

NON-FICTION IN THE PRIMARY SCHOOL YEARS: A STUDY OF SOME  
FACTORS ASSOCIATED WITH SUCCESS IN HELPING CHILDREN TO READ  
NON-LITERARY TEXTS AND TO REFLECT ON IDEAS AND INFORMATION  
WHICH THEY ENCOUNTER.

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## ABSTRACT

In this dissertation I argue the case for placing children's reading of non-fiction in the context of the whole language and learning programme. The emphasis is on supporting reflective reading rather than only on the acquisition of study skills. An action inquiry, involving a whole class of 9 year olds using non-fiction in the context of project work, is described and evaluated by the writer as teacher-researcher.

The study is in three parts. Part 1 begins with a short analysis of the present state of affairs, then proceeds to an examination of different theoretical approaches to learning and particularly the role of language in learning. Out of this analysis four principles are suggested as a framework for learning and this general model underpins the planning of the practical example in Part 3.

The study moves into Part 2 by offering a taxonomy of children's non-fiction texts. It is argued that while many children's books are 'transitional' and cannot easily be assigned to a particular kind of adult non-fiction, it is possible and helpful to recognise some broad categories.

Part 3 examines evidence from surveys and classroom studies illuminating the major question - what is reading comprehension? Some problems involved in reading non-fiction are considered.

The main study describes and evaluates a classroom example, the planning and carrying

out of which aims to embody some of the pointers to good practice indicated in the whole work. While it is not possible to generalize from one example it is argued, following Bassey (1981), that the description and evaluation are 'relatable', that other practitioners will be able to relate to the challenges and partial solutions achieved. Finally, drawing on all parts of the study, a framework for reflective reading of non-fiction is set out in seven principles.

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## INTRODUCTION

This study is about helping children to read and to learn from non-fiction, or non literary texts. This involves much more than acquiring library and study skills, necessary as these are, since controlling this kind of reading is to do with reflecting on ideas and information and taking command of them for your own purposes. This quality of reading brings about not only new kinds of thinking and talking about the new information, but also about features of the texts themselves.

Research into how children can be helped to control and enjoy reading the kinds of material termed 'non-fiction' has been meagre until the last few years. Now, in the early 1990s, the importance of this kind of reading is increasingly recognised: several new books examining the issues have been published including **Reading All Kinds of Writing** (Littlefair, 1991), **Finding out about finding out: a practical guide to children's information books** (Neate, 1993) and my own book **Making Facts Matter: Reading non-fiction 5-11** (Mallett, 1992). The Nuffield **Extending Reading in the Junior School** project is researching into how children can be helped with different kinds of non-fiction text. This research project is based at the University of Exeter School of Education and is further evidence of an intensification of interest in reading to learn. In April 1993 new proposals for National Curriculum English 5-16 were published for consultation. One of the four Statements of Attainment in Attainment Target 2: Reading, is Information Handling. Throughout the Key Stages what is included under this statement attempts to show a progression of abilities in reading in non-fiction. (However, at the time of writing the existing statutory guidelines first published in 1989 and 1990

remain the legal framework for teaching English.)

Publishers, too, are giving this kind of reading material a higher priority, in some cases producing whole programmes of reading material to help bring non-fiction texts into the initial teaching of reading. (Ginn project in preparation for 1994). Packs of texts, together with booklets containing 'advice to teachers', are also appearing (for example the Dorling Kindersley Education Kits, 1993). Some of the advice takes the form of how to relate the reading material to National Curriculum statutory and non statutory guidance across the primary curriculum areas. New interest in what was once a neglected area is welcome, although some might feel disquiet at some of the direct advice to teachers. In this study the emphasis is on what teachers need to know and understand. As professional people, teachers should, I argue, put their own purposes and pupils' purposes at the centre of their work together. The model here is of a reflective practitioner making her own judgments.

The present study arises out of many years of work with pupils in the primary classroom, with student teachers in school and at college, and with practising teachers studying for masters degrees in Language and Literature. The challenge children confront in reading and understanding non-fiction, and particularly non-narrative kinds of non-fiction, was a recurring theme across all these areas of my work. This project also has its roots in some of the findings in a Schools Council Project, **English in the Middle Years of Schooling**, in the early 1970s on which I was a Research Officer. As the final report makes clear, children were too often left alone to cope with difficult texts across the curriculum, and sometimes resorted to copying and very close paraphrasing. (Mallett and Newsome, 1977).

The present study argues that there are three main interacting factors to take into account when considering the journey children make in becoming readers of non-fiction.

First there is the intellectual maturity children bring to their reading at different ages and stages. Becoming able to deal with challenging concepts and hierarchies of concepts is a gradual acquisition paralleling general cognitive development. Part One Chapter 2 considers theories of learning with particular emphasis on the role of language, and tries to identify some helpful principles to guide classroom practice.

The second element is to do with the nature and quality of the texts themselves. Different kinds or 'genres' of non-fiction make different demands because of their linguistic and conceptual features. An understanding of this might help teachers choose examples of each kind of book which minimise the difficulties while younger children are just becoming familiar with a genre. Some texts might be intermediate or 'transitional' in the journey towards reading mature versions of the genre: illustrations, pace of information, global structure, format, <sup>and</sup> tone, might all help here. I am using the term 'transitional' in the sense explained by Baker and Freebody, 1989. Part Two of this study examines the concept of 'genre' and how far what is termed 'genre theory' might inform good primary practice. A taxonomy of non-fiction texts is offered together with an analysis of the features of each form.

Thirdly, and drawing on both the other two elements, is a collection of what might be



termed 'intervening factors'. These are to do with pedagogy and include: children's level of intellectual maturity, their level of interest, motivation and sense of purpose in approaching reading; recognition of the social nature of learning, with the empowerment of peer group collaboration; teacher mediation in helping children acquire a sense of genre and presenting themselves as models of a mature reader reflecting on information. The kind of teacher mediation provided is of considerable importance. Mechanistic procedures, it is argued, are unlikely to foster a genuine liking for or understanding of what texts offer.

It is strongly argued here that what we know about learning in general can usefully inform our provision of books and our strategies to help the young learners make progress in becoming readers.

At the heart of this work is a classroom example, offered as an action research inquiry, which describes and evaluates some strategies for involving young learners with a range of non-fiction texts. This example described, analyzed and evaluated in Chapters 8 and 9, brings the main questions raised in the rest of the study to a practical level. I present this classroom work in a form that meets Bassey's criteria of reliability (Bassey, 1981). Thus other practitioners should be able to relate to the teaching challenges I faced and look critically at the solutions, or partial solutions I employed.

My work proceeds from a core of questions linked to the three elements in non-fiction reading identified above.

- How does becoming a reader of non-fiction relate to learning in general?
- What do practitioners need to know about children's non-fiction texts?
- What do children need to be helped to understand about non-fiction texts?
- What are the most significant intervening factors in helping children become reflective readers of non-fiction texts?

In Summer term 1990 I was granted study leave which enabled me to analyze the classroom example. Apart from this provision, the study has been worked at in the increasingly narrow margins of a busy life of teaching and lecturing. My situation resembles that of many other mature part time students working towards higher degrees. One effect of the quite long time span over which I have worked is that important new books and articles have been published. This is particularly the case in the area of 'genre theory'. Thus the analysis of my classroom example makes use of new ideas from sources not accessible to me when I carried out the teaching. Nevertheless the work of scholars at Deakin University and Sydney University in Australia, particularly Christie and Rothery, and the responses by some British educationists, notably Rosen and Dixon, inform my analysis of the example. One effect of taking some powerful new ideas to the evaluation of my classroom work is that I am able to take a more realistic view of its weaknesses as well as some strengths. The status of action research is problematic, as I make clear in Chapter 7 on Methodology. Nevertheless it is potentially a useful tool to examine pedagogy. I believe the example and my reflections on it illuminate the

important issues in supporting young readers of non-fiction. The seven significant factors, to do with good practice, are offered as an original contribution to knowledge and understanding in this area of pedagogical practice.

I should also comment briefly on another matter. Lecturers in Education departments have, like their colleagues in other university departments, been encouraged to publish evidence of research activity. Thus alongside the present work I have shared the emerging insights and understandings with a wider audience, both national and international, by speaking at conferences and submitting and having published a number of journal articles and a full length academic book. These texts are referred to in this work, and seem to have contributed already to a wider debate on the importance and use of non-fiction in the primary school classroom.

**PART ONE**

**LANGUAGE AND LEARNING: THE WIDER CONTEXT OF NON-FICTION  
READING.**

'New knowledge has to be fitted into existing knowledge, to be translated into terms of one's own experience and reinterpreted, and in this process (which can be called learning) thought and language are very close together.'

(Martin et al, 1976 p.17.)

## Introduction to Part One.

Part One begins with a short chapter examining the present state of affairs as far as non-fiction reading is concerned. This chapter considers how successfully or otherwise we support 'reading to learn' in the primary school. It goes on to ask how well the demands made by different kinds of texts on young readers is understood. Finally it explains how the present work will aim to illuminate some of these issues.

Chapter 2 covers some well worn ground by describing and evaluating the main competing theories of learning with special reference to language and thinking. It ends by arguing the case for accepting four general principles as a guide to all learning and, in particular, as a framework for non-fiction reading.

## CHAPTER ONE.

### READING NON-FICTION IN THE PRIMARY YEARS THE PRESENT STATE OF AFFAIRS.

#### Introduction.

This chapter provides a broad backcloth to the whole study. It begins in Section 1.1 with a brief history of reading, starting with its central place in the first compulsory education programme in 1870. It is argued that only in the last twenty years has 'reading to learn,' sometimes called information retrieval or rather charmlessly 'functional reading', received appropriate attention from researchers into classroom practice. Dr Joyce Morris gives a particularly clear account of the history of reading in Britain and my review draws on her analysis. Significantly for this study it was only towards the end of the 1960s that a notion of reading as a developmental process from the early pre-school and school stages through to adulthood became accepted.

Section 1.2 looks at the traditional contexts for reading to learn in the primary years. It identifies two main contexts: first narrow comprehension exercises and questions and second project work. The National Curriculum, a consequence of the Education Reform Act of 1988, has brought more subject centred contexts for reading across the curriculum. (Appendix 18 sets out the approach to reading to learn in the National Curriculum English documentation at the time of writing ) ... 1.3 comments on the features and quality of non-fiction texts.

What are some of the research approaches recently adopted for finding out how children's non-fiction reading is best supported in school? This is the content of section 1.5. Finally the chosen approach to illuminating the area of reading to learn in this study is explained and justified in 1.6.

### **1.1 A Brief History of Reading with special attention to reading to learn.**

General compulsory education was introduced in Britain in 1870, and with it the aim of a literate democracy (Maxwell, 1972).

Only a few privileged children in the United Kingdom had the opportunity to learn to read before 1870. Morris comments that instruction was given by those who could read: literate parents, governesses, tutors or by teachers in fee-paying schools.

'Most of those who gave instruction were not specifically trained for their task; their main qualification was that they themselves could read.' (Morris, in Melnik and Merritt, 1972, p. 299.)

A major aim of compulsory schooling was that all children should achieve a minimum standard of literacy. Large numbers of children, perhaps a hundred or more, ranging in age from three to eleven were taught together. They were trained in the mechanical recognition of words and Morris comments that:

'... many children who left state schools in the nineteenth century never got

beyond the stages of reading monosyllabic words and simple stories.’ (Morris, in Melnik and Merritt, 1972, p. 299.)

Educational psychologists began to look at the existence and the measurement of individual differences in children’s abilities in the early years of the twentieth century. P.B. Ballard published the first standardized test of reading attainment in 1914. The discovery of wide spread illiteracy among men and women in the armed forces during the First World War, increased interest in how to teach reading and to improve standards. The Education Act of 1921 insisted that local authorities should make appropriate provision for children who were not able to learn to read in ordinary schools.

In 1922 Ginn, the educational publishers, introduced **The Beacon Reading Scheme** which had been developed in America to England. Morris notes that at that time learning to read was considered to be the province of the infant school and it was assumed that once initial skills had been acquired reading abilities would develop to meet the growing demands of the curriculum. (Morris, 1972; Southgate, Arnold and Johnson, 1981.) Drawing on her own experience as a student preparing for the junior school stage at a London University college during the early years of the Second World War Morris writes:

’For students who, like myself, intended to teach children aged seven upwards, there were few lectures in which reading was discussed at all, and they focused attention mainly on the need to divide pupils into groups for oral practice and



to set them exercises in reading comprehension.’ (p. 302, Morris in Melnik and Merritt, 1972.)

The decontextualised comprehension test as a way of extending reading abilities persisted well in to the 1970s and 1980s and exists still in some schools. (Southgate, Arnold and Johnson, 1981; Arnold, 1992.)

By the 1940s we find reading assuming a new importance as in the ~~second~~ world war illiteracy was found amongst the armed forces. Morris argues that there were three reasons why this was as of great concern at this time; in a world advancing towards universal literacy and a technological age, Britain needed a literate population to remain a major power; there was a movement towards equality of educational opportunity; there was controversy over prevalent reading practices in State Schools.

In the 1940s and 1950s national surveys were carried out by the Ministry of Education. Two national surveys carried out four years apart in 1948 and 1952 found the same number of fifteen-year-olds, 30%, were classed as 'backward', 'semi-literate', and 'illiterate'.

This heralded a programme of research into reading carried out by the National Foundation for Educational Research. The first report, by Morris, 1959, amongst many other things questioned the assumption that from the early junior years the teacher's task was to develop reading comprehension by setting exercises with questions. Morris's research took a new direction, and for the first time the

development of children's reading began to be related to 'the kinds of teachers, classroom conditions and reading materials they happened to have'. (p. 306, Morris, 1972, in Melnik and Merritt.)

Two of the most important developments in the 1960s were the establishment of the United Kingdom Council of the International Reading Association in 1961 and the establishment of the Schools Council in 1964. The Schools Council initiated a ten year programme of research and development into teaching English. Two of the projects, those headed by Lunzer and Gardner and Southgate, Arnold and Johnson focused on the development of reading beyond the initial stages.

The 1970s began with a report on reading which caused some concern as it provided evidence that the post war improvement in reading standards shown in earlier surveys had ceased. The report, entitled **The Trend of Reading Standards**, and published in 1972 by the National Foundation in Educational Research in England and Wales, presented the findings of the 1970-1971 governmental national survey of reading comprehension. (Starland Wells, 1972).

The interpretation of such results is problematic. For example the suitability of the test material for the subjects needs to be assessed. Nevertheless the report made a considerable impact on employers and parents and was one of the reasons for the setting up by the Secretary of State for Education of a committee to enquire into reading and the use of English chaired by Sir Alan Bullock, whose study was published as the Bullock Report in 1975. One of the Bullock committee's briefs was

to consider the teaching of reading in school with reference to the use of different materials and methods to develop 'effective reading'.

The committee expressed doubt that what is learned from reading tasks set in narrow contexts is likely to transfer and be applied at will to other reading, unless the teacher actively encouraged such transfer. While recognizing some evidence that there may be short term gains from intensive use of SRA type reading laboratory methods and comprehensive exercises, the committee concludes thus:

'... any real gain in reading development must come through the generation of a strong motivation, and this means reading to satisfy a purpose.' (p. 117, Ch. 8. The Bullock Report, 1975).

As well as providing a motivating context the Bullock committee recommended that teachers should help pupils 'learn methods by which study becomes more effective' (para 8:10) and that 'pupils should become accustomed to applying strategies which give them access to appropriate materials' (para 8:13).

However despite Bullock's encouragement evidence from an HMI survey in 1978 found little to show that 'the more advanced reading skills were being taught' (para 5:30).

We might feel, with Wray, that the elitist connotations of the term 'advanced reading skills' are inappropriate since:

'all children need to be given the opportunity to learn to apply their reading to the widest range of texts and tasks' (Wray, 1992, p. 7).

However it is cause for concern that HMI surveys, and research studies into children's reading to learn, from Bullock to the time of writing in the early 1990s consistently find very little evidence of any coherent approach to helping children acquire the flexible reading strategies that are likely to encourage reflective reading.

This finding is stressed in two Schools' Council studies following soon after the publication of the Bullock Report: Lunzer and Gardner's **The Effective Use of Reading** (1979) and Southgate, Arnold and Johnson's **Extending Beginning Reading**. (1981)

Lunzer and Gardner write thus, mainly with middle and <sup>secondary</sup> school pupils in mind:

'At the outset of this project we believed that reading was widely used in the classroom and that teacher expectations would be relatively high. What we have found tends to deny both these hypotheses. In most lessons, reading for learning seems to have a relatively minor role'. (p. 137, Lunzer and Gardner, 1979).

A similar picture is shown in Southgate, Arnold and Johnson's study of reading in junior schools in their final report. In a survey preceding the main project the research team asked 440 head and class teachers of children age 7-9+ what they

considered should be the priorities in providing practical guidance about reading. Only a small minority recognised that the foundations for enjoying reading and controlling reading to learn might be laid in the early junior years. (Southgate, Arnold and Johnson, 1981).

However in interviews it seemed that teachers were concerned about reading for learning, but were unsure of how to support and nurture it.

'Few teachers in charge of younger juniors had been trained to teach bibliographical skills and study skills and, consequently, most of them were unsure of their ability to do so and were eager for guidance or advice in this area of reading which they regarded as important'. (p. 318, Southgate, Arnold and Johnson, 1981).

Even at the time of writing, in the mid-1990s there is little sign of consistent good practice in helping children to read to learn.

In 1989 an HMI study reported that

'The three fold purpose of forming appropriate questions, selecting and reading texts and writing it up in their own words had not been taught to or acquired by many pupils' (HMI **Reading Policy and Practice at Ages 5-14**. London: DES. 1989).

The HMI survey a year later, **The Teaching and Learning of Reading in Primary Schools**, in 1990 also found that reading to learn, particularly in the later primary years, was not well supported.

The setting up in 1991 of the Nuffield **Extending Reading in the Junior School** project at Exeter University is further evidence of increasing concern about how well children are helped to read to learn.

In a small scale study, related to the Exeter project, of a number classes in three junior schools, Wray and Lewis found a lack of teacher guidance in context in helping children to use secondary sources to improve their learning. The teachers insisted they had introduced the children to library and study skills. The Exel team concluded that demonstration of reading strategies by a mature adult, **in a strong context**, would support young learners in becoming able to read for learning. (Wray and Lewis, 1992).

This brief history of the teaching of reading in Britain began with an emphasis on the initial teaching of reading. It ends with an increased concern for reading development beyond the initial stages. The other important change of emphasis is that, while the early researchers like Cyril Burt tended to see reading difficulties as entirely to do with the child, the focus changed to looking at the teachers' approaches and the resources that the schools provide as a way of understanding better how children can be helped to read and learn.

## 1.2 Traditional contexts for reading to learn.

Traditionally there have been two main ways of trying to help children to read for information: first by setting comprehension exercises on short passages of text, and second by encouraging the use of non-fiction in the context of project work. (Wray 1985; Southgate, V., Arnold, H. and Johnson, S., 1981, Arnold, 1992; Mallett, 1992).

### 1.2.1 The use of comprehension passages.

Southgate et al found in their study of reading in junior schools that teachers often made a distinction between 'books for teaching' and 'books for using'. The former are reading scheme texts and books to develop phonic skills or comprehension, while 'books for using' include all those 'fiction and non-fiction books which children consult or use for information and pleasure'. (Southgate, Arnold and Johnson, 1981, p. 62.) The present study argues the case for using books to learn about topics and ideas and to develop reading abilities as complementary activities. Southgate and her team observed that two particular texts, **Reading to some Purpose** (Flowerdew and Ridout, 1954) and **Using your reading** (Gagg, 1956) were named by teachers as available in their schools as sets for comprehension work. These books consist of passages followed by some questions to test 'comprehension'. The research team were not sanguine about the effectiveness of this method of helping comprehension.

'The questions to be answered were generally concerned with merely literal comprehension and it seems doubtful whether the books or the manner in

which they were frequently utilized did much either to help children to improve their reading proficiency or to appreciate reading'. (Southgate, Arnold and Johnson, 1981, p. 57.)

In a much larger study examining reading methods, Bassey found that nearly all of the 900 junior teachers taking part used comprehension and vocabulary exercises (Bassey, 1978). Arnold, commenting on Bassey's results, which include the fact that fifty nine per cent of teachers mentioned using either **Sound Sense**, **Better English** or **SRA Laboratory**, comments:

'I doubt whether these percentages have changed much in ten years, in spite of research showing lack of transfer of skill from isolated texts to general reading for learning. Most pupils do comprehension exercises for the extrinsic motivation of getting the answers right, and to get on to the next task. I have not yet met anyone who was interested enough in the context of the decontextualized excerpts to pursue the topic in further personal reading'.  
(Arnold, 1992, p. 128).

James Britton makes the same point powerfully:

'... what children use language for in school must be 'operations' and not 'dummy runs'. They must **practise** language in the way in which a doctor 'practises' medicine and a lawyer 'practises' law, and **not** in the sense in which a juggler 'practises' a new trick before he performs it. This way of



working does not make difficult things easy: what it does is make things worth the struggle'. (Britton, 1970, p. 130).

Chapter 6 of this study examines the notion of 'comprehension', the notion of what readers do when they negotiate a text. At this point it is useful to summarise some of the problems with an approach to reading which presents children with isolated passages, with Britton's 'dummy runs'. This approach may be termed a 'study skills' model in contrast to a 'language and learning' model which embeds reading in real not contrived learning contexts, and which is discussed later in this section of Chapter 1.

#### **Problems with a 'study skills' approach to reading non-fiction.**

There are four main problems with a 'study skills' approach to non-fiction. First it leans towards a behaviourist model of learning, which as Section 2.1 in Chapter 2 argues, pushes children into a relatively passive role. Children are obliged to use decontextualised skills to find the answers to other people's questions.

Second, children tend to work independently on their exercises, having little opportunity to work collaboratively. These first two problems are to do with motivational issues. As Britton, Southgate et al and Arnold all insist, reading skills exercised in narrow situations are outside the kind of strong motivating context which gives point and meaning to children's reading and writing. It is the potentially rich contexts across the curriculum which encourage the kind of questioning and curiosity

which, as Britton points out above, makes the struggle worthwhile. (Britton, 1970; Southgate et al, 1981; Arnold, 1992.)

A third problem is that the teacher's role can often be simply that of showing retrieval strategies out of context. Fourthly, and perhaps most importantly of all, a 'study skills' approach is based on an assumption that there will be a transfer of abilities used in the exercises to other contexts.

Recent evidence, raising doubt about the likelihood of such transfer of abilities, comes from a study of classroom practice. Wray and Lewis were assured by the teachers in their study of informational reading in junior schools that study skills to do with library research and using the retrieval devices in information books had been taught. Yet there was little sign of children applying any of this in their science project work on shells. (Wray and Lewis, 1992).

### **1.2.2 Using non-fiction texts in the context of project work: a 'language and learning' approach.**

The second traditional context for developing reading for learning is cross curricular work organised in projects, topics or themes. (Mallett and Newsome, 1977; Mallett, 1992; Wray, 1985; Wray and Lewis, 1992; Arnold, 1992.)

Well planned and monitored project work can provide a strong motivating framework for many activities, including reading different kinds of text. The other activities often

included, for example art and craft, drama, outings, watching video-films and book making, create a powerful context for using books and other secondary sources. A detailed analysis of the potential strengths and weaknesses of this approach is set out in Part 3, Chapter 6.<sup>1</sup>

### **Advantages of a 'language and learning' model.**

The project approach to language and a range of other activities associates it, potentially at least, with what I term in this study a 'language and learning' approach to reading non-fiction. However, more subject centred teaching, if it creates strong contexts for using language and particularly encourages reflective reading, is also compatible with this model.

The first advantage of a 'language and learning' approach to non-fiction is that it embeds the quite challenging kinds of reading presented by many non-fiction genres or forms in a broad motivating context. If you are genuinely interested in how the Vikings built their ships, in what causes a volcanic eruption or why red squirrels are declining while the greys flourish, it is likely that, with some support from teacher and peers, the struggle to read, reflect and write will be worthwhile.

The other advantages arise from this central strength. Second a broader context with a range of exciting activities is likely to include a collaborative element; children will have opportunities to share the fruits of their reading and will want to talk and write about them in cooperation with others. Thirdly, the teacher, freed from the confines

of a narrow set of tasks, is able to approach the children as young learners in a broader way. Non-fiction reading ceases to be regarded as a special kind of activity distanced from other kinds of learning and the teacher can respond to the wider intentions and purposes of the young readers and make sure their reading complements and extends these. Fourthly, this approach to reading to learn recognizes the essentially active nature of genuine learning in line with the theories of Piaget, Vygotsky and Bruner examined in Chapter 2.

However, not all broadly based work whether organized in a cross curricular or subject centred way results in reflective non-fiction reading.

There is evidence that where children do not receive adequate support in using the secondary sources there is little effective reading achieved. Studies by Maxwell (1977), Mallett and Newsome (1977) and more recently by Wray and Lewis (1992) suggest that many children do not learn to control non-fiction reading without considerable help and encouragement. Indeed, in the latter study, some of the children answered the questions on their work sheets without using the books at all. Using existing knowledge and asking other children the answers were two of the strategies used to avoid using the books! Answering questions formulated by someone else listed on a work sheet is not of course the most exciting of activities. In Chapter 6 it is argued that project work, like work organized on a subject basis depends on good planning and monitoring for its success.

Appendix 13 sets out the reading to learn abilities cited in The National Curriculum

as Table 1. A very important element in the present state of affairs in helping primary children become reflective readers of non-fiction is the new framework of the National Curriculum brought about by the Education Reform Act in 1988. Amendments to National Curriculum English are expected in 1995, but the analysis throughout this study stays mainly with the existing guidelines in place until 1995.

### 1.3 Non-fiction texts.

What is the present state of affairs as far as the provision of non-fiction texts is concerned? Part II of this study examines the different forms of text which have a place in the primary school non-fiction collection and offers a taxonomy for consideration. It is argued that main categories include narrative kinds of writing: informational narratives, procedural writing and biography; and non-narrative kinds of writing: reference books and information books.

Margery Fisher's book **Matters of Fact** (1972) remains a classic. There have been recent studies of non-fiction by Meek, 1977; Von Schweinitz, 1989; Neate, 1985; 1990; 1992; Arnold, 1992 and Mallett, 1992. These studies encourage publishers of children's non-fiction to attend to the provision of retrieval devices, where these are appropriate, and even more importantly to ensuring lucid and accurate writing and useful, aesthetically pleasing illustrations which integrate with the text.

Although there is still some way to go, and publishers are unlikely ever to want to abandon the series approach which tends to reduce topics to a uniform format, the

signs are that publishers are responding to suggestions. The Times Educational Supplement Junior Information Book competition, and competitions set up by Earthworm and the Science Museum in London draw many good entries. Advances in computers and information technology, have helped improve illustrations. (Tucker and Timms, 1990). Nevertheless, even apparently up to date and aesthetically pleasing books can be difficult for young readers because the most helpful kind of authorial 'voice' is difficult to manage. Some authors are experts in the topic they write about, but need help in accommodating to the young reader's level of linguistic and conceptual development. Other writers are what Arnold calls 'interpreters', non-specialists taking on a writing task and risking at worst misinterpretation and at best blandness. (Arnold, 1992).

Arnold suggests some questions which would help teachers and parents make their mind up about particular texts:

'How immediate is the author's voice? Is it genuine, conveying real interest in the subject, or a rag-bag of other peoples' fossilized ideas? How powerful is the voice? Can it excite curiosity without indoctrination? Does it respect rather patronize the reader?' (p. 131, Arnold, 1992).

Meek also recognizes the importance of the author's voice in the non-fiction text:

'The stance of the author is, in a very subtle way, **alongside the child**. He or she is saying, in effect: 'Look at this, when I go about my business, in botany

(history, science, architecture), this is what I look for and this is what it tells me.' From this the reader gets an idea about significant observation or a new meaning for what he has already seen'. (p. 11, Meek, 1977).

Meek continues by urging us to pay writers of non-fiction the same courtesy as we do those who write fiction: we should invite reviewers of distinction, those who have knowledge of the subject matter, who are able to understand the merits of the illustrative detail, and who in addition understand the conceptual development of the young readers, to comment on the texts. (Meek, 1977).

Attitudes have changed since 1977, but it remains difficult to find reviewers who meet all these criteria.

Successful reading to learn depends a great deal on the quality of material available. Part II of this work presents a taxonomy of forms within the category of children's non-fiction and comments on desirable qualities in each form. The main research question running through this part of the study is: what do teachers and what do children need to know about non-fiction texts?

#### **1.4 Summary of present state of affairs.**

- o There is now recognition that children's reading to learn, their use and interpretation of the information they find in the different kinds of non-fiction texts is of great importance. This recognition is evident in recent and current

research projects and studies and surveys (HMI surveys, 1989, 1990; Neate, 1992; Arnold, 1992; Mallett, 1992; Nuffield Extending Literacy project (1991-1994) and in increased interest in conferences on reading development (EXEL conference, Nov. 1992; Sept, 1993; Sept, 1994; NATE conference, April 1994).

- o While there is a change in attitude, detectable from the late 1960s, and a recognition that teaching approaches and resources affect the development of reading strategies appropriate to non-fiction, evidence does not suggest a significant change in practice. Southgate et al 1981 encountered dictionary work embedded in a context extremely rarely and Wray and Lewis in a recent small scale study found little evidence of the demonstration of study skills in context in the classrooms they researched in, (Wray and Lewis, 1992.) This fits with the view of HMI that informational reading, particularly in the later primary years was not well supported. (HMI, 1989; 1990).
  
- o Generally the quality of non-fiction texts available for the primary years has improved. Most new information books have adequate retrieval devices, and information technology has helped improve the quality of illustration. There are still problems over the appropriate 'voice' in some texts, and publishers persist in wanting to fit a range of topics into an inflexible series format.



### 1.5 Research approaches to reading non-fiction.

The recognition that reading abilities needed to be carefully supported and extended beyond the infant school was evident only towards the end of the 1960s. Views on reading before this are reflected in the kinds of research into reading carried out, in the 1950s and early 1960s. Research projects then were mainly concerned with surveys of reading attainment, the early stages of reading and teaching older children with severe reading difficulties. (Goodacre, 1972; Morris, 1972; Southgate, Arnold and Johnson, 1981). Southgate comments that the only research to do with the factors that appear to influence children's reading progress from 5-11 years was carried out by Morris from 1954-1957 in Kent for the National Foundation of Educational Research. (Southgate, Arnold and Johnson, 1981; Morris, 1959, 1966).

Chapter 7, on the Methodology and Design of the main study in this dissertation, examines some of the options open to researchers in education and other social sciences. At this point it is necessary to explain the reason for the choice of approach adopted here. Three main possibilities seemed to be open to me. First a survey investigating the existing attitudes and practice of teachers in the area of non-fiction reading could be carried out. The survey approach has informed the research projects of Morris (1959, 1966), Southgate et al (1981), governmental surveys including those in 1948, 1952-1972 and the very recent HMI survey, of the teaching of reading in 1989 and 1990. Valuable information can be obtained in this way, and it can go alongside other approaches. Two things made this unsuitable for the present study. First it is an approach better suited to a team than a lone researcher like myself.

Second, surveys tend to show the existing state of affairs and I wanted to help illuminate the way forward by arguing the case for promising strategies.

A second option is experimental research: the researcher sets up a situation in a school to examine particular factors. John Chapman of the Open University and his reading research team set up situations which enabled the assessment of children's knowledge of cohesive ties and the relationship of this to different kinds of reading. (Chapman, 1983, 1984, 1987). Experimental research of this kind, often with a psychological, sociological or linguistic focus is valuable in adding to knowledge of the reading process. However, my own interest and emphasis is pedagogical, and the core of the questions round which this study is built are not capable of being illuminated by this kind of research.

The third research model is the kind of research known as qualitative research. This includes a number of approaches including ethnography, case study and action research. Qualitative research has its own way of being valid and systematic.

### **1.6 A way forward: rationale for the approach adopted in this study.**

The action research approach was chosen for the main study in this dissertation as it allowed me to make a systematic evaluation of strategies to help non-fiction reading in the context of my own practice. Using the fruits of the analysis of what is known about children's language and learning in Part I and insights about a range of non-

fiction texts in Part II, I was able to plan within the ordinary curriculum of the class I worked with, a project incorporating promising strategies. The last two chapters evaluate the evidence of the progress of the children and relate this single example to more general issues.

In line with action research convention my research has a centre of questions rather than a hypothesis.

- o How does becoming a reader of non-fiction relate to learning in general?
- o what do practitioners need to know about non-fiction texts?
- o what do children need to be helped to understand about non-fiction texts?
- o what are the most significant intervening factors in helping children make progress in becoming **reflective** readers of non-fiction texts?

The methodology of the main study including methods of data collection in this dissertation is explained in detail in Chapter 7.

### **Summary**

This chapter has introduced the main issues which this study aims to illuminate. The brief history of reading in school since compulsory education began in 1870 indicates

that recognition of the need to develop reading abilities beyond the initial stages is comparatively recent.

The two traditional approaches to reading to learn, by setting comprehension tests with questions and by placing reading in the context of project work, persist. Evidence from surveys and classroom studies consistently suggests successful strategies to support reading to learn are not yet in place in most primary schools. There is certainly no golden age in the past when non-fiction reading was nurtured in an informed way. The approach in this study is to seek demonstration and support for study strategies embedded in both project work and the more subject centred context of some National Curriculum work. Reflective reading is likely to arise from being embedded in interesting work.

A variety of research methods can usefully inform studies of children's reading and children's non-fiction texts. This study grounds an examination of reading to learn in a theoretical model of language and learning. (Part 1) It argues that educators need also to know about the range of non-fiction texts, and their features, encountered in the primary years (Part 2). The major contribution of the study is the bringing together of insights from the analysis of Part 1 and Part 2 to inform the carrying out and evaluating of a classroom study in Part 3. Finally a framework for non-fiction reading in the primary years is suggested.

## CHAPTER TWO.

### The broader context for non-fiction reading: towards a model of language and learning.

#### Introduction

This study proposes that we need to place our understanding of how children learn from non-literary texts in the context of more general principles of learning. There is no comprehensive and universally accepted model of how children learn but rather a number of approaches from which we can draw helpful insights. In trying to establish a working model of learning to inform the classroom practice, in the empirical work in this study, I have to travel some well worn ground. However this chapter aims to provide a selective review of the competing theories with particular emphasis on what each view contributes to our understanding of the role of language in thinking and learning.

The first model of learning to be considered is behaviourism, 2.1, even though, in its starker form, its influence has faded. I believe it should be included for more than reasons of historical interest: it is argued here that some teaching strategies persist where children's interest and intelligence are not fully engaged in their learning. Study skills to help retrieve information from non-fiction can for example be taught as mere exercises rather than being embedded in broader learning contexts. As long as children are put in a relatively passive role and required to carry out exercises

unrelated to their broader intentions and purposes behaviourism is still alive.

Other theories are included because each contributes something of value to an overall view of the young child learning. Chomsky's convincing description of language as essentially creative from the earliest stages is briefly set out in section 2.2 and the limitations of his theory explained. More time is spent on Piaget's powerful adaptive model of learning in 2.3. This way of viewing how we take on new ideas seems to me as pertinent to learning from books as from first hand experience. The relative underemphasis on the potential role of language in assimilating new ideas in Piaget's theory is assessed.

In section 2.4, Vygotsky's view of the role of language in learning is examined; his theory of instruction suggests how skilled and sensitive teaching can help children make the link between spontaneous knowledge and the new 'scientific' concepts encountered in more formal situations like the classroom. It is here that we find theoretical support for the view that language is a major means of assimilating new ideas. This principle informs the classroom work in this study.

Some of Vygotsky's pioneering ideas have been taken up in a new way by current cognitive theorists and the work of Bruner and Donaldson is reviewed in section 2.5. Social interaction and collaboration are placed at the heart of school learning.

Finally in 2.6, a working model of how children learn, drawing on the approaches covered here and providing an organising framework for the whole study, is set out.

## 2.1 Behaviourism

Behaviourism, 'the study of observable and measurable behaviour' (Crystal, 1987, p. 327) dominated the psychology of learning from early this century right up to the early 1960s.

At its most general the aim of behaviourism was to produce a scientific theory of learning based on general laws. Thus the emphasis was on behaviour which could be directly observed, and mentalistic concepts like 'mind', 'interest' and 'feeling' were avoided. This linked behaviourists with a long tradition in experimental biology, and particularly with the objective study of animal behaviour. As Wertheimer puts it:

'the study of animal behaviour was particularly congenial to behaviourism because you cannot ask animals what their mental states are like and expect a coherent answer in your own native language'. (Wertheimer, 1979, p. 122).

As we shall see later, children's language was not recognised as an agent of their learning when behaviourism was applied to human subjects.

Not surprisingly behaviourists were influenced by the work of the Russian physiologists or reflexologists who believed psychological processes could be studied via the physiological investigation of reflexes. Pavlov's well known pioneering experiment showed how dogs can be conditioned to associate a neutral response like a bell ringing with food. If on a number of occasions a bell is sounded just before

food, the dog salivates on hearing the bell. Thousands of similar experiments were tried in an attempt to 'shape' the behaviour of different species. The desired responses to particular stimuli were reinforced so that 'S-R' or stimulus response bonds were made. (Pavlov, 1927) The ultimate aim was to be able to predict the outcomes of different kinds of conditioning.

John B Watson was a major figure in early behaviourism: his article in the 1913 **Psychological Review**, 'Psychology as the Behaviourist views it' was the first major statement on the behaviourist position. He believed his simple systematic approach, with its central belief in the explanatory power of conditioning, could be applied to all aspects of psychology, including child psychology.

However it was the later behaviourists, Guthrie, Hull and Skinner who tried to apply the principles of behaviourism, arrived at through extensive animal work, to classroom learning. B.F. Skinner tried out thousands of different reinforcement schedules to assess their effects on the speed of learning and the retention of what had been learnt. Learning programmes were designed for teaching machines, and advice given to teachers about the most effective ways of 'shaping' children's behaviour. A useful review of Skinner's work and of other learning theorists is available in **Theories of Learning and Instruction** edited by Hilgard, 1964.

It is not difficult to accept that simple mechanistic forms of learning can be explained in terms of conditioned responses: for example operating a tape recorder. Behaviourism is less illuminating when considering the more advanced kinds of



cognitive behaviour, the kind of reflection which is pertinent to this study and it has little to contribute to the idea that children's language might assist their learning.

## 2.2 Chomsky's view

Although as a theoretical linguist Chomsky brings a different perspective to the debate, his theory of language acquisition greatly interested psychologists and educators. The ideas first expressed in *Syntactic Structures* (1957) and "Review of B F Skinner's *Verbal Behaviour* (1959) made a considerable impact on how child language was viewed. Chomsky described language as a system of grammatical rules which cannot be regarded in behaviourist terms as responses to stimuli. The question frequently asked is, how does a young child manage to use most of the syntactical rules of his or her language by the age of five. Chomsky's answer is consistent with the nativist approach: children have an inborn species specific sensitivity to the rules of grammar. This enables them to construct and apply grammatical rules from the fragments of language around them. Support for this view comes from the novel utterances all of us are able to produce. We are not limited to what we have heard or read. The character of the speech of young children offers considerable support for the view that a mechanism apart from imitation is operating. The over generalisations children make are well documented, for example Donaldson quotes a child saying 'I bringed it' suggesting the child has formulated the rule that you make the past tense of a verb by adding 'ed' to the present tense. (Donaldson, 1978) Whitehead brings together some interesting examples from the literature including 'He's keying the door' (Whitehead, 1990). This child is operating on the principle

that nouns can become the stem of verbs, e.g. 'warming her feet'. A personal example comes from three year old Anna who declared 'I've eaten my apple and readen my book'. The conventional first part of her sentence explains the principle of the novel second part.

Of course Chomsky is not suggesting young children apply these rules consciously. He proposes the intriguing notion of a 'language acquisition device' - a phenomenon located somewhere in the brain which enables the child to extract the rules of grammar from his or her linguistic input. Chomsky argues that all human languages share some similarities and that these 'universals' effect individuals' ability to use and understand language. For example he considers that the subject predicate relationship in all known languages is a manifestation of how the human mind works.

Chomsky makes an important distinction between 'competence', our underlying knowledge of the rules of our language and 'performance', the actual utterances we make. Any sample of language written or spoken has a surface structure and a deep structure of more basic meanings and ideas. A major part of his work is to do with finding out how deep structures are transformed into surface manifestations of linguistic performance. Thus his area of study is essentially the human mind and how certain mental structures make language possible.

Chomsky's revolutionary theory encouraged much research and drew attention to the creative nature of human language. However we have to ask if this theory is of any more help in understanding how children come to 'mean', 'think' and 'intend' than

the behaviourist view. Donaldson expresses the misgivings of many as follows:

‘Chomsky’s LAD is a formal data processor, in its way just as automatic and mechanical as processes of an associationist kind. In go the linguistic data, out comes a grammar. The living child does not seem to enter into the business very actively (not to say fully) in either case. What does warm blood in the veins matter? It actually figured more in some associationist accounts than in the Chomskian’. (Donaldson, 1978, p. 38).

Chomsky’s theory cannot be accepted uncritically because in his focus on language he ignores all the other kinds of learning which accompany and enrich it and which are part of the total environment. I turn next to a theory which contrasts sharply with Chomsky’s in that it is far from privileging language in development. Piaget’s standpoint is that it is the cognitive achievements of the sensory motor stage which make language learning possible.

### **2.3 Piaget’s adaptive model learning.**

Piaget was a developmentalist and epistemologist, not an educator or even primarily a psychologist, but his theory of child development has had considerable effect on classroom practice. His first works were translated into English as early as the 1940s, but the dominance of the learning theories discussed in Section 2 of this chapter meant that Piaget’s ideas were not taken up in a major way until the mid sixties. The limitations of the explanatory power of behaviourism were becoming evident. Some

psychologists, for example Pribram (see Hilgard, 1964) were beginning to question whether external reinforcement was necessary to learning. Pribram describes how a monkey which was being conditioned by rewards in the form of peanuts to operate a piece of machinery continued to operate the machinery, even when satisfied. Pribram argued that the activity itself provided intrinsic motivation. Other tenets of behaviourism as well as the emphasis on extrinsic motivation were questioned, and it was clear that new principles and approaches to learning were needed. (Pribram, 1964).

Piaget's view of the child differs both from behaviourist and Chomskyian views in important respects. Piaget sees children as active constructors of their knowledge of the world. Since he saw the child as overcoming problems with the kind of intelligence available at each developmental stage, extrinsic motivation was hardly necessary. It is important to understand that Piaget aimed to create an integrated theory of biology and philosophy of mind. Abstract thinking developed out of material actions. The individual develops intellectually through the construction of logical operations which are realised within the limitations of each developmental stage. This begins with the 'sensory motor' period, from birth to about eighteen months when the infant knows the world through perception and action and continues with the 'preoperational' stage, two to about seven, during which the child's language and social development advances although lack of experience limits thinking. During the 'concrete operations' stage from about seven to eleven years the child becomes capable of logical thought processes that can be applied to concrete problems. Finally by the stage of 'formal operations', reached between eleven and fifteen, when

cognitive structures become mature . . . the adolescent can begin to understand hypothetical problems and propositional logic. Piaget accepted that the rate at which children proceeded differed, but argued that it was necessary to complete each stage in the right order. Piaget himself makes no dogmatic claim that the stages are universal, but others, for example Dason considered some aspects may be cross cultural or at least be universally applicable to western cultures. (Dason, 1977).

Piaget collected much of his data from a large number of experiments with children. He would set up the task, observe how the children set about carrying it out, and then often question them about what they had done. These experiments led Piaget to describe what he believed children could manage at each stage. They included tasks which tested mathematical concepts like reversibility, the ability to apply rules, and the ability to take another person's view into account.

This is only to scratch the surface of a rich and beautifully integrated theory of development. It is not possible to give a detailed account of every aspect of the fruits of Piaget's forty years of research and writing. I concentrate now on those aspects and ideas which are of most help in illuminating the classroom work which is at the heart of this study. These are: Piaget's theory of learning by adaption through the complementary processes of assimilation and accommodation, the idea of the 'equilibrium' as a motivating force and egocentricity as a central characteristic of child logic. I look also at the further research and reflection Piaget's work has inspired, and particularly at the criticism levelled at his relative lack of emphasis on language in thinking.

Piaget's model of learning by adaptation can be applied to any type of new learning. When an individual is confronted by new objects, people, events or situations two complementary and simultaneous processes are set in motion: assimilation which means the absorption into general schema of a specific piece of new learning and accommodation which in Piaget's theory is to do with the modification of internal schemes to fit a changing cognizance of reality. (Reber, 1975). Piaget suggests we compare this dual process to the digestive system: food is mixed with the gastric juices to become capable of assimilation, and the organs of digestion have to adjust so that accommodation is possible.

One of the most detailed accounts of assimilation, with reference particularly to the sensory motor stage, is set out in **The Origins of Intelligence in the Child** (1953). Piaget observed the sucking behaviour of his own newborn infants; the process of assimilation is first of all evident in the need for repetitions, and then by a 'generalising assimilation' as the child incorporates increasingly varied objects in to the sucking scheme. Thus in the early weeks of life the child sucks the pillow, bedclothes, quilt and so on as well as the breast or the bottle. However, when hungry, the child will reject the pillow or eiderdown he or she may have begun to suck in order to seek something more nourishing. Laurent, as early as the tenth day, rejects his father's index finger showing some selectivity. Piaget argues that this third kind of assimilations implies:

'the beginning of differentiation in the global scheme of sucking, and consequently a beginning of recognition, needless to say, but sufficient to be

called recognitory assimilation'. (Piaget, 1953, p. 36).

Although he describes such kinds of assimilation separately Piaget finally brings them together under the general term 'assimilation'. The assimilatory process is always accompanied by accommodation, by a process of adjusting to the new elements in the environment. Thus even at this very early stage in development:

'the experimental trial of a reflex mechanism already entails the most complicated accommodations, assimilations and individual organisations.' (Piaget, 1953, p. 36).

This basic mode of organising experience through assimilation and accommodation persists throughout life. The same functional laws are obeyed whether the learning is of the earliest kind at the sensory motor stage when intelligence is rooted in action and perception, or when the individual is grappling with the most evolved forms of rational thought.

New learning involves some alteration of a child's existing schemata, however if the gaps between what is already established and what needs to be integrated is too great learning cannot take place. This has an obvious application to learning from books. If they are too difficult through complexity of subject matter or difficulty of language the new learning cannot be assimilated. I find this an extremely powerful and useful model of the learning process. Perhaps because Piaget did not think of himself as a pedagogue he does not attend to the enabling role of instruction in making

assimilation of difficult material more possible.

The contribution of the adult, parent or teacher, is an aspect which is taken up at several points in the present study, see particularly Chapters six, eight and nine.

How does Piaget suggest a balance between the processes of assimilation and accommodation is maintained? Wadsworth suggests the possible outcome if the relative amounts of assimilation and accommodation that take place were not in balance:

‘... imagine the outcome in terms of mental development if a person always assimilated stimuli and never accommodated. Such a person would end up with a very few large schemata and would be unable to detect differences in things. Most things would be seen as similar. On the other hand, what would be the result if a person always accommodated and never assimilated? It would result in a person having a great number of very small schemata that would have little generality. Most things would be seen as different. The person would be unable to detect similarities’. (Wadsworth, 1989, p. 15).

Piaget believed there existed a self regulatory mechanism, equilibrium, which kept the balance between assimilation and accommodation allowing for the individual’s efficient interaction with the environment.

The term is used as a synonym of balance but has several particular usages. In physiology the term ‘homeostasis’ is used to describe the point at which opposing



biological reactions are stable. In perception the term 'equilibrium sense' means the point at which the body maintains a stable upright posture in relation to its centre of gravity. Social psychologists use the term in connection with the tendency for a social system to change in order to maintain itself as a functionally integrated unit.

How then does Piaget use the concept? **The Penguin Dictionary of Psychology** offers the following explanation.

'In Piaget's theory (it is) a cognitive state whereby the information available to the child is the equilibrium or balance with the existing cognitive schemes held. Such states may be quite temporary, especially during the early sensory-motor, preoperational and concrete operational stages or they may be rather stable and permanent as at the formal operational stage. (Reber, 1985, p. 246).

Thus by a process of equilibration the individual moves from a state of disequilibrium to equilibrium as new experience is incorporated into the existing schemata's internal structures. Just as the body in a biological sense adapts to environmental change and seeks homeostasis a cognitive balance is maintained by a process of equilibration. As Wadsworth puts it so neatly:

'... assimilation and accommodation - a cumulative co-ordination, differentiation, integration and constant construction - account for the growth and development of cognitive structures and knowledge'. (Wadsworth, 1989, p. 17).

Piaget maintained that these processes began at the sensory motor stage and continued throughout childhood and adulthood. The dynamic view of a child constructing his or her knowledge about the world challenged the behaviourists' more passive view of the child as responder to stimuli when Piaget's work first appeared some decades ago. As I intend to make clear in Section 5 cognitive psychologists and developmentalists now assume that knowledge is constructed by learners. Piaget's view of motivation as essentially intrinsic is also now generally accepted. The striving to relieve the intellectual discomfort of disequilibrium brings positive reinforcement when equilibrium is restored. Thus in Piaget's theory motivation is integrated into the learning process as a whole. It seems to follow that the child has to feel the need to move forward in taking on new learning and educationists and teachers have acted on this by recommending lively classroom environments with many objects and pieces of apparatus to create a favourable climate for the child to experience and discover. The relatively low status accorded to language in Piaget's theory leads to an underemphasis on the potential role of verbal interaction in learning.

The importance of child and adult negotiating meaning in a joint effort is increasingly recognized, (Vygotsky, 1962; Bruner, 1975; Wood, Bruner and Ross 1976; Wood, 1988; Wells, 1981, 1985, 1987; Walkerdine, 1984; Edwards and Mercer, 1987). Piaget tends not to present the adult as a crucial part of a child's environment, but the enabling role of the adult and the role of language as a tool of assimilation need not be incompatible with his adaptive model of learning. The teacher's support for children's own questions in the course of the classroom study is consistent both with the intrinsic form of motivation germane to Piaget's assimilation accommodation model and with the views of those who

see language as a prime tool of learning. A strong example of this is Andrew's series of questions about the photograph of the squirrel with mange (Transcript 6, conversation 1, Appendix 2.)

Any consideration of Piaget's work must include some assessment of a concept which is entrenched in his view of the developing child: the psychological feature of child thinking known as 'egocentrism', the tendency of the individual to see the world from his or her own viewpoint.<sup>1</sup>

For Piaget all experiences, all environmental input, including the contribution of the adult, are transformed by the structure and functioning peculiar to child thought.<sup>2</sup>

This way of looking at child thought contrasts quite sharply with Bruner's assertion that anyone can be taught almost anything in some way at any age, and with Vygotsky's belief in the role of adult help in moving the child forward in his or her intellectual development. The permeation of egocentrism in child thought would, in Piaget's terms, make adult verbal intervention of limited value, particularly presumably before the age of about seven. The work of Hughes (1975) and Donaldson, (1978) has challenged Piaget's view.<sup>3</sup>

Does Piaget recognize the contribution of talk and collaboration to a child's developing thinking? He does consider that others might play a part in provoking the desire for verification.

‘Surely it must be the shock of our thought coming into contact with that of others, which produces doubt and the desire to prove?’ (Piaget, 1977, p. 202).

Contact with others then stimulates us to argue our case. It also, suggests Piaget, modifies personal eccentricities in our thinking:

‘we are constantly hatching an enormous number of false ideas, conceits, Utopias, mystical explanations, suspicions and megalomaniacal fantasies, which disappear when brought into contact with other people.’ (Piaget, 1977, p. 202).

The strange thing here is that Piaget presents a picture of the child first constructing his or her mental abilities alone, then emerging from isolation to test out these acquisitions on others! Yet children are part of a social world from the very beginning of their existence. As I hope to show in the remaining sections in this chapter others, notably Vygotsky and Bruner, integrate Piaget’s demonstrations of the distinctive features of child logic with convincing accounts of the social, interpersonal and cultural underpinnings of thinking.<sup>4</sup>

In his paper ‘Language and Thought from the Genetic Point of View’ Piaget sets out his views on the role of language in thinking in three main age periods: when language is first acquired; the concrete operational stage and the formal operations stage. (Piaget, 1954).

Piaget recognises that language frees the sensory motor child who knows the world only

from action and percepts from an exclusive concern with immediate time and space.

Objects and events are with the onset of language:-

‘no longer experienced only in their perceptual immediacy; they are experienced with a conceptual and rational framework which enriches understanding of them.’

(Piaget, p. 171 in Adams (ed), 1954).

However Piaget believes the acquisition of language alone cannot explain the beginnings of representation.

While it now seems generally acceptable that language is only one of several modes of representation, that it is not the earliest kind and may well depend on the prior establishment of other cognitive gains (see Macnamara 1972; Donaldson 1978; Bruner 1987) Piaget’s relative neglect of the power of language is shaping and organising thinking once a child becomes a language user <sup>has</sup> been challenged. (Walkerdine, 1984; Tizard and Hughes, 1984; Wood, 1988; Gipps, 1992). In my analysis of Jerome Bruner’s position in Section 5 of this chapter it becomes clear that while Piaget did recognise a role for the social, cultural and interactional elements, Bruner argues, in his later work particularly, for a far greater emphasis here. Perhaps because he never saw himself as an educator Piaget rarely examines the potential of instruction of a less mature person by a more mature one. Indeed the general impression is that the adult cannot teach the child something until he or she is ready to understand it. Vygotsky’s concept of the ‘zone of proximal development’ discussed in Section 4 of this chapter has made necessary the re-evaluation of learning ‘readiness’ and the potential role of the adult as enabler. It is

the work of the latter which provides the theoretical justification for a classroom in which talk with teacher and peers about objects, concepts and ideas has a high priority as a way of bringing about learning.

#### **2.4 Vygotsky's linguistic model**

Vygotsky's research was carried out in the 1920s and early 1930s and published in 1934, the year of his death. His book 'Thought and Language' was suppressed by the Soviet authorities and only after twenty eight years did an English translation emerge, in 1962, followed in 1971 by 'The Psychology of Art' and in 1978 by 'Mind in Society'. Vygotsky's considerable contribution to pedagogical theory is still being assimilated by educators in the 1990s. (Wertsch, 1986; Bruner, 1986; Kozulin, 1986; Daniels, 1993; Burgess, 1993). It is important to note that because of his premature death many of Vygotsky's ideas remained undeveloped and uninformed by later research and writing. However, as I intend to show in Sections 5 and 6 of this chapter, others have taken up his ideas and developed them further.

The richness of Vygotsky's theory of development arises partly from his quest to integrate insights from the humanities and the social sciences. A linguist and psychologist, he was also well read in philosophy, literature, sociology, art and history. A main emphasis in his work is a search for an explanation of the development of human consciousness partly by comparing the abilities of primates and human beings. He has a great deal to offer to educationists: while he agrees with Piaget that intelligence is rooted in activity and experience, unlike Piaget he gives great weight to the roles of instruction and social

interaction in human development. While Piaget recognises language as an important means of crystallising and communicating thinking, Vygotsky maintains that once a child gains control over language his or her whole intelligence is transformed. Like Bruner he views language as an instrument of organising thinking and indeed he would argue that certain kinds of thinking only come into being through language.

In my analysis of Vygotsky's work I intend to explore his beliefs on the origins of language and thought, the place of language and social interaction in his theory, his insights on concept development and his contribution to our understanding of the role of instruction in children's learning. Underpinning this exploration will be the question: what are the implications for classroom practice? Rather than attempt to replace Piaget's model with Vygotsky's, I intend to indicate how both models, together with insights from Bruner and others currently working in the field of developmental studies, can inform teaching.

Vygotsky argues that before about the third year of life thought and language develop separately: there is language without thought, the early babbling and sound play infants engage in; and thought without language, giving rise to the kind of simple problem solving achieved by the higher primates. In explaining how these two processes fuse at about age two to make possible an entirely new kind of intelligence, Vygotsky offers us the powerful image of two intersecting circles. This allows for the continuation of both thought without language, skilled behaviour like riding a bicycle or driving a car and perhaps some kinds of mathematical thinking, and language without thought, perhaps nonsense rhymes and some kinds of language play would be examples of this. However

his main emphasis is on the new kinds of thinking that language makes possible.

Children learn to talk because they want to communicate with other human beings. Vygotsky recognises, with Piaget, that two kinds of speech arise: speech for oneself, often in the form of talking out loud as a young child engages in a task and speech for others, speech to communicate and converse. Vygotsky studied the speech of children between about three and seven years and noted that while in their conversation children's control over syntax and increasing understanding of conventional word-meaning, were apparent, their monologues, speech for themselves, become much briefer and much more personal in the sense that they were not affected by any sense of an audience with whom to share them. (Vygotsky, 1962).

While Piaget believed that egocentric speech fades away to be replaced by socialised speech, Vygotsky rejects this hypothesis claiming that speech is essentially social in its origins and egocentric speech 'goes underground' as inner speech or thought. The planning and organising function of egocentric speech is carried on internally by thinking. So the pattern is: first social speech, then the addition of egocentric speech which branches off to become inner speech and a tool of thinking; meanwhile social speech continues its development becoming a more mature instrument of communication. Vygotsky describes the peculiar features of inner speech thus:

'Inner speech is not the interior aspect of external speech - it is a function in itself. It still remains speech, i.e., thought connected with words. But while in external speech thought is embodied in words, in inner speech words die as they bring



forth thought. Inner speech is to a large extent thinking in pure meaning. It is a dynamic shifting, unstable thing, fluttering between word and thought, the two more or less stable, more or less firmly delineated components of verbal thought'. (Vygotsky, 1982, p. 149).

Vygotsky continues by maintaining that behind verbal thought lies the 'plane of thought itself'. He insists that there is no rigid correspondence between the units of thought and speech. Indeed the 'post-language symbols' with which we think began as speech, but have been freed from the constraints of the spoken language and the limiting force of conventional public word meanings. As James Britton puts it:

'It is this freedom that characterises the fluidity of thought - and accounts for the necessity of imposing organisation upon our thoughts when we want to communicate them'.

Britton goes on to comment on the paradox that it is because the child, motivated by social need, handles freer forms of speech, that he or she becomes able to carry out 'mental operations more subtle than anything he or she can put into words'. (Britton, 1987, p. 124).

No wonder children were often unable to explain adequately what they had understood about some of Piaget's tasks (see Section 4 of this chapter). The implications of this very intellectually challenging part of Vygotsky's theory for classroom practice are considerable but need careful thinking through.

The claim that human consciousness is achieved by the internalisation of shared social behaviour is an even more central theme in 'Mind in Society' (1978) than in 'Language and Thought' (1962). If indeed education is 'an effect of community' there are strong implications for how teachers, who are powerful agents of a culture, organise the learning environment and their own role within it. Before explaining some of the implications for instruction I would like to turn next to Vygotsky's contribution to our understanding of the development of concepts, for this too, has enormous potential for guiding classroom practice.

Vygotsky stresses that concepts are not taken on ready made. Burgess reminds us that a central theme of **Thought and Language** is that words refer to classes and categories.

'Words are in the language. They relate to each other contrastively, as every Saussurean knows. But thought is in the language too, because words are not just categories but generalizations. They have got there through an act of mind in history. It follows that in children's learning, words do not just pop out of language or out of daily life and into their heads. To grasp and use a word is to grasp a generalization. (Burgess, 1993, p. 25).

The acquisition of the word may be the beginning rather than the end point in understanding the mature meaning. In short word meanings evolve during childhood. Vygotsky notes for example that there are several stages in coming to understand a concept like a triangle:

'In the experimental setting, the child produces a pseudo concept every time he surrounds a sample with objects that could just as well have been assembled on the basis of an abstract concept. For instance, when the sample is a yellow triangle and the child picks out all the triangles in the experimental material, he could have been guided by the general idea or concept of a triangle. Experimental analysis shows, however, that in reality the child is guided by the concrete, visible likeness and has only formed an associative complex limited to a certain kind of perceptual bond. Although the results are identical, the process by which they are reached is not at all the same as in conceptual thinking.'

(Vygotsky, 1962 p 66.)

The time concept only emerges when the abstracted traits are synthesised and this synthesis becomes the agent of thought. Vygotsky maintains that his experimental results reveal that it is language which is significant in directing 'all the part processes of advanced concept formation'. Vygotsky (1962) It is only when a time concept is acquired that a child can generalise what has been learnt to other situations.

This gives language a far more significant role in the development of conceptual thinking than we find in Piaget's theory. (Walkerdine, 1984; Edwards and Mercer, 1987) In the case of younger children it is the spoken form of language which organises mental activity. Vygotsky goes on to note the profound effect becoming a reader and a writer has on the young learner's critical awareness of his or her own thought processes. The constancy of the written word makes possible reflection upon meanings. As I intend to show in Section 5 of this chapter this has had a great impact on other educational thinkers

and researchers, not least Jerome Bruner. However only slowly are these understandings about the role of language in its spoken and written form being fully applied to everyday primary school practice. In Part Three I will take up this question of language and learning looking more precisely at the kinds of language we need to promote.

Vygotsky does make explicit some of the pedagogical implications of his theory and I turn now to some of his ideas which have direct relevance to instruction: his analysis of the relationship between 'spontaneous' and 'non spontaneous' concepts, the notion of the 'zone of proximal development' and the related idea of the role of the adult in promoting intellectual growth. The kind of support the adult provides has been termed 'scaffolding' and has been applied to every aspect of children's learning (Wood, 1988; Wells, 1986; Applebee, 1989).

Piaget described the ideas which we arrive at by inference from our everyday experience, notions like 'dog', 'angry' and 'plate' as 'spontaneous' concepts while 'non spontaneous' or 'scientific' concepts are often taken over from others in a relatively formal context like a school. These latter concepts are essentially verbally mediated and are 'empty categories' until infused with the life blood of our own experience. In human learning there is a two way process constantly taking place as the experience-saturated spontaneous concepts move upward, while the verbally mediated non spontaneous concepts <sup>descend</sup> ~~rise~~ in a mutually supportive and enriching manner. This seems to me entirely compatible with Piaget's complementary processes of assimilation and accommodation.

In any classroom programme it is the teacher's role to help the bridging of the gap

between the two kinds of concept. Thus to take as an example the 'Squirrel' project in Chapters 8 and 9 of this study, the children come to the project with spontaneous notions about squirrels: they are small furry animals with large tails; they live in woods but in Kent the grey squirrel is also found foraging in dustbins; they are killed by foxes but are also seen dead on the roads. These spontaneous notions were refined by contact with non spontaneous concepts in the video film, in books and the teacher's comments: squirrels become part of a category of creatures, 'rodents', their woodland environment becomes a 'habitat' and they are seen as both 'prey' and 'predators' in the food chain. In Chapter 8 it is suggested that by helping children to organise their prior knowledge verbally and in a group context the teacher can prepare the way for the integration of these spontaneous ideas with the new ideas school learning provides.<sup>5</sup>

Vygotsky has much to say about instruction and the teacher's role: learning can accelerate when a more mature person explains something by thinking through strategies out loud to a less mature person. This assistance helps a child manage a particular task with help, but more importantly, he or she internalises strategies for planning and organising their own thinking. For Vygotsky this self regulation of mental activity is the key to intellectual progress. It begins with social interaction which makes possible the inner dialogues which regulate thought and lead to mature culturally developed ways of learning.

However bringing about what David Wood helpfully terms 'shared constructions' of knowledge and expertise is not a straightforward matter. As Wood points out some children retain and generalise what they are taught, others are less successful. (Wood,

1988). The way the adult structures the task, verbally and through demonstration, draws attention to the most important features for the child to remember and supports the young learner with praise and advice is highly significant and this whole area will be taken up again in different ways throughout this study. At this point it is helpful to look at Vygotsky's notion of the 'zone of proximal development'; at its simplest this refers to the tasks, activities and kinds of problem solving a child can manage with help at a particular time. Thus it has to do with the gap between what a child manages competently with help and what he or she would manage unassisted. This is an exciting and useful way of looking at the potential role of instruction, and not surprisingly since Vygotsky's 'Mind in Society' was published in English in 1978 the idea has given rise to much interest and research. David Wood et al (1978) carried out a series of experiments with pre school children engaged in practical mathematical tasks. Attempts to teach children only by verbal means were not successful, nor were the children able to learn effectively from demonstration alone. However they managed the tasks well when what Wood terms a 'contingent teaching technique' was used: where an element of 'showing how' was accompanied by carefully judged verbal advice. In short the instructions were contextually meaningful. Successful 'contingent learning' requires that the teacher is sensitively tuned with the needs of the young learner. (Wood, 1988, p. 78).<sup>6</sup>

This kind of sensitivity on the part of the adult in pre school child-caregiver conversations has been observed by Gordon Wells. It was noted that most, in fact seventy per cent, of such conversations, were child initiated. The school situation is necessarily more formal than home contexts and child-caregiver (often the parent) relationships are

qualitatively different to those between child and teacher. Nevertheless we can learn much of value from the intuitive strategies of the caregiver whose conversations with young children are characterised by a special quality of reciprocity and cohesion.

In the classroom context careful observation of pupils' strategies leads to greater sensitivity in judging when direct teaching seems appropriate and when it is best to hold back and let the young learner take the initiative. How far can this kind of support or 'scaffolding', difficult enough with one young learner and with a relatively structured task like that in the Wood's research, be provided in the lively complexity of the classroom? (Wood, 1988).<sup>7</sup> As well as teacher/pupil interactions we should perhaps recognise the potential of peer tutoring and group activity in opening up the zone of proximal development for the young learners. The case study in Chapters 8 and 9 aims to look at how ways of thinking about things can be developed in a collaborative setting in which the teacher plays an important part. This cooperative approach, in which social interaction is central, seems close to Vygotsky's way of looking at learning. Pollard believes that 'social constructivist' approaches which recognize how the social context influences behaviour and perspectives have their theoretical basis in Vygotsky's work (Pollard, 1993). Two aspects of Vygotsky's theory discussed in this section are making an impact. First the emphasis on the interrelations between thought, language and culture and second the enabling role of the adult. (Donaldson, 1978; Hughes, 1986; Bruner, 1986; Bruner and Haste, 1987; Edwards and Mercer, 1987; Pollard 1993).

The next section considers the views of current developmentalists of the cognitive school and how they draw on both Piaget and Vygotsky in refining their own theory of

pedagogy.

## **2.5 The later cognitive theorists: Bruner, Macnamara, Donaldson and the importance of context and collaboration in learning**

Jerome Bruner has played a significant part in interpreting and reinterpreting Vygotsky. He has also contributed much to our understanding of Piaget's work. Piaget was interested in the structure of thinking from infancy to maturity but Bruner's interest centres on processes: on individual differences in creative problem solving. Like Vygotsky, Bruner places great emphasis on the role of language in the development of knowledge and understanding. In this section I begin by comparing Bruner's beliefs about the origins of thought and language with Piaget's and Vygotsky's, looking both at the role of social interaction and the role of instruction. I move on to the importance of context and of collaboration in learning in Bruner's theory, and in related thinking and research by some of those who would feel reasonably comfortable under the broad umbrella of cognitive psychology.

In his early work, Bruner described developmental stages superficially similar in some ways to those of Piaget. The 'enactive' stage from birth to about eighteen months is like Piaget's sensory motor stage a period of action based thinking. This is followed by the 'iconic' stage when a child can create internalised images of experiences and things. The 'symbolic' stage arrives later; it includes language and transforms the child's capacity for thinking. Perhaps it is misleading to call these ways of processing experience 'stages' as



this suggests they are immature modes to be replaced. In fact some of our thinking throughout life remains both 'enactive', skilled learning being an obvious example and 'iconic', which would include some kinds of problem solving. Thus the onset of the capacity to symbolise enriches the child's existing experiencing and thinking.

While Piaget's theoretical position on development remained more or less constant, and Vygotsky died before his work could be fully developed and refined, Bruner's views have changed over a long working life. He has made these changes of perspective explicit in recent works, for example in 'Actual Minds, Possible Worlds' 1986 and in 'Making Sense' 1987. Here is how Bruner puts it in the introduction to the latter book.

'A quiet revolution has taken place in developmental psychology in the last decade. It is not only that we have begun to think again of the child as a social being - one who plays and talks with others, learns through interactions with parents and teachers - but because we have come once more to appreciate that through such social life, the child acquires a framework for interpreting experience, and learns how to negotiate meaning in a manner congruent with the requirements of the culture.' (Bruner and Haste, 1987, p. 1).<sup>8</sup>

Bruner has always seen 'making sense' in the context of what particular cultures offer to the individuals growing up in them. However, like Piaget, he described a problem solving child interacting with objects in a relatively isolated way. Bruner acknowledges a re-reading of Vygotsky's influence in his new focus on the child as a social being whose competences are 'interwoven with the competences of others.' (p. 11, Bruner and Haste, 1987).

The resources of a particular culture affect how a young learner develops and Bruner's interest in the significance of cultural differences was evident in his book 'Studies in Cognitive Growth'. Bruner, Oliver and Greenfield (1966) Ways of thinking are for Bruner partly a function of the lifestyle, customs, resources and values offered in particular cultural environments. Above all children's pattern of development is affected by the ways in which older members of society relate to the new members and what they consider needs to be learned. Something as commonplace as interpreting a picture or photograph in western culture would be difficult for children who have not been helped to infer solidity and depth by cues, like the relative size of the things portrayed. Even within our culture we sometimes assume pupils can make sense of diagrams and illustrations in books when in fact they have not the experience, skill and knowledge to do so without help. This is an issue taken up later in this study in Chapter 6, and in Chapter 8 where children struggle with a Food Chain Diagram. Bruner pointed out that perceptions of such things are not natural but learnt. Like Vygotsky, Bruner recognises that the processes that underlie intelligent and adaptive thinking are communicated, often in subtle ways, from the mature to the less mature.

In his work on infants in Oxford Bruner studied pre verbal 'conversations' between caregiver and infant. He and his co-workers noted the quality of 'joint attention' exhibited by the 'conversing' pair. The turn taking that occurred in play, perhaps the adult rolls a ball to the child and the child rolls it back, seemed to be in important ways the forerunner of verbal language. 'I roll the ball to you, and you roll it back to me.' These early action patterns of behaviour sequences provided a framework for language

learning: '.... that a concept of agent - action - object - recipient at the pre-linguistic level aids the child in grasping the linguistic meaning of appropriately ordered utterance, involving such case categories as agentive, action, object, indirect object and so forth.' (Bruner, 1975, p. 17).

Bruner goes on to claim that the child grasps initially the requirements of joint action at a pre-linguistic level, learning to differentiate these into components and '.... learning to recognise the function of utterances placed into these serially ordered structures, until finally he comes to substitute elements of a standard lexicon in place of the non standard ones'. (Bruner, 1975, p.17).

Bruner stresses that it is the role of the adult as interpreter while interacting with the child that is so significant. It is not a matter of imitation, which dominates the behaviourist model of language learning considered in Section 1 of this chapter, but of extending, with help, the rules in action to the semiotic sphere.

'Grammatical rules are learned by analogy with rules of action and attention.' (Bruner, 1975, p. 171).

However they are learnt in a context which is vital to the success of the communication.

Bruner's work is very much in tune with that of the linguist John Macnamara, working at McGill University. Macnamara proposes that children are able to learn language because they have other skills of the mind. He rejects the narrowness of Chomsky's

theory of the language acquisition device, arguing that human beings possess a strong capacity for making sense of situations involving human interaction. Donaldson (1978) [Macnamara, 1972;]

In his belief in certain cognitive abilities as a necessary condition for acquiring language Macnamara is close to Piaget. However he makes a point of recognising the impact of language on thinking once the child becomes a talker. Superficially the theory seems reminiscent of behaviourism in that what the words mean in a particular context is understandable because they occur together with non-linguistic events. However as Donaldson makes clear the old idea was that associations between for example a word and a thing were built up quite mechanistically and were bonds between isolated elements. Donaldson observes that:

‘The newer account differs from this in the most fundamental way. The primary thing is now held to be the grasp of meaning - the ability to ‘make sense’ of things, and above all to make sense of what people do, which of course includes what people say. On this view, it is the child’s ability to interpret situations which makes it possible for him, through active processes of hypothesis - testing and inference, to arrive at a knowledge of language.’ (Donaldson, 1978, p. 38)

By extending interest to the very earliest stages of infancy Bruner and others have investigated the way in which the human infant learns about the world. Home and school are different contexts for learning, but a model of development can help inform good practice later on in school.

There are clear implications for instruction in the work of Bruner and other cognitive

psychologists and developmentalists. As I have noted earlier processes of self regulation are emphasised rather than the emergence of underlying logical structure. Powers of concentration are developed over time and as Wood points out perceptual/attentional activities demand 'guided selection, memory and interpretation'. (Wood, 1988, p. 70). These abilities are developed within a cultural context and, as Bruner has written consistently over several decades, the interpretative skills of the more mature in a society are needed to help the less mature use all the resources, human and technological which that culture offers.<sup>9</sup>

As the classroom work in Chapter 8 aims to exemplify, the secondary sources need to be introduced and organised to encourage collaboration and discussion. Bruner and others believe a major step forward in current views on pedagogy is the new status of collaboration in learning, of perceiving learning as a social act. I believe, as my analysis shows later, that this applies even to reading reference and information books. This leads to a widely recognised acknowledgement of the role of language in classroom learning and collaborating. (Vygotsky, 1962; Britton, 1970, 1981; Walkerdine, 1984; Tizard and Hughes, 1984; Wood, 1988; Gipps, 1992). A major new emphasis is now placed on the idea that language is embedded in a communicative context that includes non linguistic cues. I have already referred to the work of John Macnamara on the importance of the meanings inherent in the general context in helping children to match their intentions to language. Donaldson takes up this idea and recognises its relevance for the older child in school. We gain a sense of what people mean because we have access to a wide range of cues that tell us what the context is and the problem people are referring to. Donaldson (1978). Bruner points out that non-linguistic clues like gestures and

movements reveal subtleties like the degree of importance of what is being said. He comments:

‘The embeddedness of speech in a communicative context is something we take for granted; we do not realise that we are not relying simply on the meanings of words put together in a grammatical way. As various writers have indicated, however much the structure of language communicates about meaning, in ordinary interactions we rely greatly on other information’. (Bruner and Haste, 1987, p. 15).

As Donaldson makes clear, pre-school children do their learning in context; for them speech and thought are nearly always embedded. This accounts for the young child’s ability to engage in apparently logical exercises like negation which would be beyond them if presented in disembedded language. (Donaldson, 1978; Bruner and Haste, 1987).

A main theme of Donaldson’s book ‘Children’s Minds’ is the gap between what a child can manage in a real life problem solving setting and what is achieved or not achieved when the same problem is confronted in more remote terms. But in school settings we are sometimes obliged to consider what words mean since there cannot always be a perfect embedding in a context. Even here we do not derive meaning from the words alone. Bruner observes:-

‘We try to make sense of them by treating them to memory, knowledge and association. We make them ‘mean’ by locating them in our known world.’ (Bruner and Haste, 1987,

p. 15).

This recognition of the central role of speech in learning, alongside its embeddedness in a wider learning context had considerable implications for classroom practice as I intend to explore further in Chapter 6.

## **2.6    Towards a model of learning.**

It was observed in the introduction to this chapter that no one theory explains the full complexity of human development and learning. No single existing approach answers every question. However it is suggested in this study that certain insights or themes about how children learn in general might helpfully be applied to their reading of non-fiction to support classroom work. What are some of these understandings?

Firstly the main three developmentalists, Piaget, Vygotsky and Bruner agree that the child actively constructs his or her intelligence through interaction with the environment. Chomsky too presents a picture of the child actively applying the rules of syntax in becoming a language user, although he pays minimal attention to environmental factors. It is clear that an active child needs to be helped to formulate his or her own questions and to be fully and intelligently engaged in every aspect of the learning situation. The dynamic nature of learning is evident in Piaget's adaptive model of learning as assimilating new to existing knowledge and accommodating the established framework to take in the new learning. If the new learning, whether it is from first hand experience

or activity or from a secondary source like a book, is of too alien a nature, and the gap between existing knowledge and the new information is too great, learning cannot take place. This has important implications for choosing and using information books and this area is discussed in detail in Chapters 4 and 5. However Piaget's notion of 'readiness for' learning has been challenged, in its more extreme form at least.

This leads to the second insight which informs my work. Although the child is active in his or her learning the sensitive adult whether parent, caregiver or teacher can make a difference. The right sort of intervention can allow a child to reach for an idea which might not be accessible without help. Judging children's 'zones of proximal development' requires experience and skill; one child, apparently at the same stage as another, may have a more elastic capacity for further learning. Clearly this idea is important where the teacher is giving help on an individual basis. Can a teacher engage in what Bruner terms 'scaffolding discourse' with a group or even a whole class? Edwards and Mercer found that even in classrooms where the teachers perceived themselves as 'progressive', genuine negotiation of meaning between teacher and children is relatively rare. (Edwards and Mercer, 1987). In the main study in Part Three, the work begins with a class discussion. This provided the opportunity for the teacher researcher to help the children organise their prior experience and knowledge, in Vygotsky's terms their 'spontaneous' concepts to prepare the way for new learning or 'non-spontaneous' concepts. The nine year olds in the example organise their common sense ideas about squirrels before formulating their own questions and then seeking information from books. Throughout work of a sustained nature like this the teacher can help take the children's thinking further in class or group discussion than might have been the case if learning was



more solitary. This is why many have reservations about work which is too much structured by worksheets or cards or by computer programmes, thus cutting the children off from the verbal interaction with teacher and peers which would give their learning point and vitality.

It is of course interaction with the other children in the class that leads to the shared purposes and intentions which make extrinsic kinds of motivation unnecessary. My third theme is indeed that learning is essentially social. Vygotsky confronts us with a paradox: what is first engaged with through social interaction is then internalised as a tool of thought and self regulation. This is how the ways of thinking characteristic of the particular culture in which we have our being make their impact on us. Bruner and others have accepted and developed the idea that children learn best collaboratively. In the case of primary schoolchildren this means making talk about activities and about their reading and writing, central to the learning. Spoken language can help bring alive for children the new ideas and information they find in books.

A fourth theme has to do with the recognition that learning takes place in a context in which both linguistic and non linguistic cues combine to make meanings available to young pupils. Donaldson and Macnamara have shown how language is embedded in other kinds of learning from the earliest stages. How we help children to integrate verbal and non verbal kinds of learning, and first hand experience with what they find out in secondary sources continues to be a pedagogical challenge to which we have only partial answers. Edwards and Mercer draw attention to the teacher's role in socializing cognition. (Edwards and Mercer, 1987). Walkerdine also emphasized the importance of

the teacher's discourse in establishing joint understanding, between teachers and pupils: pupils are introduced to certain ways of thinking, talking, and later writing valued by the educational community. The teacher's discourse as an agent of acquiring abstract concepts is for Walkerdine an important part of the social context of learning. (Walkerdine, 1984) These four themes, that children are essentially active in their learning, that the adult's discourse can move a child forward in a special way, that learning is essentially social and collaborative and that it takes place in context involving both linguistic and non linguistic elements, provide an organising framework for considering how we might best support children's reflections on the information they find in non-fiction.

There is a problem in developing pedagogy based on a theoretical position like the one described above. Gipps, for example, reminds us that:-

'The life of the classroom is busy, full of interactions and less systematic than the uninitiated would believe'. (Gibbs, 1992, p. 5).

For this reason the main study here is a classroom example with myself as practitioner/researcher in an attempt to present a realistic picture of what can be achieved (see Chapters 8 and 9.)

## **Summary**

Some different approaches to language and thinking and their role in learning have been

considered. First I attended to the principles of behaviourism, a theory which eschews concepts like 'mind', 'intention', 'feeling', 'interest' and 'meaning', and which after some decades of dominance was seen to lack the explanatory power to answer vital questions about learning.

Piaget's theory in which the child actively constructs his or her conception of the world, passing through a series of stages before becoming able to reason and understand in a mature way, was considered and his relative lack of emphasis on adult mediation and language as a tool of learning was assessed.

I attended next to Vygotsky's theory noting that the broader cultural context, social interaction and instruction all play a far greater role in development than in Piaget's theory. His views on the significance of language in thinking, his conviction that control over writing moved the individual forward intellectually and his emphasis on the power of the right sort of adult mediation in learning all contribute considerably<sup>to</sup> the assumptions which inform the present study.

The importance of Bruner's detailed work on the processes involved in mature thinking was assessed. Bruner and the other cognitive psychologists and psycholinguists close to his views accept with Piaget that some kinds of thinking predate the acquisition of language and relatively language-free thinking continues after a child becomes verbal. However the role of language in transforming and organising thinking is given far greater emphasis. The essential activity of the child, so central in Piaget's theory, is accepted but the weight given to instruction, to the adult's mediating role in children's learning

contrasts with Piaget's view.

It was noted that Bruner comes perhaps closest to Vygotsky in his conviction that cultural history helps shape each individual mind. It was made clear that Vygotsky's early death in 1934 prevented him from developing his work further, perhaps stimulated by other research writings, and it was Bruner who fully realised, in the later part of his research the importance of the interplay between biological and social factors in human development. Bruner and others in his area increasingly attend to the importance of collaboration and shaping in learning. It is this aspect of current cognitive theory which informs the design of the classroom work in this dissertation (see Chapters 8 and 9). This makes Piaget's inflexible adherence to the idea of developmental stages untenable. Bruner has freed his view from the Piagetian notion of 'readiness' and the belief that the impact of lessons, and experience from other sources like books, is constrained by the structure of the child's intelligence.

Finally the themes which contribute to the emphasis of this study are made explicit: the child's learning is essentially active; the adult has an important potential role as interpreter of the world, and can help expand the child's achievements in a way not possible without help; learning is social and a collaborative classroom approach seems helpful; learning takes place in a context in which meanings are made from both linguistic and non-linguistic cues.

## PART TWO

### CHILDREN'S NON-FICTION IN THE PRIMARY YEARS: AN ANALYSIS OF DIFFERENT KINDS.

'In order to make a good job of selecting books, teachers need to know books as well as know their children'.

(McKenzie and Warlow, 1977, p. 62).

## INTRODUCTION TO PART TWO

In Part One it is argued that what is known about learning in general provides a framework for learning from non-fiction. Part Two turns to the different kinds of book which are generally described as 'children's non-fiction'. It is intended that the analysis in this part of the study will illuminate the second and third research questions set out in the Introduction. What do teachers need to know and understand about non-fiction texts? What do children need to be helped to know and understand about non-fiction texts?

Chapter Three attempts a tentative taxonomy of children's non-fiction books. It begins with an examination of some definitions of 'genre' as applied to different kinds of texts and considers the 'genre theory' movement at Deakin University in Australia. Genre theorists do not seem concerned primarily with the classification of books. The emphasis of their work is a different one. Some analysis of 'genre theory' is included here because it raises issues about how children can be helped to control different kinds of writing. An assumption underpinning the analysis of the classroom example in Chapter 8 and 9 is that there is some relationship between successful reading and successful writing in a particular genre. Genre theorists maintain that certain kinds of text arise in social contexts within a culture and become relatively stable. According to proponents of the theory individuals need to control the kinds of reading and writing deemed important in their society if they are to have a full range of employment options.

The theory becomes more controversial when it is translated into certain kinds of classroom practice which involve children being directly taught to write in particular styles meeting the demands of particular genres. The views of critics like Rosen (1989) and Dixon and Stratta (1992) who point to the dangers of fossilizing kinds of writing in a way that inhibits children's creativity are considered. Reading and writing interrelate, but genre theory tends to be applied to children's writing more than to their reading. A central question is addressed: should children be directly taught to control genres considered important in our culture? This issue is examined again in relation to the children's writing from secondary sources in the main study. It is of course pertinent to the question of what children need to be helped to know and understand about the different genres.

The chapter then moves to a consideration of how a flexible taxonomy of non-fiction texts might be set out. The traditional way of categorising writing is as follows: narrative, description, exposition and argument (Britton et al, 1975). These categories, general as they may be, are helpful as one way of describing the work of mature writers but less useful in considering writing for, and indeed by, children. Even a division between children's fiction and non-fiction is problematic. How, for example, do we classify Charles Keeping's imaginative picture books which use drawings of fictional people to educate us about city-life (for example **Railway Passage**, 1974)? It is possible, however, to make this division in a general way, and for the purpose of analysis in this study I do so.

A further very general division is made between books which are very broadly

narrative and arranged in a chronological time sequence, and those which are broadly non-narrative and organised on a principle other than a chronological one, for example to meet the needs of a particular subject. This broad classification of texts is helpful in making an analysis of the typical features of different kinds of children's non-fiction. However, as I explain in Chapter 4, section I, narrative is not restricted to purely chronological writing but can be a means of evaluation and reflection. Similarly much mainly non-narrative writing has some chronological element, for example historical analysis and argument and biology, where some processes follow a natural time sequence.

The broad non-fiction categories in this study are narrative, non-narrative (reference) and non-narrative (exposition). These categories and their suggested subcategories are set out in the next three chapters.

*Chapter 3 presents a taxonomy.*

Chapter 4 examines non-fiction with a narrative form including:

- o writing organised chronologically where the information is given in a story form - 'information stories'.
- o Biography, autobiography and diaries.
- o Writing organised procedurally in, for example, instruction booklets and manuals.<sup>(1.)</sup>

Chapter 5 examines categories of non-fiction with a non-narrative form:

- o reference books: dictionaries, thesauruses, encyclopedias and atlases.
- o non-narrative picture books;



- o expository texts: writing which describes, explains or sets out an argument ('information books').

Children's information books with a non-chronological organization are an important part of children's reading across the whole of the curriculum. For this reason they are given particular attention throughout this study with some suggested criteria for evaluating them. The theory of Christine Pappas on the features that make a children's information book a genre with predictable features is applied to two children's books. Pappas's work is useful in predicting what kind of global structure makes an information book most accessible to young readers.

I argue, finally, that while children's books are capable of broad classification into different forms, many fall into a group that might be termed 'transitional' (Baker and Freebody, 1989). These texts are found in the non-fiction sections of libraries and serve an informational purpose, but do not conform to a particular genre or subgenre. It is argued that they appear to be a form peculiar to children's books. The author's purpose seems to do with making information accessible to young learners.

## CHAPTER THREE

### Towards a taxonomy of children's non-fiction texts.

#### Introduction.

Many different kinds of text shelter under the general term 'children's non-fiction'. The National Curriculum Statutory English Guidance, at the time of writing in the early 1990s, requires teachers to help children to respond to all types of writing. (DES, 1990). But the question both of what are the 'kinds', 'types' or 'genres' of writing children need to read and to write and how learning to control them is best supported is problematic. Section 3.1 examines definitions of Genre and Section 3.2 Genre as a Social Category. Section 3.3, entitled Criticisms of the 'genre theory', considers the points of view of both advocates and critics of Australian 'genre theory'. The implications of what is often termed the 'genre debate' for this study<sup>are</sup> set out in 3.4.

Section 3.5 moves to a proposed taxonomy of the kinds of non-fiction children encounter in school during the primary school years.

#### 3.1 Defining Genre

Although it is used very generally to mean kind or type, the precise meaning of the word 'genre' is problematic. (Barnes and Sheeran, 1991; Crystal, 1986; Preston, 1986; Swales, 1990; Andrews, 1992). There are two main questions which may be asked to help illuminate the concept: first, to which forms in a culture does the term apply?

second, are genres static forms or fluid and reactive to particular social situations?

Crystal contributes to the argument about the first question by maintaining that the term was, until the last two decades, mainly applied to forms in literature, for example poetry, the novel and drama, and to art - for example classical, abstract and surrealist. More recently the term has been used by some rather generally to mean 'kind' or 'type' and applied to any representational form, to both literary and non literary forms, to written and to spoken language, including everyday conversation (Crystal, 1986).

Others resist the application of the term 'genre' to all identifiable forms in a culture, for example Swales, 1990.

The danger of any attempt to classify is that it can result in fossilized categories. A 'genre' approach to language should rather help children see how changing purposes in talk and writing affect the form of the language used to carry the meanings. The purposes of the language used and the awareness of the audience make genres essentially socially situated. (Stratta and Dixon, 1990; Andrews, 1992; Miller, 1984; Swales, 1990; Cambourne, 1988; Cambourne and Brown, 1989).

The second question to do with the status of genres, either as relatively static forms or as dynamic phenomena, raises issues which are of current lively debate in the early nineties. This debate centres mainly on the work on genres and genre theory at the Australian Universities of Deakin and Sydney. Contributors to this discussion about genre theory could be placed at different points along a continuum, but the extreme

positions are not compatible and would lead to different kinds of classroom practice. One position regards genres as fully determined fixed forms. Teachers holding this view would perceive their task as helping children understand the features of fully determined forms, unaffected by social contexts. Few, if any, hold this view in its most extreme form.

The other view treats genres as fluid, dynamic, and as a function of particular social contexts. (Rosen, 1988; Barnes and Sheeran, 1991; Czerniewska, 1991; Stratta and Dixon, 1992.) Stratta and Dixon maintain that adherents of this perspective:

'will have to acknowledge that students, as they write, are dealing with relatively fluid structures and thus construct their meaning according to their sense of the social situation'. (Stratta and Dixon, 1992, p. 20).

Most writers, whether taking up a linguistic or an educational perspective, would place themselves in less extreme positions along the continuum of views, the extreme ends of which are sketched above. Andrews, with reference to language forms suggests that we might usefully distinguish 'genre' from what he terms 'modes' and 'forms'. In Andrews' model the widest ranging categories, like for example narrative, argument and description are thought of as 'modes'; these are broad based ways of forming speech and writing. The term 'genre' is limited to non-specific categories like poetry, drama and novels. Subcategories of genres are termed 'forms': within the overall genre of novel, sub-genres or 'forms' would include science fiction, <sup>and</sup> romance.

(Andrews, 1992).

Barnes and Sheeran ask how 'genre' and discourse might relate to 'register' when we look at the language of school subjects. They detect some ambiguities in the work of Christie (1985) on the exact meaning of the terms. Do they refer to patterns of language forms that are commonly used by specialists in a subject, that is the grammatical forms and the vocabulary? Or do they refer to the conceptual frameworks that underline the register, the 'range of knowing' made possible by it?' (Barnes and Sheeran, 1991).

Ways of knowing and meaning in school subjects like science, mathematics, history and so on have an important place in our culture. The concern of some educationalists is that by thinking of these as 'genres' we risk too narrow a focus on a set of linguistic forms and practices to do with grammar and vocabulary. It is the way of meaning rather than the relatively superficial surface features which need emphasis. (Dixon, 1988; Rosen, 1988; Barnes and Sheeran, 1991).

### **3.2 Genre as a social category**

Scholars and educationalists sympathetic to the view of 'genre' associated with the Australian universities believe children should have access to the main genres used in their culture. Some forms of language and kinds of text are not evenly distributed, and these are often ways of using language associated with the educated and powerful

in society. (Kress, 1982, 1985, 1986, 1987; with Knapp, 1992). Space does not allow for a more detailed account, but further analysis is presented in Appendix 20.

### 3.3 Criticisms of 'genre theory'.

The case for and against genre theory was explored in some interesting papers in **The Place of Genre Theory in Learning: Current Debates**, edited by Ian Reid of Deakin University in Australia and published in 1987. The lively debate begun in this publication continued in issues of **English in Australia**, for example in December 1988, and later in 1992 in a special issue of **English in Education**, Summer 1992. The previous section makes clear that while genre theorists treat genre as a social category, certain social situations occur and recur in a culture which leads to language associated with them becoming in some sense predictable and conventionalized. Kress, for instance, speaks of 'generic conventions', and in doing so implies that these have an existence of their own and are subject to rules. Kress states his position unambiguously thus:

'in my view there are genres; they, and access to them, are unevenly distributed in society, along the lines of social structuring. Some genres - and the possibility of their use - convey more power than other genres. As a minimal goal I would wish every writer to have access to all powerful genres.'

(Kress, 1987).

Critics of the genre school suggest that if a range of relatively stable genres are

identified there is a danger of fossilization. (Dixon, 1987; Barrs, 1991) Dixon, for example, is concerned that this might lead to prescriptive practices in school particularly in relation to children's writing. Dixon, (1987).

### **3.4 Implications of the genre debate for this study.**

Some of the recent thinking about and recent studies of genre discussed above were available to me only after my classroom study was complete. It is also true that work at Deakin University leans more towards children's control of different genres as manifest in their writing, while my study primarily examines strategies for helping children control their reading. But reading and writing interrelate, the one enriching the other, and some of the Australian work and critiques of that work are helpful to me in my analysis of the writing produced in the classroom study in Chapters 8 and 9.

One meeting point between children's reading and writing is their growing knowledge about language. (Martin 1987; Cambourne, 1988; Moon and Raban, 1992). It is helpful for children to become familiar with the different ways in which their culture makes meaning in written and spoken forms.<sup>1</sup> Denial of access to certain forms of language and kinds of text, as Kress and Knapp argue, may perpetuate certain inequalities (Kress and Knapp, 1992). It is children's sense of purpose in their reading and writing which can make a genre-based approach dynamic rather than static. In the classroom example in this study children's sense of purpose arises from taking their own questions to the books, and gains strength also from a clear sense of

audience for their talk and writing.

### **3.5 Kinds of Non-fiction in the primary years.**

Non-fiction is a broad term used to cover kinds of writing which have to do with information about the phenomena human beings experience in the world. It contrasts with fiction, stories, poems and plays, which draw also on the inner world of the imagination and explore human experience in a different way.

This chapter aims to identify the different kinds of non-fiction with which children need to become familiar in the primary school years. If, as required by Attainment Target 2: Reading (English in the National Curriculum (No.2) DES March 1990), children are to be helped to develop 'the ability to read, understand and respond to all types of writing' there needs to be some broad agreement what types of non-fiction there are and the demands each of them makes on young readers. Thus a simple categorisation of the kinds of non-fiction writing typically used in the primary years is set out.

#### **Genre and register**

Different styles or 'genres' of writing are characterized by their distinctive language and subject matter (David Crystal, 1987 p.73). Each style of writing is also the outcome of a particular kind of thinking. Children need help in becoming familiar



with these different kinds of thinking and writing. The linguist MAK Halliday refers to the way in which spoken and written language is expressed as its 'register'. (MAK Halliday, 1978 p.32). The "register" depends on what is being spoken or written about (the field), how the language is used (the mode) and to whom we are speaking and our attitude to the subject (the tenor).

Each school subject has its own register as do the reading materials associated with it. The previous sections on genre theory indicate the problems that might arise if too inflexible an approach to kinds of reading and writing is adopted. However there are generic choices to be made and children need to be helped to understand these. They can then begin to take control of and be active in their reading: they can read to learn. However, since the different kinds of reading material cross subject boundaries they can be considered under some broad headings.

TABLE 2 CATEGORIES OF CHILDREN'S NON-FICTION

NARRATIVE			NON-NARRATIVE		
Information Stories	Biography, Autobiography	Procedural	Reference	Picture Books	Exposition (Information Books)
<p>Main feature is adherence to a time sequence; a creature's life cycle or a person's activities over a period of time. While the form is close to story, the kind of content permissible is much more restricted than the term 'story' might suggest - authors are expected to stick to what is known factually about the phenomena written about.</p>	<p>Accounts of people's lives organised chronologically. The narrative breaks sometimes to evaluate events. Letters, diaries, children's own books and newspaper accounts also included here. Similar to the adult genre, differing mainly in the complexity of the accounts and the language.</p>	<p>Instruction books, manuals, recipes and notices all belong here as do the booklets children themselves make about the routine care of the class pet or how to use the computer.</p>	<p>The principle of organization may be alphabetical (dictionaries) or topic based (thesauruses and some encyclopedias for the very young) dictionaries and encyclopedias are simpler, sometimes illustrated versions of the adult genres, but the judgements about what to include and leave out are just as important. Atlases and map books belong here.</p>	<p>The earliest type within this category are books where the organizing principle is a concept like shape, colour, numbers or the letters of the alphabet. This genre can be for any age - for example the remarkable drawings by the child artist, Stephen Wilshire in books like <i>Cities, Dent &amp; Sons</i>, are enjoyed by a wide age range.</p>	<p>Illustrated books on one topic arranged chronologically. Following elements usually present: topic presentation, a description of the attributes of the phenomena and characteristic events, in case of an animal - feeding, breeding and movement. Most new books have contents pages, indexes and glossaries. Often published in series.</p>
<p>Jan Taylor (1978) <i>Scelurus: The Story of a Grey Squirrel</i> Collins. Barrie Watts (1989) <i>Tomato A &amp; C</i> Black David Macauley (1978) <i>Castles</i> Collins.</p>	<p>Olivia Bennett (1988) <i>Annie Bessant</i>. Hamish Hamilton. Ruth Thompson (1990) <i>Washday Turn of the Century</i> Series, A &amp; C Black.</p>	<p>Barrie Watts (1991) <i>Grasshoppers and Crickets, Keeping Minibeasts</i>. Frankling Watts <i>Roma Gans</i> (1984) <i>Rock Collecting A &amp; C</i> Black. Usborne's <i>First Cook Book</i> (1987) A. Wilkes and S. Cartwright.</p>	<p>Collins School Dictionary John Paton. <i>The Kingfisher Children's Encyclopaedia</i>. Brian Delf (1991) <i>The Picture Atlas of the World</i>, Dorling Kindersley.</p>	<p>John Burningham. <i>Colours, Opposites, 123, ABC</i> etc Walker Books. Charles Keeping <i>Railway Passage</i>. Oxford University Press.</p>	<p>Riley, P.D. (1990) <i>Electricity and Magnetism</i>, Dryad Press. Codrrey, S. (1986) <i>The Squirrel in the Trees</i>, Belitha Press Ltd.</p>
<p>Not only for the very young - this form can be an appealing way into a topic. Sometimes this can be a transitional genre which includes asides, sometimes in information boxes, giving general information</p>	<p>Most famous people's achievements are assessed differently by different groups (of course not only well known lives are of interest) Controversy is exciting! Newspaper accounts often used to aid a discussion on bias in writing and the difference between fact and opinion.</p>	<p>Explanations about how to carry out experiments in books, work cards, work sheets and charts need of course to be capable of being easily understood by the young readers for whom they are intended.</p>	<p>An alphabetical organization of encyclopedias is often preferred. Children need help in becoming familiar with the format of all kinds of reference material mentioned.</p>	<p>Pictures and text need to integrate even if they aim to surprise as well as complement and extend. Best examples are the distinctive work of gifted authors and are aesthetically pleasing whether photographs or drawings are used.</p>	<p>Too wide a focus best avoided - 'Ants' rather than 'Insects' for younger readers. Clear and appropriate retrieval devices are important and well integrated attractive illustrations. Jumbles of photographs and drawings best avoided. Good Organization of the topic with helpful headings and language that is clear and alive. A questioning approach that encourages reflection and recognises controversy.</p>

## Categories of Writing for Children

The main categories of children's non-fiction, divided into narrative and non-narrative kinds are set out in Table 2. Chapters 4 and 5 examine texts under these broad headings.

Chapters 4 and 5 describe the kinds of reading material categorised above likely to be found in the non-fiction section of good school and class libraries, and identify some general pointers to what features make such books good examples of their kind.

Children deserve the liveliest most useful and attractive books we can provide. A main limitation of non-fiction compared to the best stories is that knowledge, and attitudes to existing knowledge, are constantly changing. Conscientious renewing of books and other material is therefore necessary. Fiction has a special power to engage and enchant, but non-fiction can be just as exciting in its own way.

### Summary

This chapter began with a consideration of genre and particularly the 'genre theory' associated with Deakin and Sydney Universities which is currently the focus of lively debate.

The importance of genre theory for this study is its recognition that there are some genres important in our culture which children need to control if they are to progress

and take up opportunities in our society. However direct teaching of a few genres might inhibit children's writing rather than liberate it. Thus Dixon's notion, of helping children see the implications of certain generic choices, makes for a more dynamic approach to reading and writing. In the main study in this work children are encouraged to think of purposes and audiences when choosing from the available options. Provisions of a range of texts provide some models for children's own writing. But how **directly** we should invite children to model their own writing on them is more problematic. Houghton, for example, invited 7-11 year olds to model their report writing on entries in the Encyclopedia Britannica. (Houghton, 1992)

When looking at non-fiction texts for children an attempt is made to put these into flexible categories. It is suggested that a working division can be made between kinds of non-fiction which broadly follow a chronological or narrative organization, informational narratives, biography and procedural writing (Chapter 4) and non-chronological or non-narrative writing - non story picture books, reference material and exposition (children's information books) in Chapter 5.

## CHAPTER FOUR

### A Consideration of Children's Narrative Non-Fiction

#### Introduction

When during the course of this study I asked teachers informally for their views on non-fiction they tended to think first of the children's information book. This kind of book, typically on a topic like 'Ships' or 'The Rain Forest', illustrated, and organised non-chronologically round the demands of the subject, is examined in Chapter 5. This chapter considers non-fiction narratives which are broadly chronological. Not all narrative writing is chronological, nor for that matter is all 'non-narrative' writing non-chronological (Andrews, 1989). However, while I argue for a flexible approach to the forms of children's reading and writing that fall under the general term 'non-fiction', I believe we can broadly conceive of some kinds of writing as having a time sequence while others are organised on a different basis. It is to the former I now turn. My researches in school and public libraries suggest there are three main types : 'information stories'<sup>1</sup> which describe a sequence of events in story form; biography, diaries and letters; procedural writing,<sup>2</sup> for example instruction booklets and manuals.

Section 4.1 aims to provide a background to a consideration of the different kinds of narrative non-fiction by looking more generally at narrative in an educational context. It is argued that the evidence points strongly to narrative as a major way of making

sense of experience, particularly in the case of young children.

Section 4.2 tries to define the features of the 'information story' and argues that it is a sympathetic form for children's early experience of non-fiction. (I use the term 'form' in Andrew's sense, as a subcategory of a genre, in this case children's non-fiction [Andrews, 1989])

Biography for children is considered in section 4.3. It is argued that the best examples of this form invite the young reader in through the narrative 'telling', and through illustrations including photographs. Extracts from diaries, letters and contemporary newspapers are associated with this form of writing.

Procedural writing, examined in Section 4.4, includes instructions for science experiments, making models, using the computer and food recipes. It is argued that this is a form, usually a simpler version of the adult kind, which has an important role in serving some of the purposes of children as they move through the primary years.

#### **4.1 Narrative, story and learning**

The terms 'narrative' and 'story' are sometimes used rather loosely, and it is important to establish what these terms are taken to mean in this study. While 'story' is taken to refer to a particular set of events, 'narrative' is the spoken or written account that

communicates the story's events. I will return to the concept of 'story' later, but turn first to the nature of narrative and its role as organiser of human experience.

The word 'narrative' is derived from the Latin 'narro' meaning to relate or recount, and in turn from 'gnarus', knowing and the sanskrit 'gna', to know. (Andrews, 1989). Prince defines narrative as the representation of at least two fictive or real events or situations in a time sequence, neither of which must presuppose or entail the other (Prince, 1982). This conception of narrative as **representation**, through telling or writing, emphasises its selectivity in interpretation. (Whitehead, 1990)

Two important claims are made : first that narrative seems to be a basic way of organising human experience; second that what writers, authors and story tellers do is very like what all of us do most of the time when we plan, remember, dream and share with others the stories that make up our lives. (Britton, 1970; Hardy, 1975, 1977; Meek, 1991) Hardy describes it as 'primary act of mind transferred from art to life'. (Hardy, 1977, p. 12).

The implication of a view that regards narrative as a major means of making sense of experience, both the inner experience of the imagination and the outer experience of the 'real' world, are considerable. For children in particular conceptions of the world are rooted in this narrative organisation (Meek et al, 1977). James Moffett in **Teaching the Universe of Discourse** drew attention to the importance of narrative to children's cognitive development, including their development in categorising information, and their progress in controlling abstract thought as well as concrete

action. Adults on the other hand have become able to differentiate their thought through specialised kinds of discourse involving generalisation and theory as well as narrative.

For a long time 'narrative must do for all' (Moffett, 1968, p. 14). Meek agrees commenting that:

'the narrative habit is not confined to fiction but is embedded in every kind of discourse.' (Meek, 1991, p. 183).

This conception of narrative, is most pertinent to this study. It suggests that non-fiction for the youngest children might be most accessible if it is in narrative form. Further, far from being a mere relating of series of events, narrative can embody many ways of thinking about and evaluating experience. These ideas are examined in depth in the other sections of this chapter and in the final chapter where the children in the classroom example write narratives.<sup>3</sup> At this point I intend to look further at 'story' and particularly at the kinds of thinking which can be embodied in a story form.

A story is one realisation of narrative representation. Narratologists have carried out research which has given rise to a widely recognised structure or story 'grammar'. The typical story pattern begins with an 'orientation' which sets the scene by giving the spatial and temporal context and possibly introducing the characters. There is then a series of events and the introduction of conflict which gives the reason for the story. (Martin and Rothery, 1981a).



In most known societies stories are likely to be the narrative form first encountered, usually as a child listens to an adult telling or reading. The place of stories in learning to read is well established. (Clark, 1976; Heeks, 1981; Meek, 1982, 1988, 1991; Bennett, 1985; Wells, 1985; Michael 1986; Waterland, 1988; Fox, 1989; Andrews, 1989; Whitehead 1990).

If the human mind is disposed to evaluate and tell about particular experiences it follows that narrative is a process concerned with the development of the mind. (Hardy, 1977; Gregory, 1977; Wells, 1985; Meek, 1988, 1991; Whitehead, 1987, 1990). Piaget's claim that children were not capable of logical argument until they reach the stage of 'formal operations' after 11 is challenged by Carol Fox. The capacity of children to argue, if implicitly, is evidenced in their written narrative in the form of stories. The attainment targets set out by DES in 1988 assume that argument follows narrative in development and that narratives are always chronological. The work of Fox suggests otherwise. She examined the stories of young children and concluded that:

'argument is not a higher and later development of children's thinking, but begins its growth in the life-giving oxygen and verbal play from the children's earliest encounters with stories - both those in books and those they hear all the time in everyday talk.' (Fox, 1989, p. 34).

Fox claims that 'argument' can be implied in narrative discourse itself, suggesting that storytelling contexts which are 'pleasurable, emotional and metaphorical', lead

children into discourses which are 'more rational than the term 'narrative' might at first imply'. (Fox, 1989, p. 35).

The best way of conveying the power of Fox's argument is to set out part of a story by one of her five year old narrators, Josh.

**Extract from story based on Grimm's Snow White and Rose Red**

'but as you know who lived in the forest?  
well I shall tell you?  
well it was a big wicked grey wolf  
and (so-so) so how should they get away from  
this forest 'cos if he saw them he would  
surely swallow them up?'

(Fox, 1989, p. 35).

In her analysis Fox draws our attention to how Josh uses questions, hypotheses and explanations, usually thought of as agents of argumentative discourse, as part of the very structure of his story to reveal the central problem of the predatory wolf. The function of the first two questions is to create suspense, but the third takes in a hypothesis about what might happen to the rabbits if the wolf caught them.

Fox's evidence here is to do with children's thinking through oral telling. Others examine the intellectual contribution listening to and reading stories from books makes to young minds. Wells, in particular, provides strong evidence of the power of experience of stories to enhance later language achievement. He examined transcripts of all the recordings of spontaneous conversations collected during the Bristol 'Language at Home and School' longitudinal research project for any occurrence of

activities likely to be related to reading and writing. These were grouped under four categories: looking at picture books and naming objects; listening to a story read aloud; drawing and colouring; writing or pretending to write. The last category was abandoned as it occurred very rarely. Frequency scores were computed for each child and compared with three of the language measures obtained at school. These language measures were: Knowledge about Literacy on entry to school; Reading Comprehension at seven years and the Oral Language section of the Teacher Assessment at five years. Wells reports:

'The results were absolutely clear cut. Of the various pre-school activities related to reading, only listening to stories was significantly associated with later language measures and it was associated with all three of them!' (Wells, 1985 c., page 139.)

Wells suggests three reasons for the potential of stories to enhance educational attainment later on. Firstly through hearing stories read aloud children become familiar with the language of books and with the characteristic narrative structures they will encounter in story books at school. Secondly some of the mechanical aspects of reading and writing may be conveyed. Thirdly, and according to Wells, most importantly hearing stories 'introduces children to language being used in a way which is independent of any context other than that created by the language itself'. (Wells, 1985c, p. 139).

Looking at picture books and naming objects helped children enlarge their

vocabularies. But this activity, and writing their names and drawing, were far less linked to intellectual development and later literacy.

Wells believes the talk that accompanies listening to stories with an adult encourages the ability to consider different interpretations. This in turn leads to a child's direction of his or her own thought processes in a reflective manner. Both of these abilities are singled out by Margaret Donaldson as being important for a child's success in our educational system. (Donaldson, 1978, p. 88).

It seems that stories encourage the recognition of causes, the anticipation of consequences, the hypothesizing about people's motives (evidence of this latter ability was noted in Josh's story quoted earlier in this section) the asking of questions and, according to Wells, the construction of both 'narrative and expository sequences'.

This last suggestion is most interesting and if the argument were to be taken further implies that the kind of intellectual activity set in motion by stories, the questioning and hypothesizing and so on, might well contribute to later success in understanding other kinds of discourse. Wells makes the claim thus:

'Stories may (thus) lead to the imaginative, hypothetical stance that is required in a wide range of intellectual activities and for problem solving of all kinds.'  
(Wells, 1985c, p. 139.)

This fits well with the observation of Richard Gregory, in his article 'Ways forward

for the psychologist: alternative fictions', that 'even untutored brain fiction could be rather like the predictive hypothesis of science'. Gregory suggests that fiction is liberating to the intellect since it allows escape from current fact and allows us to consider alternative possible realities. (Gregory, 1977, p. 396.)

This evidence for rooting all kinds of intellectual activity in early experience of stories challenges existing assumptions. It adds support to Richard Andrew's suggestion that the relationship between narrative, and other kinds of discourse, particularly argument, may be closer than was once thought. It is important to point out that they are still separate modes of discourse (Andrews, 1989).

Andrew's proposition is radical and exciting.

'Rather than narrative appearing as a mere element in the arrangement of an argument (as Aristotle's **Rhetorica** would have it), or, on the other hand, narrative being the centre piece of a theory of discourse, mind and cultural form (as the narratologists would have it), might the classical tradition be combined with narrative theory and practice to produce a theory of discourse that empowers writers of all kinds (from learner-writers to professional novelists, from producers of advertising copy to writers of company reports) by giving them not only a link between the 'naturally' acquired narrative competence and the demands of persuasive (and expository) discourse, but also a choice of strategies available at the 'point of utterance'.

(Andrews, 1989, p 4)

I have divided children's books into narrative and non-narrative categories since I do believe different kinds of written material make different demands on the young reader. However, the considerations discussed here point to the wisdom of some flexibility in approaching the texts children read and write.

I turn now to the kind of non-fiction which has a story form and consider its features and contribution to literacy.

#### **4.2 Information stories**

The main way in which narrative non-fiction differs from narrative fiction is its narrower focus. An information story is largely concerned to tell us about actual phenomena. Let me give an example of a story which is not an information story. In **Squirrel Nutkin** Beatrix Potter delights readers with the exploits of an imaginary squirrel. Some squirrel-like behaviour is evident, for example the need to gather nuts and a playful resourcefulness. The illustrations convey perfectly the form and movement of the creature. However, we are not limited to the literal truth. Squirrels do not go in boats and they do not take presents to persuade owls to land on islands! Children learn at an early age that in stories animals sometimes talk (e.g. in the **Frances** stories about ~~badgers~~ people can visit imaginary places with fabulous creatures (Max in **Where the Wild Things are**), and that our belief in the ordinary laws of science has sometimes to be set aside (e.g. Dahl's **The Magic Finger**). Familiarity with such fictional devices helps them develop some expectations about the genre. There are, however, narratives which have a story form, but whose primary purpose

is to inform. For example in *Sciurus: the story of a Grey Squirrel*, Jan Taylor never deviates from behaviour he has observed as a naturalist studying the creatures in woodlands near Windsor Park. In the foreword his invitation to young readers makes this clear; indeed it makes explicit how he conceives the genre. He mentions how he carefully observed and recorded what squirrels did and what happened to them, and drew on this in writing his account. All squirrels 'like Scirius will have to escape from predators, learn how to open nuts, and how to establish social relationships with other squirrels' (Jan Taylor, 1978, p. 11). Even so Chapter 1 starts like a story 'Scirius woke with a start; something strange had given him a fright. He knew very little about the world because he was only thirty two days old, but he was using his senses and learning fast'.

This story about Scirius is good of its kind; the illustrations by Harold George are clear, detailed and accurate. The book is organised in chapters, which stand on their own. For example when the 9 year olds whose work is described in Chapter 8 and 9 were learning about "winter dreys" it was helpful to end the session with a reading of Chapter 4 'Winter Home'. Unlike conventional fiction, the book ends with a 'further reading' section - another feature which signals the nature of the genre to young readers.

While it is argued that some kinds of information story may be a sympathetic form for young children to read, the writing of the 9 year olds in the classroom example suggests it is not necessarily an easy form for young writers (see Chapter 9.)

## Early Information Stories

*Scientific* is an example of the mature form of the genre for older juniors, but 'information stories' take their place alongside other kinds of book from the earliest years. One major type is the books Peggy Heeks refers to as 'induction aids'. (Heeks, 1981). These books centre on the experience of the very young child: narratives about dressing, shopping, visiting the park and playing with friends. (e.g. Sarah Garland's **Going Shopping**). The everyday events in a familiar environment reflected in these books helps make children feel secure - 'the known is less frightening than the unknown'. (J. Cass, 1967, p. 3). However, other books in this category aim to introduce the unknown in unthreatening ways and prepare young children for the broader experience they will soon be facing. Books serving this aim have names like: **First Day at Nursery School** and **Visiting the Dentist, Doctor or Optician**. **Staying Overnight** by Kate Perry and Lisa Kopper follows through a little boy's experience, showing how anxieties about a night away from home are overcome.

## Information Stories at Key Stage 1 (5-7 years).

The themes covered broaden further as children reach school age: books describing festivals like Christmas, Chinese New Year and Divali often following through the activities of one child or one family and books about the lives of children who have handicaps like deafness fit here.

Within this type, first there are those accounts which have a realistic background often



with colour photographs, and those which are more personal and which come close to being stories but which still relate to places and activities children know about, like Errol Lloyd's **Nina at Carnival**, and Khurshia Hasan's **Manzur goes to the Airport**.<sup>4</sup> All of these operate on the principle that young children like to find their own world and experience reflected in books, and that of others they are likely to meet.

A second type of book brings to the children's attention information and experience from the wider world: what it is like to go on a journey by boat, aeroplane, bus or train. In this category we also find books about different occupations like nurse, doctor or fire officer, often following through one person's working day. **Doctor** by Tim Wood follows, through a working mother's day and **Postwoman**, also by Tim Wood, are good examples which have clear texts, good photographs and which challenge sexual stereotypes.

A third category is the early books to help children find out about science, geography and history and to relate the new ideas to their own everyday experience. By following through a day, a week or longer in a child's life in another country geographical and cultural ideas can be absorbed through the familiar narrative form. As with all types of book there are good and less good examples. The better books are accurate with written text that draws the young readers into someone else's experience, sometimes indicating what is different and what is similar between our own and other cultures. Stereotyping needs to be avoided in both text and illustration. A good example of this kind of book for Key Stage 1 is Nadia Kabeer's **Ann in Bangladesh**. It is about a relatively comfortably off family, showing not everyone is

poor in the third world.

Early narrative information books about the life cycle of animals like squirrels, foxes and hedgehogs and creatures are frequently found in infant classrooms. Barry Watts' **Housemouse** is a good example; beautiful photographs tell the story of how a mouse is born and grows to adulthood. Like all the books in this series (suited to Key Stage 1 and the early part of Key Stage 2) the young readers or listeners are invited to re-tell the story using the small versions of the photographs placed at the end of the text. Following through the life of one creature, plant or object is easier and more interesting for younger children than a more general approach.

Many natural phenomena have a clear life cycle and the narrative form is a sympathetic and appropriate way of providing information. We need to apply the same standards of accuracy to this kind of narrative information book as we do to other factual books. Some narratives mingle fact and fantasy and a number of reviewers believe this can cause confusion. Neate, for example questions the wisdom of the humorous illustrations in Dick King Smith's **All Pigs Are Beautiful**, Walker Books **Read and Wonder** series (Neate, 1993). Perhaps it is a question of the purpose of a book. This series is for enjoyable sharing and browsing rather than for children's more systematic research.

Often the familiar story form suits younger children, and some older readers still seek out this kind of narrative framework as we shall see in the Squirrel case study in Chapter 8.

## Information stories at Key Stage 2 (7 - 11 years).

This is not an immature genre discarded as children move through the primary years. We have already seen how challenging *Scientific* and there are many other books with a narrative organization which also provide advanced information. Sarah Biesel's **The Secrets of Vesuvius** traces the author's research at Heracleum, and shows what seems to have happened to one family when Vesuvius erupted in AD49. Ruth Thompson's **How A Book is Made** follows through all the stages of production from initial idea (for **The Piggybook**) through to end product.

David Macauley's architectural picture books are good examples of this genre for older children; **Cathedral, Pyramid, City and Castle** all tell the story of how each was typically built or made. An overall narrative framework often opens with a general introduction, and there is evaluation of what is done and of thoughts and attitudes throughout.

### 4.3 Biography

Biographies written for primary age children can draw young readers into the account and evaluation of a person's life. The basic overall organization is a narrative one, but some careful choices are made about what to leave in and what to miss out so that evaluation of a person's life is constantly made. Some of the features of the most successful biographies are set out in Appendix 16.

#### **4.4 Procedural: Manuals, instruction books.**

The earliest examples of this genre (termed 'procedural writing' in Littlefair, 1991) are notices, street and shop names and simple books of instructions. (Meek, 1991; Arnold, 1992; Bissex, 1980). Teachers often write their own instructions, for example for using the tape recorder, paper trimmers and other everyday classroom equipment and place them on the wall for easy reference. Children can be helped to work in this way for a purpose. (Mallett, 1992b.)

Table 28 in Appendix 9 sets out the kinds of non-fiction covered in National Curriculum documentation. I agree with Littlefair when she expresses surprise that there are no suggestions for appropriate texts of this kind for children of primary school age (Littlefair, 1991). Many science books for this age range set out instructions for simple experiments. The tone, and features like the use of headings and lists typical of this genre, become familiar with use. As well as reading this type of writing children often produce their own instructions in simple books about use of the classroom computer, chess and recipe dishes. The kind of thinking involved here, to do with ordering practical action, is very typical of children in the junior school years.

#### **Summary.**

This chapter has argued that the narrative form is a significant way of making sense of experience, particularly for young children.

A large number of the books for young children in the non-fiction part of libraries have an organisation which follows a time sequence in the way that a story does. However the permissible themes, scope and incidents are usually much more narrowly conceived than those in a story-book classified as fiction. Some varieties of this form have a more playful approach and the purpose of a text guides us in when to use these. There can be unhelpful minglings of fact and fantasy and teachers use their judgement here.

The 'information story' can be a sympathetic way of inviting young readers into new learning as it uses a familiar form.

Biographies have a special power to draw the young readers into the life and times of the person under study. While the main organization is narrative, analysis and evaluation are also present.

Procedural reading material from simple notices and instructions on the classroom walls to instruction in information leaflets and manuals has important uses throughout the primary school years. Although this kind of material does not fit with usual notions of narrative, it is included here because of its chronological organization.

## CHAPTER FIVE

### Non-narrative kinds of non-fiction: reference and exposition.

#### Introduction.

This chapter first examines the category of non-fiction known as reference material and suggests 'good' examples at different stages. The main types used by 5-11 year olds are dictionaries, encyclopedias and atlases. The reference genres, 5.1, are identified by certain conventions which are best taught in context. Section 5.1.1 considers dictionaries which are invariably arranged in alphabetical order and thesauruses, 5.1.2, which catalogue the English language according to meaning. Encyclopedias are examined in section 5.1.3 and atlases and map books in section 5.1.4.

5.2 turns to the important category of non-narrative non-fiction, which includes non-narrative picture books and children's information books. Section 5.3 looks at the former. More detailed attention is given to children's information books in 5.4 as these are such a substantial part of the primary school non-fiction collection. The most important features of these texts are examined as follows: 5.4.1 considers the global structure, 5.4.2 the language, 5.4.3 the illustrations and 5.4.4 the retrieval devices.

Recent research studies illuminating the features of non-fiction texts and identifying

problems are set out and evaluated in 5.5. Section 5.6 considers non book non-fiction materials. Issues to do with bias in children's books are the focus of 5.7. The last section, 5.8, argues that some of the best information books encourage children to reflect on information and ideas and to come to appreciate what the important issues are.

## **5.1 Reference materials**

Authors of reference genre aim to list explanatory condensed information about topics. Littlefair suggests that dictionaries, encyclopedias, atlases and thesauruses are sub genres (Littlefair, 1991; 1993) of the main reference genre.

### **5.1.1 Dictionaries**

Children need to acquire more than the ability to understand the alphabetical organization of dictionaries. Other features of the genre are: the tendency of compilers to write in phrases as well as in sentences; the inclusion of several different meanings of a word; appropriate abbreviations.

Decisions by compilers about the content of dictionaries, the choice of words included and those left out, are difficult to make whether the dictionary is aimed at adults or children. One strange omission in the main dictionaries available for the primary years is the lack of any sexual terminology. (Carol Fox, *Of Shoes and ships*, TES 13. 10. '89 p. 62).

The idea that words are fascinating and open up ideas is reinforced in the better dictionaries. In the invitation at the beginning of his picture dictionary for very young children Richard Scarry writes 'a dictionary should be fun'. This is certainly a dictionary children would enjoy browsing through. As we would expect from this author the pictures and text are amusing and integrate perfectly.

Contextualising of words is a feature of most dictionaries for the younger end of the primary years (Octopus, Hamlyn, Chambers and Scarry). In Scarry's dictionary, under 'address' we have: "Betty has written Grandma's address. This is where grandma lives. Do you know your address?" Alongside is a picture of an addressed envelope. This helps make the meaning secure. Such contextualising of terms also gives an opportunity to include the spelling of inflectional variations like past tenses.

The entries in John Grisewood's **Kingfisher Illustrated Dictionary** for the 8-12 year old range often have a nice speculative flavour. It is suggested, for example, that the idea of the existence of the mythical creature, the unicorn, may have been the result of people mistaking the oryx, a desert antelope, for a white horned horse.

The specialist dictionaries for older juniors support the keen interests children of this age often acquire for some favourite subject or topic, for example Michael Benton's **Prehistoric Animals: an A-Z Guide**. This is a book adults and children can enjoy together. It offers up to date information on both the history and science of fossils, and comparisons between species. For younger children R. Matthew's **Dictionary of Dinosaurs** would be more accessible. The latter could be used alongside Alikis



delightful account of a child's research into fossils entitled **Dinosaur Bones**.

Perhaps a true concept of what a dictionary is and how we use it is best acquired by children making their own personal dictionaries and this is well established in good practice.

### **5.1.2 Thesauruses**

Thesauruses of antonyms and synonyms are available for the Primary years. I have often used them, for example, in the context of poetry writing. Although the national curriculum at the time of writing does not require them to be introduced until the secondary school stage, help with using a thesaurus seems to be appropriate for the older juniors. It reinforces the idea of language as essentially creative and varied, and offers us an exciting range of options to express our meaning. In his preface to the **Oxford Children's Thesaurus** Alan Spooner hopes that 'it includes a wide enough vocabulary to make it interesting and thought provoking'. This thesaurus was used during the classroom work in this study.

### **5.1.3 Encyclopedias (and major resource books).**

A set of encyclopedias can cost a hundred pounds, or much more, and teachers will wish to study several sets before making a choice. To prepare a short list it is helpful to consult a guide. To my knowledge, the most comprehensive and fair minded is Tucker and Timms' **Buyer's Guide to Encyclopedias**. This appeared in revised form

in May 1991. The National Curriculum's subject centred emphasis has led to renewed interest in a set of volumes summarizing all kinds of human knowledge.

Multi-volume encyclopedias are prepared for three main age ranges, broadly: Elementary Sets for children under twelve, Intermediate Sets for the ten years and over and Advanced Sets for older children and adults. It is the first of these which mainly concerns us in the primary years, although middle schools and families buying for home use might choose an Intermediate Set.

Awareness on the part of the compilers of the kinds of project 5-11 year olds are likely to be undertaking should be evident: for the British market this would certainly involve a good knowledge of National Curriculum requirements at Key Stages 1 and 2. This might also mean that encyclopedias following too closely the school curriculum of other countries might now be less appropriate. On the other hand an internationalist approach is attractive particularly when, as in **The Children's Britannica**, it is combined with some special coverage of Britain.

I now set out briefly features which seem important in choosing encyclopedias for the primary years. A fully comprehensive encyclopedia would result in a weighty set of books and at the primary stage since some topics are likely to be more relevant than others, compilers can, to some extent, be selective. The editor of **New Oxford Children's Encyclopedia** commissioned a survey of what children look up; volcanoes, Vikings, Normans, Romans, Dinosaurs and so on. So we are looking for good clear treatment of the most important topics at the primary stage. The language of

encyclopedias for reasons of space may be a condensed form of exposition. (Littlefair, 1993). There is evidence that, as we might expect, more is remembered in a passage if the ideas are not too condensed. (Bartlett, 1932; Wason, 1962; Wright, 1972).<sup>1</sup>

As in the case with most kinds of non-fiction we seek books which provide sound factual information but also ideas and speculation to awaken curiosity and interest. A good motivating feature of **The Children's Britannica** (revised reprint published 1991) are the stories about historical characters which run alongside factual accounts. **Child-craft**, for children in the early years of schooling, includes stories, games and projects appropriate to each volume's subject (e.g. Mathemagic, Art Around Us and Celebrations).

Naturally we expect good retrieval devices in reference material and, in learning about what this genre offers, children need to find out how to get to the items they seek quickly. The survey carried out by the **Oxford Children's Encyclopedia** editors found that an alphabetic format was much preferred to a thematic organisation.

Most modern compilers take great trouble over indexing. **The Children's Britannica**, in 20 volumes, devotes the final one to a 630 page index which, as well as directing young readers to appropriate parts of the volumes, also provides short, useful definitions. **The New Book of Knowledge** (updated edition 1991) provides a large well organized main index and each of the 21 volumes has its own index. **Childcraft** (1989 edition) also provides a general index to its reference books as well as for each

of the fifteen books.

Illustrations, photographs and drawings are important in making reference books inviting or otherwise.<sup>2</sup> Colour illustrations are generally more numerous in updated encyclopedias (Tucker and Timms, 1991). In Chapter 8 of this study we find a strong preference for colour pictures and photographs amongst the children. But often black and white diagrams are more appropriate and **Children's Britannica** provides a great variety. Sometimes the illustrations vary in quality from volume to volume. The **Childcraft Resources Set** presents high quality art work in the 'Art around us' volume, but pictures in other volumes are on the insipid side (Tucker and Timms, 1991.)

Encyclopedias specially designed for the primary years usually avoid dry reference book language. Stories, bits of biography, ideas for projects all help to interest and motivate. The long, dreary sentences typical of the genre are off putting (Littlefair, 1991). The whole format, how the text integrates with illustrations and actual print size, matters to the younger children.

The most recently prepared or updated encyclopedias are avoiding a narrow ethnocentric view of the world. **The Oxford Children's Encyclopedia** (in 7 richly illustrated volumes) mentions the implications of Colonialism, for example under 'Aborigines' it is made clear they 'resented the settlers taking over their land, especially the sacred sites'.

So far, the encyclopedias discussed have been sets rather than less detailed single volumes. For younger children a single volume like **The Kingfisher Children's Encyclopedia** and **The Dorling Kindersley Children's Illustrated Encyclopedia** can be less daunting. Both of these are alphabetical, give instructions about use (symbols etc.) and are clear and easy to handle. I looked up 'Octopus' in each volume and found that, as well as basic facts, each included boxes of extra information about particular kinds of octopus. Each also included the kind of detail that interests and motivates the very young. **The Kingfisher Children's Encyclopedia** explains that some of the 50 kinds of octopus are as big as 9 metres but that most are 'no longer than a person's fist'. **The Dorling Kindersley Children's Encyclopedia** mentions that one member of this family of sea creature - the male cuttlefish - 'turns black with rage when it is angry'.

Children usually need quite a lot of help in using encyclopedias whether they are sets or single volumes. Talking about the signs, symbols and cross reference systems is best done with individuals or small groups in the context of everyday classroom work. Encyclopedias often give the first summary of a topic a child needs and sometimes provide a framework for researching a topic in other books. All this needs to be made explicit and demonstrated by teacher or parent. Work with encyclopedias can be more enjoyable if it is collaborative.

New computer based encyclopedias, for example **The Information Finder** on CD-ROM, which uses the text of **The World Book Encyclopedia** are now available. Rather than replacing the book form the new advances have encouraged the use of

computer technology in updating, indexing and generally speeding up the production of books.

#### **5.1.4 Atlases and map books.**

Maps communicate information visually. Compilers of map books and simple atlases, which include the continents of the whole world, use carefully considered strategies to try to link the information to children's existing ideas and experience. In **The Phillips Children's Atlas** information boxes explain about occupations, flags, stamps and so on. **The Kingfisher Children's World Atlas** uses bright clear photographs and pictures indicating the way of life in the countries on the maps.

In fact the format and layout of the best atlases for the very young is much improved. Contents pages are clear and inviting and the countries of each continent are often colour coded (e.g. **The Phillips Children's Atlas**).

World Atlases aimed at older primary and secondary school children often include political and religious information (**Hamlyn's Children's World Atlas**). This can date rather swiftly. Events in Russia in the Summer of 1991 make political maps in atlases published only a few months earlier seem prematurely out of date.

Similarly tables of statistics on health, population and so on, quite sensibly included in new editions of atlases (see for example **Phillips' Modern School Atlas**), are in need of constant updating.

## Summary

Dictionaries often provide more than one word meaning for each item, tend to use phrases rather than sentences and include abbreviations which are explained at the front or back. All these features need to be understood by young readers and help by demonstration and direct teaching is necessary.

Early dictionaries try to contextualise the items by embedding them in sentences and including helpful illustrations. This is also a way of bringing in the spelling of inflections like past tenses and plurals.

The liveliest dictionaries not only anticipate the words children are likely to want to look up, they also include the unusual and intriguing words which would encourage browsing and reinforce the idea that language is creative, interesting and exciting.

A children's thesaurus is a useful classroom reference book since it is organized round word meanings; the synonyms and antonyms provided help children refine their vocabulary, and indicate the enormous range of options a writer has.

Children's encyclopedias include single volumes and sets of up to 20 books. New computer technology has greatly enhanced general layout and organisation of retrieval devices. The best encyclopedias challenge and interest as well as inform.

The best early atlases and map books have clear, colourful and accurate illustrations

and an inviting large format; they use strategies like information boxes to help children make links between what they know and the new information.

The best atlases for older primary age children are also clear, aesthetically pleasing up to date and accurate, but have more detailed information - e.g. political and religious background to countries and statistics on health and population.

## **5.2 Non story picture books and information books (exposition).**

The earliest non-narrative texts, apart from labels and notices, which children experience are usually the non story picture books for the pre school and early school years. These are the forerunners of the genre known as children's information books, so I examine them first. Then the nature of the information book genre with sections on the global or overall structure the language, the illustrations and retrieval devices is examined. Attention is paid to how information books can be inviting and accessible and suggests that there may be some transitional genres to provide a bridge to mature non-narrative prose.

## **5.3 Non Story Picture Books.**

Books organised round the theme of numbers or letters, for very young children, can be introduced as early as their first year. (Butler, 1982). The educational advantages are obvious - reading and counting are anticipated and the baby becomes familiar with the shapes of numbers and letters. Looking at the pictures together, parent and child



talking about them, is highly enjoyable. The realization that print 'means' is also learnt. Babies learn to connect the black marks on the page with the adult's voice and then the knowledge that the meaning arises from the writing will have 'lodged in her bones'. Butler (1982, p.9.) There is evidence that interpreting pictures is learnt too (Bruner, Olver and Greenfield, 1966; Wood, 1988).

Favourites at this stage include Brian Wildsmith's **ABC**, John Burningham's **ABC** and Rodney Peppe's **The Alphabet Book**. In the latter the illustrations are simple and clear and there are sentences like - "this is the anchor ... that holds the boat".

Other non story picture books are organised according to a concept like shape, size, opposites, odd one out and up and down. Often the written text is minimal and the pictures are meant as a starting point for conversation. Sometimes continuity between pictures is achieved by having the same child shown in different contexts. In John Burningham's **Opposite Book** the same little boy in a yellow hat and blue trousers is seen : on a double page he observes a tortoise and then a hare with the caption "slow" and "fast"; in another he holds a baby's hand, and then an old lady's hand to extend the written word "young" and "old".

Fiona Pragoff's picture book on the same theme, opposites, uses photographs rather than drawings and we follow through the same little boy in the same environment with his toy bear.

Both books reflect the mingling of fact and fantasy in a young child's mind. While

Burningham's pictures, for example of the child lifting an elephant to indicate the concept "heavy", have a delightful sense of the ridiculous, Prigoff enters into the idea of treating the toy bear as if he is joining in the activities.

This kind of picture book is not an immature form which recedes as children grow older. Some publishers like Macdonald Education (eg Starter's **Long Ago Books**) and Usborne (**Understanding ... Farm Animals**) have specialised in pictorial information books for the early and middle primary school stages. These are a transitional genre leading towards books with a greater proportion of writing to illustrations.

Some picture books reinforce the idea that acquiring information can be fun at any age. Anno's superb history and geography books create an exhilarating mixture of legend, custom, literature and all the things that make up a place's character. **Anno's Britain**, for example, includes Chaucer, Churchill and Land's End. **Anno's Italy** and **Anno's Medieval World** provide similarly rich experiences for any reader from the older primary school age upwards. Of course these do not replace the more conventional information books described later in this chapter, but teachers include them in displays and talk about them with groups and even the whole class to enrich a geography or history theme.

Older children often enjoy books intended for a younger audience. Some over tens love to agonize over the disturbing choices in John Burningham's **Would you Rather ...**, for example 'Would you rather your dad did a dance in school or your mum had a row in a cafe?' I would use this playful sort of book to develop English work, their

own writing and drama.

Charles Keeping's imaginative picture books, bringing alive the life of the inner city community, can also be the starting point of children's own art, language and dramatic activities. Perhaps books like **Railway Passage** are not easily placed in a firm category. The old age pensioners, couples, individuals and children that people the black and white drawings are in one sense fictional, but also educate us about City life. There follows below a brief summary of the main points in this section.

- o Picture books, with a topic based rather than a chronological structure, are often amongst the first non-narrative reading material alongside captions and notices young children experience.
- o Text and illustration integrate to communicate meanings in the picture book genre but pictures are not necessarily just simple visual expression of the text; they may extend or even challenge what is written. Above all they often entertain and provide a playful focus for adult child conversation.
- o The picture book genre is not an immature or necessarily a transitional form but rather a type of book which can be enjoyed at any age.

## **5.4 Information books.**

Information books are illustrated books, usually on one topic, identified by the title, for example 'Squirrels', 'The Victorians' or 'Stars and Planets'. Information books make up a large part of the non-fiction section of class and school libraries. While it is probably true that story genres are most familiar to children when they start school it is unlikely that the information books at school will be their first experience of non-chronological writing. As well as the non story picture books described in the previous section children see signs, labels, notices and captions. (Bissex, 1980; Arnold, 1992). Nevertheless some features of the information book genre can present a challenge to young readers. These difficulties can arise from factors to do with the global structure, the language, the illustrations and the retrieval devices. Each of these is looked at in some detail to try to illuminate those generic features which present a challenge to young readers and to provide a framework within which to choose appropriate texts. Section 5.5 considers research studies which take up a critical approach to particular information books. Critics of publishers' output include Heeks, 1982; Meek, 1977; Lavender, 1983; Paice, 1984; Cherrington, 1990; Neate, 1992; Arnold, 1992.

### **5.4.1 The global structure.**

It is the global or generic structure of a text that identifies it with a particular type or genre of writing (Halliday, 1978). This has to do with the organization of the book into sections which are ordered in a certain way. In a very interesting paper Christine

Pappas<sup>3</sup> (1985) suggests that children's expectations of the global structure of texts is an important factor in their developing ability to understand and control this kind of reading material. She examined 100 children's information books and concluded that there are three obligatory elements, without which a text could not be considered to belong to this genre. The first is 'Topic Presentations' and this, as we might expect introduces the topic of the book. For example **Squirrel in the Trees**, one of the texts the 9 year olds in the case study in Chapter 8 used, begins on page 2 with a heading 'Tree living squirrels around the world' and the first sentence is:- 'Squirrels that live and shelter in the trees are common in many countries.' The account under this introductory heading explains how all the tree squirrels are helped by their tail to move and function in the trees. The variety of trees different squirrel species prefer is mentioned.

The second obligatory feature is termed 'Description of Attributes'. The "attributes" are the essential features of the subject of the book. These features can either be blocked together or interspersed throughout the text. In **The Squirrel in the Trees** the "attributes description" applies to the different kinds of tree squirrel which are the subject of the book. On page 2, still within the topic presentation, we are told that 'Tree living squirrels can be no bigger than mice, Indian giant squirrels are 'as big as cats' and flying squirrels 'have two flaps of furry skin stretching between their front and back legs' which 'open out like a parachute when the squirrel jumps allowing it to glide through the air'. Some pages later we return to a further "attributes" description complicated by the fact that the book is about all the different kinds of tree living squirrels, and we get a generalised statement:

'There are many different colour varieties throughout the world, but greyish-brown and brownish-red are some of the commonest'. (**Squirrel in the Trees**, page 6.)

Thus in this book the Description of Attributes is interspersed and not a discreet element in the book.

The third and final obligatory attribute, 'Characteristic Events' is, as Pappas discovered, nearly always the largest element in an information book. These include typical processes like feeding and events like giving birth. This element is certainly the largest and most detailed in the book under consideration and is mainly contained under headings like 'Movement', 'Food and Feeding', 'Activities', 'Behaviour', 'Starting a family', 'Growing up', 'Natural enemies', 'Ways of Escape' and 'Squirrels as Pests'.

As well as these three obligatory elements Pappas describes three elements which are optional. The first of these, 'Category Comparison', is important in **Squirrels in the Trees** because in each section it is necessary to modify generalisations about squirrels with reference to particular varieties. Unlike most Squirrel books for the primary years, which only compare grey and red squirrels, species common in Britain, this one takes on a large number of species, all of which, as the title suggests, are tree-living. The description of the tiny pygmy squirrels and the large Indian squirrels which was quoted as an example of 'Attribute Description' also exemplifies the 'Category Comparison' element. In this book the feature appears in the text in different ways

at different times.

The second optional element identified by Pappas, 'Final Summary', sums up the main information in the book. This seems to be lacking in **Squirrel in the Trees**. The last sentence of the book might be viewed as a sort of conclusion - not summarising the information in it but in a sense deriving from it.

'So it is very important that we keep plenty of large areas of wild, unspoilt woodland and forest, in which squirrels and other woodland creatures can survive'. (Coldrey, 1986, p.31.)

Finally the sixth element and third optional element, 'Afterword', adding extra information at the end of a book, is present in the example under discussion.

For some reason Pappas (following Hasan 1984) does not include retrieval devices as an optional feature of information books. This is perhaps unfortunate since in my work in school both teachers and pupils often mentioned the quality of contents pages, indexes and glossaries as important in how well a book supports research for a topic. I would not expect all non-fiction texts to offer this feature; it is often not necessary in books for very young children. We would exclude from class libraries many individual and lively books if we insisted on a blueprint for information books. However, it seems to me that a contents page, with headings and subheadings to organise it, is very often useful when children are using books for research.

How useful then are the identifying elements Pappas proposes in relation to children's information books?

In Hasan's terms by recognising three obligatory elements we gain an idea of what would or would not count as an information book. (1984a, 1985b). Teachers of course, identify them on intuitive, common sense grounds. Nevertheless, Pappas' attempt to make explicit these intuitive judgements is useful. While these elements, both obligatory and optional, once pointed out are fairly obvious, the variable order and interspersion of elements is not.

Is it the case, as Pappas believes, that the way in which information books are structured affects how easy or difficult it is for children to understand them? Pappas suspects that books which do not treat the 'Description of Attributes' and 'Characteristic Events' as discreet categories, but rather intersperse them through the text, are likely to be more challenging. This might be particularly the case for the youngest children who are just becoming familiar with the structure of the new genre. Pappas suggests that the order in which the elements are presented may also be an important factor in how easy or difficult a young child finds a particular text. The existence of the optional Category Comparison element, for example the comparing of different kinds of tree squirrels in *Squirrels in the Trees*, seems likely to be a complicating factor for some young readers. This suggests that a book like *Tomato* by Barrie Watts (1989) would be relatively accessible for the young reader just tuning in to the register of information book: it concentrates on one category - 'tomatoes;' the order of the elements moves in an uncomplicated way from Topic Presentation,



Description of Attributes - colour, seeds etc - to Characteristic Events which follow the life cycle of the growing seeds through stages to the mature tomato. The Characteristic Events element is perhaps inevitably in narrative form, because it is about the lifecycle of the tomato plant. However, the early part of the book and other cues like the pictures and diagrams reveal it is an information book rather than a story. The final Summary is presented in the form of the key illustrations, reduced in size, and in the same sequence as in the main body of the book. It is suggested that the young reader describes the stages in their own words, using the pictures as a guide.

**Tomato** clearly qualifies as an information book if we accept Pappas' criteria. Thus a text can tell about events through time and still belong to this genre. This kind of text, discussed in Chapter 4, which is organised partly or mainly on a chronological basis, seems a good way of introducing the information book genre to children sympathetically.

As well as the **Stopwatch** series to which **Tomato** belongs (and which includes many other delightful books with titles like **Bumblebee**, **Conker**, **Newt**, **Spiders' Web** and **Strawberry**) we have series like **Life Cycles** and **Animal Families**, structured to appeal to children at Key Stage 1. Quite a lot of young junior school children are still most comfortable when dealing with a specific example of a phenomenon and with a partial time sequencing approach. Not all topics can be presented like this, and as they move through the primary years children need help in learning how to read text organised round a topic and not through time, in other words books more like **Squirrel in the Trees** than **Tomato**.

#### 5.4.2 The Language of Information Books.

Non-narrative information books are organised on the basis of the demands of the subject or topic. The language used reflects this. A certain lexis is associated with particular topics. We can identify a core of concepts we would expect to be covered, in for example a topic book on "Squirrels" for children. The squirrel books used in the case study, described in Chapters 8 and 9, included sections headed 'drey', 'gestation', 'hibernation', 'rodent', 'arboreal', 'habitat' and 'species'. Part of coming to understand a subject is to do with making sense of the technical terms that help describe it. (See Appendix 1c.) In books for primary age children we look for the embedding of new vocabulary in a strong contextual support: both writing and pictures can help here. In *Under the Sea* (by Claire Llewellyn) one of a new science series for 5-7 year olds, a headline 'Pollution of the Sea' is accompanied by a striking and moving picture of an oil saturated sea bird emerging from an oily sea. I include the supporting text as it communicates effectively and simply the chain of events a polluted sea sets in motion.

'What does the sea look like when it is polluted? How does this happen?

What happens to the tiny creatures of the sea when there is Pollution? What

happens to the fish and the animals and birds which feed on them?' (p. 7. Llewellyn 1990.)

The speech type patterns in this text make it a 'transitional' genre in the sense of the term in Baker and Freebody (1989). The syntax of information books for older children is distinctive; sentences are often quite densely packed (Rosen, 1967;

Littlefair, 1991, 1991; Neate, 1992). Information is arranged hierarchically and a difficulty for primary aged children is coping intellectually with the generalisations realised in language. Headlining can help indicate what are main and sub topics and careful use of headings and colour coding of pages to do with different aspects of a topic e.g. basic information, projects to try out can help show children how an information book works. Because of the general nature of the content of many information texts the tone tends to be rather impersonal. Thus we read near the beginning of Ralph Whitlock's **Squirrels** the following sentence:

"Squirrels scientifically belong to the great order of rodents, or gnawing animals, of which the best known examples are rats and mice".

Here the reader is encouraged to think of squirrels as one species within a larger category. This kind of thinking is more characteristic of the later primary and early secondary school years. However the sentence above is the second sentence in the book. The first is:

"Have you ever seen a squirrel with an acorn scurrying up a tree trunk?"

This question, appealing directly to the young reader's likely first hand experience, is like **Under the Sea** close to the rhythm of speech and therefore provides a sympathetic invitation to the rest of the book.

The use of personal pronouns indicates an author has some insight into the needs of

the young readers the book is intended for. In Propper's **The Squirrel** there is a first page that draws the reader into the context of the book.

"Squirrels live deep in the woods where it is cool and dark. If you see half-eaten pine cones lying on the ground beneath fir trees, you can be sure that there are some squirrels not far away. Listen and watch for them".

Two concepts from linguistics are helpful in analyzing texts: register and cohesion. Put simply register refers to the fact that spoken and written language varies according to the situation.<sup>4</sup> The theory of register attempts to uncover the general principles which control this variation thus helping us to understand what situational factors determine what linguistic features. Halliday, more than any other modern linguist has drawn our attention to the importance of context when language is used. He insists that any piece of text arises in a particular setting in which particular purposes are embedded. A successful reader of a text is sensitive to the context and the author's purposes in writing the text. (Halliday, 1978). The classroom study in this book, set out and evaluated in Chapters 8 and 9, seeks to demonstrate the merits of providing a total learning situation, in which information books are read and discussed and in which teacher and pupils make learning progress explicit.

The Open University Reading Research Project Team found that another factor, children's sensitivity to the cohesion of texts, was important in their reading development. (Chapman, 1983, 1987). Cohesion is to do with the internal unity of a text. Studies of cohesion examine the ways in which the text is knitted together and

"the different kinds of stitches in use." (Barrs, 1987, p. 12). Barrs differentiates between global cohesion (citing a list as an example) and local cohesion which is the "knitting" together of ideas found in a sentence. A list lacks local cohesion. At the same time it is possible to produce a text which has local cohesion but is not globally cohesive. (See Perrera 1984 for an example). However, a satisfactory text has both local and global coherence. Increasing sensitivity to local and global cohesion is, according to the Open University research team, a sign of reading progress. The importance of cohesion in texts and children's sensitivity to it is considered again in Chapter 6. Increasing control over reading and writing in a genre seem to be complementary activities. (Cambourne and Brown, 1989).

I believe that we can conclude from this analysis that understanding mature non-narrative text and producing it in writing requires a certain level of cognitive development; different kinds of reading and writing demand different kinds of thinking. Primary aged children are likely to need support in learning to read the harder texts. Part III considers the teaching strategies which seem promising.

#### **5.4.3 Illustrations.**

The photographs, drawings, maps and diagrams used in children's information books communicate facts and ideas as well as the written text.

In general we seek books in which the illustrations are clear, accurate and useful and which complement the text. The language, for example the labelling of the

illustration, needs to be clear and unambiguous. We cannot assume children understand how to 'read' diagrams as we see in Part 3, Chapter 8, where children struggle with a 'food chain' diagram. (See Appendix 1d.)

Publishers work to a budget of course, and sometimes too much is crammed into one page. Von Schweinitz argues that a jumble of sketches, maps and photographs can confuse the reader (1989). A book needs to be aesthetically inviting. Ian Redmond's beautiful photographs in **Elephant** (Walker Books) serve an excellent text very well. Drawings too can be aesthetically pleasing, as in David Macauley's fine architectural illustrations in **Cathedral, Pyramid and Castle**, Collins, (1983).

The power of illustrations both to motivate and to aid comprehension is noted by a number of researchers including Harrison, 1979 and Newton, 1983. The main questions we need to ask about the illustrations in a text include: are they clear and accurate; do they complement, explain and extend the written text; are they attractive and pleasing to the age group for whom they are intended; do they include pictures of girls and children of ethnic minorities where appropriate; are the illustrations free of stereotyping?

#### **5.4.4. Retrieval devices.**

Contents pages, indexes and glossaries are often a feature of non-narrative texts and are particularly important when children are using books for research rather than for browsing. **The Times Educational Supplement** received one hundred and eighty

entries for the 1990 Junior Information Book competition. They comment:-

'It is unusual, now, to have a book submitted without index, glossary or other apparatus where these are necessary'. TES, (1990).

The last four words are pertinent. Non-fiction for the very young tends not to have any of these, for example Alik's **My Five Senses** or Franklin Watts **Way to ... Change It** series. A text has to have reasonable substance to justify retrieval devices. The books in the Stopwatch series (A&C Black) for young children have an index but there seems no real need for a contents page. The two would be rather too similar.

While we need a core of information books in the main primary curriculum areas of the National Curriculum with well organised retrieval devices there is not a blue print which must be adhered to. Indeed the 1990 winning entry, Judy Hindley's **The Tree**, lacks even page numbers, but is a delightfully original, quirky and almost poetic work. As Vivien Griffiths comments:-

'You couldn't base a school library on books like **The Tree**, we still need our "bread and butter" information books, but, its excellence lies in its difference from the rest and that is what makes it a winner.' (T.E.S. (1990), p. 24.)

Nevertheless where retrieval devices are appropriate and present they need to be of good quality. Information retrieval is part of the requirement of National Curriculum, Attainment Target 2 English: Reading, and includes the ability to trace information

through an automated electric system as well as from printed materials like books. Teachers consulted in the course of my research for this book expected information books for junior children to have at least good contents pages and indexes.<sup>5</sup> Appendix 21 examines further some of the features of good retrieval devices.

### Summary.

- o Information books vary in style and complexity but research evidence suggests that to qualify as an example of the genre three elements have to be present: topic presentation, description of attributes (essential features of the subject of the book) and characteristic events.
- o Early books in which 'characteristic events' can be present, at least partially organized in time stages, seem to help a transition from story forms to the information book genre featuring mature non-narrative text.
- o It seems to be helpful for younger readers if description of attributes of the subject are blocked together rather than dispersed throughout the text.
- o The language register of information texts can be difficult for young readers. Strategies which help are the careful contextualising of new terms, use of personal pronouns and a conversational tone where appropriate.
- o Illustrations need to be accurate and to complement, explain and extend the



text as appropriate.

- o Illustrations should not reveal a sexual or ethnic bias and stereotyping of particular groups needs to be avoided.
  
- o Where children are using information books for research the quality of the retrieval devices is extremely important. We seek contents pages, glossaries and indexes which are well designed and easy to use.

Table 2 summarises the kinds of writing which I argue are part of the traditional primary school collection. ( p. 98. )

### **5.5 Research Studies of Children's non-fiction texts.**

In this section I consider work by Shirley Paice, Eleanor von Schweinitz, Bobbie Neate and Pappas and record the views of the 1993 judges of the Times Educational Supplement Information Book Award.

Paice examined books on honey-bees in her own infant school. (Paice, 1984). Shortcomings were found in areas of accuracy, style and readability and in illustration and presentation. This study is described and evaluated in Appendix 17.

Neates's recent study confirms many of the shortcomings pointed out by Paice. The main findings can be summarized as follows:

- o general presentation and aesthetic appeal of books had improved since 1980.
- o the text and structure of books is not always carefully thought out to help young readers.
- o the written style of information books varies considerably both from book to book and within particular books. (Neate prefers a straightforward informational register.)
- o themes can vary within a single book making it, in Neate's view, confusing for young readers.
- o the books Neate considers most helpful have what she terms 'clear structural guiders'. These include headings and sub headings, retrieval devices like contents pages and indexes, glossaries, bibliographies, writing on the book's cover and introduction and chapter summaries. (Neate, 1988).

Neate concentrates mainly on information books rather than on the larger non-fiction category. While there is no doubt that books which have what she terms 'a straightforward informational register' are helpful for children's research, she is intolerant of any non-fiction book which does not meet rather narrow criteria. For example in her review of the Walker books **Read and Wonder** series she comments:

'These books are suitable for reading aloud, but as information texts they have

serious flaws. They are not books from which children can extract facts.

The language is a serious concern. The writing which is often poetical, is not what one expects from a non-fiction book.'

( 'Wonderful World' *The Times Educational Supplement* 18.6.93, p. 34 ) .

Neate continues her criticism by deploring the lack of clear structural guides, the lack of retrieval devices (in fact there are contents pages and indexes) and the use of drawings which 'cannot be as accurate as photographs'. The humorous slides into fantasy, for example Dick King Smith, in **All Pigs Are Beautiful**, imagines the pigs in one picture might be saying 'How kind of you to admire my children', are condemned as unhelpful anthropomorphism.

The very lack of uniformity in approach, selection of content, visual presentation and design in the **Read and Wonder** series strikes Eleanor von Schweinitz as a strength. She considers:

'these books challenge most of the stereotypes of current non-fiction publishing and, apart from their standard square format and twenty six pages, each is a unique entity with a character all of its own ...' their main aim is to share the excitement of discovery and sow the seeds of lasting curiosity; they are the antithesis of those children's information books that regiment their information into double page spreads'. ('Facts with the freshness of Fiction', review article by Eleanor von Schweinitz in **Books for Keeps** May 1993, p. 8).

Bobby Neate believes non-fiction, or at least information books, should not use 'poetical language'. But image and metaphor are great teachers and explainers. In **Think of a Beaver** Karen Wallace tells us:

'Beaver feet are webbed  
like duck's feet  
push like paddles  
through the water  
past the slowly  
swimming salmon  
down to where  
the tangled roots  
lie buried in  
the reedy lake bed.'

Von Schweinitz finds this incantatory style pleasantly reminiscent of Longfellow's **Hiawatha**. The simile of the feet pushing like paddles is actually a very precise image which would help children understand the motion and function of the beaver's feet.

Pappas examined 100 children's information books and concluded there were three obligatory elements without which a text could not be considered to belong to this genre: **topic presentation, description of attributes and characteristic events**. This research suggests the order of these elements either meets with children's expectations

or frustrates them. (Pappas, 1986). A detailed account of this important contribution of our knowledge of this genre appears in Section 5.4.1 of this chapter.

Some of the criticisms of children's non-fiction made by the researchers whose work is considered in this section have been noted and acted on by some of the best publishers in this area. The judges of the 1993 **Times Educational Supplement** information book award note the following improvements over the last ten years.

- o bibliographies, glossaries and indexes are not only now often present but are improving in quality.
- o the signposting (or in Neate's term 'structural guiders') to help the reader is much more evident.
- o the design of information books is in general much improved, with attractive covers, uncrowded pages and attractive and useful illustrations.
- o publishers have made an effort to include pictures of girls and ethnic minorities in active roles in the illustrations.
- o the standard of illustrations and photography have improved; Dorling Kindersley is singled out for special praise for excellence in this respect producing in many books illustrations that integrate actively with the text.

- o publishers have consulted with teachers and librarians to produce books to support the National Curriculum Primary Curriculum areas (Self, 1993).

## **5.6 Resources other than books.**

Resources other than books used across the primary curriculum areas include newspapers, charts, posters, magazines, archive material, video films, slides, T.V. programmes and computer data bases. The main study in this work reveals teacher-researcher and pupils using magazine articles, video films from television programmes and charts. These materials can, like books, be categorized according to the taxonomy offered in Table 2 **Categories of Children's Non-Fiction.**

### **Some general issues.**

These last three chapters have described the main types of reading material under the very broad classification of 'Non-fiction' and given some good examples of each kind. In the last sections of this chapter I want to look at some more general issues that usefully inform our selection of non-fiction.

## **5.7 Questions of bias in non-fiction.**

*It has* already been argued that what is objective fact or truth is more problematic than publishers and selectors of children's non-fiction sometimes assume. The same information can lead to different viewpoints and opinions.

There has also been more consciousness of the problem of books which offer a partial or ethnocentric view of the world and books which present the sexes and people of different class and racial origins in a stereotyped way.

Of course all books are biased in that each is the product of one person's unique experience and viewpoint. This cannot be avoided, and knowing the perspective from which an author writes helps us form our own judgement (Gillian Klein 1985).

### **5.8    Texts that make facts matter.**

Even if we make sure books have the sort of desirable qualities already discussed like clear format and layout, attractive and useful illustrations and good retrieval devices we cannot be sure they are exciting or involving enough to sustain interest.

A great mistake some writers of children's information books make is to imagine we should protect children from unsavoury facts by sticking to the bland and the predictable. However, seeing something disturbing like a grotesque magnified head of a predatory insect (Whitlock's **Spiders**) or reading the cruel details about the slaughter of elephants (e.g. in Ian Redmond's **Elephant**) intrigues and motivates.

A class of 9 year olds had been enjoying **The Sheep Pig** by Dick King Smith; some of them searched for information books as their interest in how we rear and treat pigs had been aroused by the story. The books in the library which included Jane Miller's **The Birth of Piglets** and Ruth Thompson's **Understanding Farm Animals** were all

right as far as they went. The problem was that they described what typically happened to the animals without ever making it explicit that certain practices like putting sows in farrowing pens and ringing young pigs were controversial. Yet it was just this kind of controversial issue that fully involved the children's interest.<sup>6</sup>

While we need a core of 'bread and butter' information and reference books we also need some which are ingenious and unusual and which show that not only stories are memorable.

Non-fiction explores the outside world and some books celebrate the sheer beauty of the natural world. **The Tree** by Judy Hindley with an almost poetic text describes trees, pollination methods but also provides the place of each species in history and folklore. **Where The Forest Meets The Sea** (Jeannie Baker) tells of the thoughts and activities of a young boy exploring a prehistoric rain forest, exquisitely illustrated with photographs of collages made from natural materials: Naomi Russell's **The Stream: From A Raindrop to the Sea**, is a book so individual that it is almost impossible to assign it to a category.

Other books celebrate the aesthetic beauty of the parts of the world made by human beings. David Macauley's **The Way Things Work** is built round outstanding drawings of computers, levers, typewriters and all manner of other machines. Ian Graham's **Space Shuttle** brings alive through clear text and excellent diagrams this amazing engineering feat. Peter Lafferty's **Wind to Flight** combines impeccable layout and indexing with a sense of the sheer excitement of science partly through



suggestions for simple projects and experiments - making a simple spray gun with a drinking straw and empty bin and shows imaginatively how a principle like using an air stream can be used to spray paint, sort out rubbish and float a Hovercraft.

All of these authors seem to have addressed themselves to the questions: what is a young reader likely to know already? What do they need to know in addition? How can this information be conveyed in a clear and interesting even imaginative way? Many have a speculative tone, Alik's **Dinosaur Bones** makes it clear that scientific enquiry continues. Often the active participation of the reader in the form of simple tasks and experiments is sought. Sometimes a 'Further Reading', or 'useful address list' gives ideas about how to go on to further study.

### **Reflecting on issues.**

It is argued in this study that a clear sense of purpose or purposes helps children persevere with non-fiction reading. In his capacity as a judge in **The Times Educational Supplement** Information Book competition in 1984 Geoff Fox commented,

'Arresting voices are all too rare in information books, which often seem to have been written by committees... The accent of genuine enthusiasm rarely intrudes.' (Fox, 1984, TES, p. 24.)

A reader does not read only to accumulate facts, but rather to find the facts that

illuminate issues. In each topic across the curriculum there are some key issues that need to be addressed. The teacher has an important role in interpreting some of these issues in a way children can understand and care about. It is the motivational implications of this that a 'studies skills' approach often ignores.

### **Summary and Conclusion.**

This chapter has looked at the features of books which fall in the non-narrative category: reference books and the expository texts we term 'children's information books'.

These texts make particular demands on young readers, and it is suggested that transitional forms, those retaining some of the familiar rhythms of speech, may be appropriate at particular ages and stages.

Research studies of children's books highlight some weaknesses, including cases where publishers' series format becomes a straight jacket, where retrieval devices are lacking or faulty and where information is not well organized or elegantly explained. Factors of bias are also examined. The trend, however, is towards improvement, and in any case as shown in Chapter 9, the limitations of texts can sometimes lead to the kind of metalingual and metatextual discussions which are so helpful to developing readers.

Finally, this chapter argues that if we want children to read reflectively we need to

offer books of quality which confront the issues honestly and in a way that children can understand.

The three chapters in this second part of the study try to set down some of the things teachers need to know about non-fiction. This knowledge and understanding about different kinds of texts, and about the qualities of particular texts, can be shared with young readers. In Chapters 8 and 9 there are vignettes of children talking about the books they are learning from. (See also the transcript material in Appendix 2, particularly Transcripts 4, 6 and 7.)

## **PART THREE**

### **BECOMING A REFLECTIVE READER OF THE KINDS OF TEXTS**

#### **IN THE GENERAL CATEGORY - CHILDREN'S NON-FICTION.**

'Knowledge has to be constructed afresh by each individual knower, through an interaction between the evidence (which is obtained through observation, listening, reading and the use of reference materials of all kinds) and what the learner brings to bear on it'.

(Wells, 1987, p. 116).

### Introduction to part three.

This third part of the study draws on both Part One, which established a working framework of how children learn, and on Part Two, which examines the different kinds of book which come under the umbrella term 'children's non-fiction,' to consider how children become readers of these forms of reading material. Between the learners and the texts are what might be termed 'intervening factors' which help determine children's progress. It is to these factors that this part of the study turns in order to illuminate issues to do with how teachers can support non-fiction reading.

Chapter 6 considers the available evidence on how children become readers of the different kinds of non-fiction. The differences between learning through spoken and written language are set out and theories of reading comprehension assessed. Factors in the texts which affect how easy or difficult children are likely to find them, including both global and local cohesion, are examined. It is argued that the acquisition of study skills and methods of supporting reading comprehension, are best firmly embedded in a learning context which embodies pupils' and teachers' broader intentions and purposes. This is consistent with the case made in Part I for regarding reading non-fiction, not as a special kind of activity apart from other kinds of learning, but as an integrated part of broad learning programmes. Chapter 6 ends with a suggested framework for reading non-fiction (summarized in a table) which is a strong reference point for the rest of the study.

This is followed by three chapters presenting the main study. The analysis and evaluation of a classroom example, in which the author operates as practitioner/researcher in planning

and carrying out a project on Squirrels, bring the main questions and issues to a practical level.

Chapter 7 looks at the options from which the educational researcher makes a choice of design and methodology for a school based project. An action research approach is chosen for the following reasons. First this approach is suitable for an educational researcher working on her own since it can take the form of a single example, as well as large projects undertaken by a team. Second, it is argued that the kinds of strategies which the rest of the study pointed to as likely to be significant, could only be tried out through actual episodes of practice. I needed to be the practitioner so that I could control the strategies employed. Third, while kinds of research not based on actual practice are valuable, there is an increasing recognition that at least some educational research should make a direct impact on practice. It is a major requirement of action research that classroom practice should change as a result of what is found. It is this dynamic concept of research and learning which is a strong theme throughout this study. Thus a research approach which contributed to the development of good practice by building in a process of systematic evaluation into the teaching and learning itself was appropriate. The limitations and disadvantages of action research are also described and evaluated.

The chosen methods of collecting and analyzing data are explained. These are the recording of children's and teacher's talk and the collection of children's writing during the project.

The classroom work, carried out with nine year olds over the summer term of 1989, is set out in Chapter 8. It is in the nature of action research that planning describing and evaluating are integrated. This is true in this case. However more detailed analysis and evaluation of the intervening factors which the author identifies as important are presented in Chapter 9. These are:

- o placing non-fiction reading in a strong framing context.
- o organising prior experience
- o encouraging children to formulate their own questions to take to the books.
- o supporting a sense of purpose
- o encouraging a sense of audience for talk and writing about the new ideas and information and about features of the books.
- o collaborative work in the context of a community of young readers and writers.
- o skilled and sensitive teacher direction mediation and provision of texts and resources.

In each learning context, each of these elements would have a place, but in particular cases some would have greater emphasis than others.

It is not claimed that the classroom example is the embodiment of perfect practice. As is the case with all teaching, success is partial. The important thing is that it is presented in a form that is intended to allow other practitioners to relate to the teaching challenges faced and to look critically at the solutions or partial solutions employed. (Bassey, 1981). It is claimed that the interacting factors identified as principles to guide good practice are an original contribution to knowledge about children's learning from the kinds of text we term children's non-fiction.



## CHAPTER 6

### Becoming a reader of non-fiction

#### Introduction.

The previous three chapters considered the different kinds of texts included in the non-fiction collection in the primary school. Studies of the features of the language and organisation of non-fiction were examined. It was observed that publishers were intensifying their interest in this area, and were producing great numbers of books explicitly aimed at helping to deliver the National Curriculum across the primary curriculum areas. (Mallett, 1992 b; Neate, 1992; Moon and Raban, 1992.)

This chapter turns attention to the young readers and how they can be supported as they develop the abilities important in non-fiction reading. In addition to the kinds of abilities necessary in all reading, namely the development of understanding and response and knowledge about language, readers of non-fiction need also to learn how to use information retrieval strategies for the purpose of study. It is argued that too great an emphasis on the latter may limit progress in the other two areas. Section 6.1 examines what is involved in learning from print, and particularly non-fiction. It looks at learning through talk, the potential role of spoken language in reading and at the intellectual consequences of orality and literacy. Section 6.2 introduces a review of the literature illuminating the issues in reading non-fiction. The question underlying the whole chapter, what is reading comprehension, is addressed in 6.3 with reference to different theoretical

positions.

6.4 reviews research studies and 6.5 examines particularly those research studies which are classroom based. Some problems in reading non-fiction, including children's tendency to copy, difficulties to do with answering questions, and difficulties arising from unsupported book research whether in the context of project work or more subject centred work are considered in 6.6.

Some strategies to help, including reading laboratories, educational technology and DARTS are examined in 6.7. Finally, in section 6.8, I attempt to link seven helpful principles to do with supporting non-fiction reading with the four-pronged model of learning set out in Chapter 2.

These principles inform the methodology of the classroom study (Chapter 8) and are offered as an original contribution to the development of strategies to support non-fiction reading.

## **6.1 Learning from written language**

All children without severe mental handicap learn to talk. By the age of five years children have acquired control over the main syntactic structures of their language and have a vocabulary of over two thousand words. (Brown, 1973; Donaldson, 1978; Tizard and Hughes, 1984). Children learn to talk in their families and communities, but most

learn to read and to write in the more formal context of the school. The relative difficulty of becoming literate is well documented. (Vygotsky, 1962; Britton, 1970; Donaldson, 1989; Wells, 1986, 1987; Czerniewska, 1992). There are important differences between spoken and written language which the young reader needs to understand. It is partly by using the spoken language in the context of handling text that children become readers. Teachers and children talk about the early texts often making links between what is in the books and the child's experiences, but sometimes jointly attending to the writing itself, to the words and phrases that make it a text. It is at the junior school stage that this discussion and joint attention to features of texts are less common, whether the children are reading fiction or non-fiction, (Southgate, 1981; HMI report, 1990; Moon and Raban, 1992.) A major challenge for teachers and children is the uniting of information from different sources into a coherent synthesis, from first hand experience and from secondary sources like books. Spoken language plays a major part in making it possible to link information from books with information from other sources. This section of the study examines first the role of talk in making sense of experience from the earliest years, then proceeds to a consideration of the role of spoken language in making sense of print, particularly non-fiction text and finally attends more closely to issues in learning from print.

### **6.1.1 Learning from talk.**

Children's earliest learning is embedded in meaningful everyday contexts. Much of it is physical: learning to crawl, walk, climb stairs, use a spoon and get dressed. It is also

social in that it is achieved in the presence of others: parents, care givers and older siblings. The activities and tasks parents and children share and talk about, for example unloading shopping, digging in the garden, cooking and playing games, are accompanied by talk: talk to focus attention, to direct activity and to evaluate and share experience. The role of spoken language in the pre-school years in making sense of the world and extending children's knowledge is well documented (Vygotsky, 1962; Halliday, 1975; Bullock Report, 1975; Bruner 1975; Brice-Heath, 1983; Garvey, 1984; Tizard and Hughes, 1984; Wells, 1981, 1985, 1987; Whitehead, 1990). Garvey puts the case powerfully as follows:

...talk depends on skills, knowledge and motives that originate and continue to develop outside the linguistic system, in inter-personal relations and in other experiences with the social and physical world. Thus almost every aspect of a child's development is reflected in his talk. (Garvey, 1984, p.13)

Part of learning to talk is a growing 'communicative competence', an increasing sensitivity to different language contexts and how this affects the nature of utterances. (Hymes, 1971; Romaine, 1984.)

The principle that children continue to learn from first-hand experience is evident in the practical mathematics and 'hands on' science, craft, design and technology and practically based cross curricular project work (still possible within the framework of the National Curriculum at the time of writing in the middle 1990s) found in primary school classrooms. The emphasis on learning by manipulating objects in a stimulating

environment is compatible with Piaget's theory that the roots of intelligence lie in action.

However, it is widely thought that classroom practice was influenced for too many years by the relative under privileging of the role of language in learning in Piaget's model of development (Walkerdine, 1984; Tizard and Hughes, 1984; Wood, 1988; Gipps, 1992). Over the last twenty five years language has become recognised as central to the learning process, much more than a mere crystallizer of what has already been learnt, as Piaget's writing consistently suggested. (Piaget, 1967). The assimilation of new material is greatly assisted by children and teachers talking together, as the work of Britton (1970); Rosen and Rosen (1973); Barnes, (1976, 1988) and many others shows. A detailed critique of Piaget's position on the role of language in learning appears in Chapter 2 of this dissertation.

In some cultures nearly everything children need to know is learnt in context. The learning is often acquired by observing and imitating adults but without adult evaluation (Edwards and Westgate, 1987; Cole and Scribner, 1974; Cook-Gumperz and Gumperz, 1982). However in technological societies kinds of learning are demanded that are not embedded in a particular context. (Bruner, 1962, 1966 a, 1966 b; Donaldson, 1979) Some kinds of knowledge and information have to be mediated verbally by teachers and parents or else acquired from books. A major educational concern is how to help children integrate information from first and second hand sources.

Here it is helpful to remember the two major functions of language set out in Vygotsky's book **Thought and Language**. First language organises human thinking as soon as a

child begins to use verbal language at about age two. Early pre-verbal thinking meets with early vocalization to form a new kind of behaviour. Thinking is not only organised and structured by language, some kinds of thinking are born through language.

The other major function of language is communication. But it is not a matter of organising our thinking and then sharing it. Vygotsky's model is much more interactive than this would suggest: the impetus to talk is social. It is this insight we must apply to schooling at every stage. The continuing problem is the tendency of teachers to leave children to read independently after the initial stages of learning to read. (Southgate, 1981; HMI, 1990; Wray and Lewis, 1992; Neate, 1992; Mallett, 1992). By making using books individual rather than shared children are cut off from the degree of interaction with peers and teachers which would develop and extend their thinking through shared attention to developing ideas expressed through spoken language. This kind of talking together about ideas in texts is realized in the classroom example in Chapters 8 and 9 of this study.

That part of Vygotsky's theory, which views the aim of teaching as at least partly to do with bridging the gap between common sense knowledge or 'spontaneous' concepts, and formal school mediated knowledge or 'scientific' concepts is most pertinent to reading non-fiction. It is on this theory, examined in chapter 2, that I draw in maintaining the importance of creating contexts for collaborative talk not only about information and new ideas, but also about features of book language.

### **6.1.2 The role of spoken language in learning from non-fiction.**

The role of talk in the initial teaching of reading as a way of both encouraging reading for meaning and directing children to important textural features has been explained by a number of reading specialists. (Holdaway, 1979; Dombey, 1986; Waterland, 1988; Meek, 1991). Meek maintains that:

'Reading and writing are embedded in talk and surrounded by it....literary is more than just a question of reading and writing.' (Meek, 1991, p 17)

The benefit of talking about reading is part of the 'understanding and responding' emphasized in Cox (1989) and applies to both reading fiction and non-fiction.

The earliest context for what Meek terms 'interacting with a reading adult' is the parent or care giver reading, probably a story, to the pre-school child. (Meek, 1991). Dombey offers a powerful account of how adult and child attend to the author's words, negotiating the meaning by talking about their own related experience. This fusion of hearing words from the page read out loud and memories of things happening in another context bring about a negotiation of the author's meaning. (Dombey, 1986). Carol White in **Books Before Five** describes this process of moving through talk from events in the world of the story and events in everyday experience and of course the reverse. Sometimes the story relates to something that has happened to the young child: for example, in one diary entry White remarks that tempers had been frayed and she had smacked her daughter. Thus, later on, reading about Tom Kitten being naughty and subsequently disciplined by his mother was soothing and satisfying, and helpful in reaching the conclusion that, even though parents are sometimes cross with children, they still love them. (White, 1954)

Interplay between reading non-fiction and first hand experience made explicit through talk, can also aid the negotiation of the author's meaning. In chapter 8 we have quite a powerful example of a nine year old interpreting his own written text about predators to an audience of two seven year olds. It is the relative lack of negotiation of the meaning of non-fiction text which increases the likelihood of near copying from books (see section 6.6 in this chapter). Edwards maintains that it is by listening to the conversations of the very young that teachers can assess progress in controlling non-fiction reading. (Edwards, H, 1994)

I now list some of the ways talk about both ideas and information and about features of text can be brought into the reading programme.

### **The organization of prior knowledge.**

Work on the importance of 'prior knowledge' in reading has been carried out at the University of Illinois in the United States of America. These researchers suggest we think of a 'schema' as an abstract knowledge structure which holds a summary in a reader's memory of what is known about a particular topic (Anderson and Pearson, 1984; Pearson et al, 1984). How do we facilitate the retrieval of information relevant to a new topic?

There are two kinds of prior knowledge relevant here: first prior knowledge of the subject whether it is Squirrels, Magnets, Seafaring or Volcanoes; second prior knowledge of the features of non-fiction texts. In both cases it is helpful for children to make existing knowledge explicit and extend it through discussion in a group or class context.



## **Formulating questions**

The bridge between what is known and the new ideas and information in the books can be made by teacher and children together formulating questions to take to secondary sources. This collaborative approach to questions is likely to be much more motivating than facing young learners with someone else's questions.

## **Teacher's mediating role.**

The teacher's mediation is of two kinds. First, it is to do with making sense of the content of the texts: throughout children's use of non-fiction the teacher's mediating role can help pupils make some of the links between first hand experience and what the books can reveal to them. Secondly the teacher can help children understand the features that characterize a non-fiction text. Familiarity with non-fiction text can be enhanced by selectively reading out loud, paraphrasing and discussion of diagrams and illustrations. The teacher can also be alert to certain key concepts and issues of interest and make it possible for these to be explained and shared in group and class discussion.

## **Children's spoken language round texts.**

The making of learning social and collaborative is an important implication of the four pronged learning model arising out of the analysis in Chapter 2. The same double focus of the teacher's contribution set out above applies to children's talk about non-fiction. Thus talk, in group and class discussion, can both be a context for sharing and reflecting

upon information and new ideas and about making explicit developing knowledge about the features of texts.

If given reasonable help and preparation time children can be helped to make some notes from their reading to expand as oral summaries.

### **Spoken language for thinking and sharing.**

It is important to recognize the dynamic nature of the relationship between organizing thinking through language and communicating that thinking so that the act of sharing reflections actually changes and modifies further thinking that will, in turn, be shared.

### **6.1.3 Learning from Print.**

The great advantage of written language is its permanence. Readers can proceed at their own pace and go back and re-read when they wish. The listener, unless speech is recorded, has less flexibility and must catch things first time. But there are features of written language that make it challenging. Texts have to stand on their own without the kind of physical context spoken language has. Katherine Perera gives a good example of how situational clues help in oral communication. A primary school teacher comments:

“the noise of that pneumatic drill is quite intolerable”. Even if the children have not come across the word ‘pneumatic’ before, the noise outside gives a strong clue, and to interpret, ‘intolerable’ they only have to look at the teacher’s facial

expression! (Katherine Perera, 1984, p. 273).

A second factor which makes written text more difficult for most of us, but particularly for the young reader, is that it lacks the speaker's tone, speed of speech and pause. To a limited extent punctuation can help, and writers and publishers of children's books sometimes try to use layout and line division to show how phrases relate to each other. But as Perera points out, listeners know immediately by the speaker's pitch, stress and even loudness which is the new and important information. Readers, on the other hand, have to hold the developing text rather carefully in their memory so that they can identify the information focus even when it does not occur in its most usual position at the end of a clause (Katherine Perera, 1984, p273). There are often visual clues to help compensate: punctuation; top and side headlining; the use of different kinds of type to indicate status of different kinds of information and the organization of the book into chapters. (See section on global cohesion in this chapter and in chapter 5).

Thirdly written language contains grammatical constructions which are not normally found in everyday speech. There is often much embedding of sentences and sometimes use of the passive rather than active voice. Writers of children's non-fiction do sometimes try to avoid this and often use questions and other forms more typical of spoken language. Non-fiction can also be made more accessible by making links with young learners' experience, by avoiding using too many words likely to be new, by placing new vocabulary in a strong context and by mostly preferring syntactic structures that resemble the patterns of speech.

## **Global Cohesion.**

The overall organization of an information book, what linguists like Perera and Pappas call the 'global structure', is important in determining how easy or difficult a text is for a young reader. (Pappas, 1986; Perera, 1987). Good, clear top and side headlines, division into chapters, the use of different kinds of type to give hints of relative emphasis and the place of a particular piece of information in the hierarchy all help. It should also be clear, and not left implicit, how the different sections of a book relate to one another and contribute to the whole. It is very obvious when aspects of the global structure are unsatisfactory. No amount of beautiful illustration or general attractiveness of a book can compensate for lack of clear organization. Global cohesion is covered in more detail in Chapter 5 section 4. However a mention is needed here, as reading non-fiction is made easier or more difficult by the quality of global cohesion.

## **Local Cohesion.**

This concept was discussed in relation to non-narrative writing in Chapter 5. We need to return to it now to understand what is involved in becoming a reader of this kind of text.

As well as overall unity and integrity (global cohesion) text needs to work at a more local level. Each sentence needs to be knitted carefully into the one before it and after it (Barrs, 1987). Halliday and Hasan have done pioneering work in the area of text cohesion at sentence level. One outcome of this was their book **Cohesion in English** 1976. In his

research for the Open University Reading Unit John Chapman applied some of their ideas to how a knowledge of cohesive ties helps reading comprehension in the primary years. Lists and copious examples of the different kinds of cohesive tie found in written English are available in Halliday and Hasan (1976) and Chapman. (1983; 1987). Roger Beard sets out a clear analysis of cohesive ties with examples taken from *The Hobbit*. (Beard 1987). As we might expect, all these researchers found that syntactical patterns which evolve later in childhood, and those which occur in written texts rather than in spoken language present most difficulties for young learners. Of course we want young learners to grow as readers, and this is partly achieved by their having opportunity to meet new and more complex sentence construction, appropriate to different kinds of writing. Only offering them texts with short abrupt sentences denies them the opportunity and indeed sometimes produces writing which is difficult to read. Beard, following Harrison's analysis (1980), identifies five syntactic patterns which often occur in non-fiction and which tend to be difficult for young readers.

**Table 5. Syntactic Patterns Making Non-Fiction Text Difficult.**

1. **Passive verb forms:** 'Hazelnuts and acorns are liked by squirrels'.
2. **Nominalisation:** making a noun phrase from a verb.
3. **Modal verbs:** 'could', 'should', 'might' and 'may' etc.
4. **Including of many clauses in a sentence.<sup>1</sup>**
5. **Compression:** writing with too many ideas condensed into a few, possibly rather short sentences. In fact some repetition of ideas and key vocabulary is helpful.  
(Beard, 1987).

Sometimes complex meanings and carefully constructed arguments have to be expressed in relatively complicated language. We want children to learn to cope with this, but it seems sensible to introduce the new forms in stages. Some syntactic forms are not essential and are best avoided in writing for younger learners. These include concealed negatives, two or more negatives in the same sentence, difficult connections (consequently, hence, moreover) and the kind of breaks in children's books which cut across phrases. (Perera, 1984)

### **Children's perceptions of the readability of texts.**

What is often termed the 'readability of a text' simply refers to the sum total of all the elements in a piece of written material which affect the reader's success.

'The success is the extent to which they understand it, read it at optimum speed and find it interesting (Gilliland, 1972 pp 12-13).

The concept of readability has tended to be boiled down to what can easily be measured, for example sentence length and vocabulary. There are formulae which can be used for such measurement and the different kinds are described and evaluated by Harrison in Lunzer and Gardner's book **The Effective use of Reading** 1979. On the whole <sup>^</sup>teacher's judgements are likely to be as reliable, particularly if several teachers work together to decide which books seem most suitable for particular ages and stages.

In my own work in school I have often discussed the issue of the readability of different texts with individual children and groups of children. Michael and Kieron, 9 year old fossil experts were able to suggest which books were best for 'younger children just beginning to learn about fossils and dinosaurs' and which were 'more for older children already interested'. (Mallett, 1992b. p. 156) In this study children mentioned size of print, whether the book was in story form, the number of pictures, simply labelled diagrams and amount of writing in relation to the number of illustrations as factors in assessing the difficulty of a book. They mentioned 'hard writing' as a factor, and when pressed to explain further suggested this meant "long sentences and difficult words". The children working on 'Squirrels' (Chapter 8) made word lists or glossaries for their own books. This helped them use the retrieval devices in the information books they were using and contributed to their understanding of what is involved in taking on new vocabulary. (See Appendix 2, Transcript 7, utterances 19-21, and Transcript 8, utterances 6-18).

#### **6.1.4 Cognitive consequences of control over oral and written language.**

What are the implications of becoming literate for children's intellectual development? All human societies develop an oral language but some, for various reasons, do not have a written form. Interestingly in some oral societies some of the purposes served by written language in other cultures are taken over by their spoken language (see Gordon Wells (1988) Chapter 7 for an interesting account of the evidence). We therefore have to be careful not to claim that literacy necessarily affects the basic repertoire of cognitive processes. Nevertheless it seems that literacy may have important effects on which

cognitive processes are selected at a particular time and the speed and efficiency with which they are employed. (Lock and Fisher; 1984; Wells, 1988).

In technological societies like our own the acquisition of literacy for the most part, unlike the acquisition of speech, takes place in the relatively formal context of the school. The more complex kinds of written language allow us to build an abstract and coherent theory of reality. David Olson believes this explicit formal system both shapes the cognitive processes of educated adults and underpins western culture. The difficulty for our children is that there is a mismatch between the kind of thinking implicit in the general theories of science, philosophy and so on and the thinking which encompasses their daily activities in the practical world. (Olson, 1984) However, another element in Olson's argument needs to be questioned. It is worth quoting it in full: 'Ordinary language, with its depth of resources while an instrument of limited power for exploring abstract ideas, is a universal means for sharing our understanding of concrete situations and guiding practical actions. And it is the language which the child brings to school'. (Olson, 1984, p 240)

While there are important differences between oral and written language it is, I believe, possible to create too great a separation between them. A major theme of this study is that it is ordinary spoken language, the children's and the teacher's, which helps make accessible the objective knowledge which is at the centre of the curriculum. Spoken language allows young learners to express their thoughts and wonderings about the world and to begin the active process of reformulating new knowledge so that it can be assimilated with what they know already. This is not to deny that competence in disciplines like history, philosophy and mathematics is often hard won. However, spoken language can be an instrument for gradually acquiring new ways of thinking and new



ways of relating to experience.

Indeed spoken language can be a bridge to the kinds of thinking which Margaret Donaldson has termed 'disembedded', that is to say thinking which is not centred on immediate context. (Donaldson, 1978). Much non-fiction deals with phenomena we cannot directly experience. Bruner has termed the ability to learn through written material 'analytical competence' (Bruner et al, 1966)

Writing, more abstract than talking, and a purely linguistic context independent of immediate reference, introduces children to the special power of language to extend our own physical context. We use a metalanguage to talk about language. As soon as children have conversations about what something 'means' or how a 'word' or 'phrase' is chosen they have become able to be aware of taking their own decisions about what they write and, for that matter, say. Thus talk can be about ideas and abstractions and things away from the classroom. Perhaps the important issue is not so much the mode, whether or not children are talking or writing, but the way in which language is used. I feel certain that talking about the ideas and information in books and about what is good and less good about particular books, develops reading ability and the range and complexity of reading material a young learner can attempt.

Nevertheless the relative permanence of written language is important since it enables the growing mind to consider the different meanings a particular text may have. (Miller, 1972; Donaldson, 1978; Chapman, 1987.) Donaldson puts it powerfully:

'Thus it turns out that those very features of the written word which encourage awareness of language may also encourage awareness of one's own thinking and be relevant to the development of intellectual control, with incalculable consequences for the development of the kinds of thinking which are characteristic of logic, mathematics and the sciences'. (Donaldson, 1978 p.95)

#### **6.1.5 Transitional forms.**

Texts which organise information into hierarchies of concepts and which require some understanding of the process of classifying and evaluating material, usually make more demands on a young reader than narrative or descriptive texts. Children's difficulty with the form is not just to do with lack of familiarity with the kind of text, but mainly because their intellectual development has not yet advanced far enough to make such reading within their powers of comprehension.

One of the conclusions reached in Part 2 is that there are transitional forms of writing for children which create a bridge from narrative forms to mature, non-narrative text. Such transitional texts included books which are completely or partly organised chronologically and those which echo conversation in syntax and tone.

The Stopwatch nature series (A & C Black) has both features. Baker and Freebody, in their interesting study described in **Children's First School Books**, found many examples of these transitional forms in school classrooms. (Baker and Freebody, 1989). Their chief characteristic is the patterning of written language in forms already familiar in speech.

The use of questions and pronouns helps draw in young readers unfamiliar with non-narrative text.

In Chapter 8 we find some children aged 9 still coping best with books which have a time sequence but which also include the appropriate introduction of more general information. There is, therefore, a case for regarding narrative and non-narrative forms more flexibly, as forms which can both appear in a single book. (Andrews, 1989: Arnold, 1992). Some of the books with this characteristic are excellent and to label them as a "transitional genre" with its developmental connotations does them less than justice. For example, Beverley Halstead has produced a fascinating story about Ajax, a brontosaurus taking us from his hatching to his death, one hundred and twenty years later. At appropriate points in the story there are boxes giving the evidence for what is unfolding in the story. For example one box justifies the view that 'Ajax' is a vegetarian:

"We can be certain the brontosaurus was a plant eater from its teeth, and sometimes plant remains are preserved in the stomach,' (Beverley Halstead.

**A Brontosaurus: The Life Story Unearthed, 1982, p.10.)**

The kinds of text we offer to children can thus be helpful or unhelpful in supporting non-fiction reading.

## **6.2 Introduction to a selective review of the literature contributing to our understanding of reading non-fiction.**

The Cox report defines three related kinds of development in becoming a reader. The first and third apply to all types of reading; the second is normally relevant only to reading kinds of non-fiction.

- o the development of the ability to read, understand and respond to all kinds of writing;
- o the development of reading and information retrieval strategies for the purpose of study;
- o the development of knowledge about language.

(DES/WO, 1989a, 16.1)

This model of what is involved in becoming a reader is essentially dynamic: both in the sense that the three elements interrelate and in the emphasis on the development of abilities. This conception of the reader as actively developing strategies, struggling to understand and responding to meaning in text is entirely compatible with the model of the active learner and reader in this study.

The review of the literature on reading non-fiction that follows indicates that the second kind of development identified in Cox 1989, strategies for using retrieval devices, can become distorted and severed from the other two both in research and in classroom practice. There has perhaps been too much emphasis on information retrieval, on what is often termed 'study skills', and too little on the reflecting upon and using of ideas and information once found. It is the interest in the ideas that makes the acquiring of study skills worthwhile. The three elements set out above are essentially in dynamic

relationship. However for the purpose of finding a way through a considerable amount of information it is helpful to look at studies as they contribute mainly to one of the three aspects of reading development. This review of the literature is organized as follows: first a consideration of what is meant by and involved in reading comprehension and this leans most towards the first kind of development - understanding and response to books; secondly an examination of surveys and research studies examining readers' abilities and behaviours which tell us most about study skills, but to some extent also about understanding and response; thirdly an evaluation of classroom studies in which teacher and researcher roles unite providing action research examples placing reading non-fiction in the context of ordinary classroom work. Section 6.6 takes up some of the main problems in children's use of non-fiction. The definition of 'study skills' is treated as problematic, since the making of notes and summaries is a far more demanding task than the term 'study skills' connotes. Other problematic areas examined in 6.6, include children's tendency to copy if their non-fiction reading is unsupported; the issue of whether only teachers' questions should structure children's research; the issues often raised about project work as a context for reading non-fiction and the more subject centred reading often now required in the primary curriculum areas, particularly history, geography, science and mathematics.

### **6.3    What is reading comprehension?**

Becoming a reader is a long process closely linked to the other language arts, listening, speaking and writing (Bullock Report, 1975; Holdaway, 1979; Southgate et al, 1981; Meek, 1991). Learning to read is fundamentally to do with getting meaning

from print. There is controversy about the relative merit of particular approaches to reading and to the kind of books 'real' or reading scheme primers offered to beginning readers.

It is generally agreed that early readers need to be helped to acquire a large sight vocabulary and some strategies for tackling new words. The main strategies are looking for contextual clues and structural and phonic analysis.

Reading comprehension has to do with an increasing ability to grasp the meaning of written text, to understand the purposes of different kinds of text and to evaluate what is read. Children learn that a story yields its message cumulatively. It has to be read in its entirety. Successful reading of non-fiction text depends on the development of a more flexible approach. Lunzer and Gardner offer the most powerful description of the reading strategies of the flexible reader known to the present writer. It is worth quoting at length:

'(They) know how to vary the pace and style of reading to accord with their personal purposes and the nature of the text. When they meet a difficulty, be it the intractability of the subject, the infelicity of the writer or ignorance of the background knowledge required to master a passage, they may pause to think. Or they may turn back and read over what was dismissed too lightly at first reading. They may skip a paragraph or two, knowing that they can return and backtrack if necessary. When they want to master the content of a passage in detail, or relish its style, they may read it over and over again.

Or they may skim along to capture a general drift'. (Lunzer and Gardner, 1979, pages 1-2)

This dynamic model shows how the mature reader uses his or her whole intelligence and reflective power in controlling their reading. Some passages may be skimmed over to discover the gist of what is being conveyed. Sometimes a text is scanned for a date or name of a city or country. There is general agreement that mature readers are able to vary the speed of reading according to purpose: some passages will be skimmed, others read very slowly and carefully because they hold an answer to a specific question being researched. (Lunzer and Gardner, 1979; Southgate, 1981; Pumphrey, 1991; ; Neate, 1992).

The mature reader draws on several reading styles according to the text difficulty and their own purpose. Most reading specialists writing about non-fiction kinds of reading recognize skimming and scanning as reading approaches to some texts or parts of texts for some purposes.

Skimming is a strategy that can be used to obtain the gist of parts of a book to help decide where to pause and read more reflectively. When skimming readers tend to concentrate on paragraph beginnings and any summaries at chapter ends. This is a useful strategy which speeds up study and research. However, as Lunzer and Gardner point out, tasks like comprehension questions which demand too much of this kind of 'short-burst' reading are not likely to help with a critical or evaluative approach. There is discussion of this point in Chapter 1 when the key issues in the whole study

are set out, and it is taken up again when the study by Perry, 1959, is examined. Scanning is a more limited kind of skimming to find if a particular point is present, or perhaps a date or name of a city.

Skimming and scanning are more limited kinds of reading than reflective or critical kinds. The mature reader is in control and varies his or her strategy according to purpose at a particular time. Lunzer and Gardner add another reading approach to skimming, scanning and critical reading. They refer to it as 'receptive' reading. For this kind of reading skimming and scanning are not subskills in a hierarchy headed by critical reading, but reading styles or strategies to make flexible reading possible:

'It is sufficient that the reader satisfies himself that the matter which he reads makes some sort of sense. To do this he must know the meaning of most of the words and he must see that they hang together grammatically and conceptually. A reader who is operating at this level would accept and pass over

1. The Bedouins were a nomadic people who built many fine cities out of bricks and wood.

just as he would

2. The Bedouins were a nomadic people who built no cities.'

(Lunzer and Gardner, 1979, p.38.)

It is argued in the main study in this work that by making reading non-fiction collaborative children's critical faculties can be brought into first gear, rather than



remaining too often in the low gear of 'receptive' reading.

In Chapters 8 and 9 the teacher-researcher acts as model reader, making explicit to the children in class and group discussion and sometimes to individuals how a mature reader of non-fiction **reflects** on the task. Reading and thinking interrelate.

While there is almost universal recognition that reading is a thinking process, involving interpretation of what is read, there are two different views on comprehension. One group of reading specialists believe reading comprehension depends on the development of a number of specific skills. (Davis, 1968, 1971; Melnik and Merritt, 1972.)

Davis takes an extreme position maintaining that:

'comprehension is composed of separate skills and abilities, such as understanding word meanings, verbal reasoning, getting the main idea, detecting the author's mood, and discerning word meanings in context.'  
(Davis, 1971, p.171)

The other position is to regard reading comprehension as an essentially unitary ability. (Spache and Spache, 1969; Thorndike, 1973-4; Lunzer and Gardner, 1979; Davis, 1971.)

In **The Effective Use of Reading**, an outcome of the Schools Council Reading for Learning Project, Lunzer and Gardner describe how texts used to identify possible

subskills like interpreting metaphors, finding main ideas, and drawing inferences from one part of a text were given to 257 10-11 year olds in Nottinghamshire and Derbyshire. No evidence emerged that such sub skills existed leading the researchers to conclude that:

'reading comprehension cannot be broken down into a number of distinct subskills, instead, the evidence points strongly to a single aptitude.'

The theoretical position on reading comprehension adopted will, as Chall makes clear, affect approaches to teaching and assessing reading:

'If the specificity concept is accepted, then both tests and instructional materials will pay particular attention to the different comprehension skills. A general concept of reading comprehension will lead to a more global approach to reading improvement, one that tries to develop ability by reading and other means'. (Chall, J. 1977, p 98.)

There is another important difference in viewpoint which would also tend to lead to different kinds of practice: reading comprehension can be viewed as one-way, as the reader coming to understand what the author writes, or as a two-way process in which what the reader brings to his or her reading of the text contributes as much to comprehension as does the message the author aims to present. (Southgate et al, 1981; Chapman, 1983; Wray, D., Bloom and Hall, 1989)

A definition which recognises information gain, as being an integration of knowledge and existing knowledge, has, as Southgate puts it:

'important implications for the kind of 'topic work' in which children of 7 to 9 years are frequently engaged. It has even more relevance for so called 'comprehension tests', in that it is not possible to ascertain what children have learned from reading a passage, without some assessment of their 'pre-knowledge'. (Southgate et al, 1980, p. 26),

In the main study in this work the children were encouraged to make this 'pre-knowledge' explicit before reading about the topic. (See Chapter 8).

The degree of motivation brought to the reading task also contributes to the quality of comprehension. Goodman maintains that:

'It is the search for meaning, the active continuous attempt to comprehend, that makes all this complex process work. What distinguishes more and less proficient reading is how well integrated it is: how efficiently and effectively cues for all sorts are used, strategies applied, and meaning created'. (Goodman, K.S., Goodman, Y. and Burke, C., 1978, p. 68.)

Drawing on this view of reading as a search for meaning, the classroom example in Chapter 8 sets the reading tasks in a rich and motivating context.

This contrasts with the comprehension tasks plus questions which so often limited children to a literal interpretation of a text. (Southgate, 1981; Meek, 1982; Arnold, 1992; Moon and Raban, 1992).

Moon and Raban comment that:

'...children soon discovered that rather than read the passage, the trick was to search for the key words and re-formulate the question into a correct answer'.

Moon and Raban, 1992, p.40.

Wray and Lewis found in their study of children using information books to answer worksheet questions that children sought strategies to avoid close examination of the texts. (Wray and Lewis, 1992). Southgate et al carried out research which pointed to the benefit of oral summary preceding written summaries (Southgate et al, 1981).

The National Curriculum also starts from oral comprehension.

'Pupils should be able to demonstrate, in talking about stories and poems, that they are beginning to use inference, deduction and previous reading experience to find and appreciate meaning, beyond the literal. SOA, Level 3 (a.)'

This extends to non-fiction and other texts at Level 4, but still involving talking not writing.

The following quotation from Meek, 1982, gets closer to the role of motivation in becoming a truly reflective reader:

'I have said many times that the 'skills' of looking up words in a dictionary, or information in an encyclopedia are learned only when the context for the use of these skills is significant for the learner. School reading becomes more flexible and economic as the pupil puts it to work on behalf of something he needs to know or to think about. What we sometimes called 'comprehension' or 'higher order reading skills' are in fact the ways in which a reader **thinks** about what he is reading, not as an exerciser to flex his reading muscles but as a means of making judgements and generalization from experience.'

(Meek, 1982, pp 191-192.)

W.G. Perry, in his well known study of the reading strategies of students at Harvard University, found that even these older, abler learners needed help in directing their reading efforts towards judgment and 'away from ritual'. (Perry, 1959, p. 199).

#### **Summary of the view of reading comprehension which informs this study.**

- o Reading comprehension is viewed as a unitary ability, a total global act rather than as to do with the acquisition and application of specific subskills. The reader actively constructs the meaning of the passage predicting what is likely to follow and modifying hypotheses in the light of what is actually there. Predictions are informed by semantic cues from immediate recognition of

words, phonic cues from knowledge of sounds of letters and syntactic cues drawn from understanding of the grammatical structure of language.

- o Reading comprehension is a thinking, interpretive and evaluative process in which new information and ideas unite with existing knowledge.
- o Reading for learning needs to be underpinned by a sight vocabulary since if too many words are not known reading the text becomes very difficult. Knowledge of common phonic rules helps with tackling new vocabulary, as long as young readers know there are many exceptions.
- o The context in which the reading takes place is important since children need to be motivated to develop the habit of thoughtful reading. Collaborative contexts where teachers and pupils talk together about the new ideas in the books makes the struggle to read and understand worthwhile.
- o Learning to understand the purposes for non-fiction reading and the conventions of this kind of text helps children make progress.

#### **6.4 Research studies about non-fiction reading.**

There is a large number of research studies on the learning and teaching of reading. These range from national surveys of children's reading interests (Whitehead et al, 1977), studies of the problems some children experience in learning to read (Tansley, 1967; Vernon, 1957; Smith and Carrigan, 1959), psychological and psycho-linguistic studies (Clay, 1968; Goodman, 1965, 1968; Goodman, K.S. and Goodman, Y., 1977; Chapman, 1983, 1987) historical accounts of development in methods and philosophies in America and the United Kingdom (Chall, 1977; Morris, 1972; Clymer, 1965 and

Resnick, D.P. & Resnick, L.B., 1977) and studies of reading tests and assessment techniques and governmental National Surveys of reading comprehension (Start and Wells, 1972; The Bullock enquiry report, 1975).

Most work concentrates either on the initial teaching of reading or on the development of reading abilities in older students of secondary or college age. The years between have had less attention. The main studies of reading development and reading to learn in the primary years include: Lunzer and Gardner's research into reading abilities of pupils aged 10-15, (1979); the study of reading abilities in the junior years carried out by Southgate et al 1981,<sup>1</sup> which included children's reading of both fiction and non-fiction; the Plowden Report, 1968 and the Bullock Report 1975 which both included an examination of children's developing abilities in reading non-fiction.

Two recent HMI reports assess schools' degree of success in promoting both response to fiction and the ability to read for information. These are: HMI (1989) **Reading Policy and Practice at ages 5-14** and HMI (1989) and **The Teaching and Learning of Reading in Primary Schools**. (HMI, 1990).

Some recent initiatives in illuminating how reading to learn can be supported include the EXEL Nuffield sponsored project - **Extending literacy in the junior school** based at Exeter University School of Education, directed by David Wray, Mallett's classroom case study approach (1992) and Neate's work on developing information-finding skills in the primary years. (Neate, 1985; 1992).

## Research on reading in the primary and middle years: Surveys.

The five studies which are most pertinent to this work are summarized here.

### **1. Maxwell's Scottish survey of Attainment and Teaching Practices.**

Maxwell directed an enquiry into reading progress from 8 to 15 describing the study as 'a survey of attainment and teaching practices in Scotland'. (Maxwell, 1972)

The investigation policy was based on four principles: all kinds of primary and secondary school were to be included; the unit of the enquiry was to be the whole class; the age-group examined should be between the comparatively neglected age range, in terms of the focus on most reading studies, eight to fifteen; that there should be an objective and common means of assessing progress by use of a reading test, namely the Edinburgh Reading Tests.<sup>2</sup>

The scope of the investigation was wide. In addition to the use of the Reading test the research team considered school and class organization, teachers' views and practices, resources for reading, socio-economic differences between successful and less successful readers, leisure reading and the reading demands of both the primary and secondary schools.

The importance of this survey for the present work is its inclusion of reading to learn, the reading of non-fiction, in its brief. 'Reading to learn' is termed 'functional reading' and refers to:



'that which is used for studies other than that explicitly taught as reading. The reading of instructions, or the reading involved in mathematics and project work is included in functional reading'. (Maxwell, 1972 p. 16.)

The present writer finds the description above, and indeed the very term 'functional' with its utilitarian connotations, do not suggest the great interest and excitement which **can** accompany 'finding out' if galvanised by a genuine need to know. The research team look at two other categories: literary reading and recreational reading, that is reading done by pupils for their own interest and purposes and not requested by the school. Maxwell and his team found there were two types of what they term 'functional reading' in the primary classes they visited: reading required for the study of subjects other than English or language and reading to support project work.

The relevant findings for this work from this substantial project are summarized below:

- o class textbooks to support history and geography were 'not a major element in the teaching of the subject areas investigated'.
- o work organized round projects or topics was supported by work cards with tasks and questions to direct study, and by information and reference books.
- o However the team found that in the 90 per cent of classes which used project work and in the 60 per cent that used projects as the main method of teaching 'outside the three R's' there was little systematic guidance given to pupils on the reading and study techniques the team considered necessary to make

effective use of the pupils' time and efforts.

- o Interviews with teachers revealed that many did not appreciate that a different kind of support was needed for reading across the curriculum. They appeared to believe there would be a direct transfer from reading from class readers to other kinds of reading.
- o The research team make two main recommendations to improve what they term 'functional' reading, both of which are pertinent to this study.
  - i. Research studies at classroom level, of some depth, are needed to discover the kinds of support children need both in terms of provision of good quality books and of methods to help children acquire flexible reading strategies.
  - ii. Teacher trainers need to emphasize the need for 'a wider and more flexible approach to the teaching of reading as an integral part of all school learning'.

## **2. The Effective Use of Reading: Lunzer and Gardners' Schools Council Research Project at Nottingham University.**

This project investigated three main areas: reading comprehension (discussed earlier in the present chapter), classroom practice in the area of reading to learn and pointers to good practice in supporting children's reading from 10 to 15 years.

The findings offered support for the view that reading is a unitary or 'global' ability rather than consisting of a number of separate skills. The study relates strongly to the

classroom work described in this dissertation as it argues that children's success in reading is to do with their capacity to **reflect** on what they read. In the first of two publications associated with the project, **The Effective Use of Reading**, 1979, the writers suggest a framework for reading to learn. First teachers should set up the kind of reading situations likely to encourage reflection; secondly teachers need to give careful support and guidance in their instruction to pupils to help make their reading reflective and thirdly they consider practitioners should examine both their provision of reading materials and their own approaches and methods to ensure they encourage reading for clearly understood purposes.

Another set of findings caused concern. First, in the early secondary schools visited by the team there was a marked increase in the use of text books in all subjects except mathematics, often without the necessary teacher support. Secondly more than 50% of the reading across all subjects was done in short bursts of 1 to 15 seconds making the development of reading continuous texts reflectively more difficult. Thirdly less able readers became increasingly conscious of their disability as they moved through the secondary school years. Average and above average readers, as measured on standardized tests, seemed often not to perceive their reading both in school and for homework as the important means of extending their learning it should be.

In a second volume, **Learning from the written word**, 1984, Lunzer and Gardner assess the works of Directed Activities Related to Texts (DARTs).

Lunzer and Gardner's work informs the present study in the following ways. First it

is compatible with the emphasis on helping children **reflect** on their reading. In the classroom example, described and evaluated in Chapters 8 and 9, strategies for encouraging pupils at the primary school stage to reflect on non-fiction text are assessed. Secondly Lunzer and Gardner's work encourages teachers to examine their own potential role as providers of texts and materials, mediators between children and their reading and instigators of tasks which encourage the **use** of reading for purposes the young learners understand.

### **3. Extending Beginning Reading: Southgate, Arnold and Johnson's Schools Council Research Project at Manchester University.**

This fact-finding investigation sought to study the progress of children who had achieved average reading standards for two years.

In the final report, published in 1981, Southgate accepts the view expressed in Lunzer and Gardner, 1979, that reading comprehension seems from the evidence available to be a 'global act' rather than a selection of subskills.

In general most of the 7-9 year olds studied were learning to read effectively, but there were some children of average ability who were not making the progress anticipated.

Three general recommendations are made.

1. Some modification was needed of the universal practice of teachers spending large amounts of time hearing each child in a class read for a few minutes from a teacher selected text. Instead contact could be longer with individuals and groups, but less frequent. The quality of the reading situation seemed more important than the frequency.
2. Silent reading of books chosen by children should be given a value by the increasing provision of time for the activity as children make progress.
3. Time spent by teachers with individuals to help spelling of words needed considerable reduction.

Findings and recommendations to do specifically with reading non-fiction include:-

- o only a small minority of teachers understood the importance of their role in the first two years of the junior school in promoting reading non-fiction (Southgate terms this kind of reading 'functional') and recreational reading.
- o abstracting information from non-fiction texts is difficult and involves the ability to understand and summarize. There should be realistic expectations of children with a reading age of 7 or under. Some of the books to support a subject or topic should be interesting but simple.
- o study skills, particularly using retrieval devices in reference and information

books, need to be taught. Children need more help than Southgate and her team found common in selecting relevant information for specific purposes.

- o the role of dictionaries and encyclopedias needs to be demonstrated. (The researchers observed children using dictionaries during writing tasks only rarely, even though teachers often recorded dictionary use in their daily logs.)

#### **4. Open University Reading Research Project.**

An Open University team of researchers, led by John Chapman, investigated children's increasing control over certain linguistic features in texts during the 1970s and 1980s. The researchers found that reading development in the areas of both fiction and non-fiction had to do partly with children's increasing ability to perceive cohesive relationships in their school texts. Chapman's work is drawn on in parts of this work where global and local cohesion are discussed, particularly in Chapter 5 and Section 3.1 of this chapter. The main findings are summarized in Appendix 8a.

#### **5. The Reading Studies of Neville and Pugh.**

A series of studies were carried out over a number of years, all focusing on how 9-11 year old children move from oral reading of the initial stages to the silent reading required in the upper primary and secondary school stages. Of most importance to this study is the finding that the structure and organization of information books, and ways of using them 'does not develop of its own accord'. (Neville and Pugh, 1982 p.36).

The researchers argue that teachers need to teach these things in context. (See Appendix 8b for a more detailed summary).

**Main finding drawing on the Five Studies and Pertinent to this work.**

- o There is no direct transfer from general ability to read to being able to read information texts flexibly and reflectively and to use retrieval devices.
- o The teachers in the surveys tended not to model and demonstrate reading to learn strategies, or to encourage children to attempt tasks involving the use of reading for purposes they could understand.
- o There is evidence that children's developing ability to perceive cohesive relationships in their school texts is related to reading progress.
- o Research is needed at classroom level to discover ways of supporting non-fiction reading.

**6.5 Classroom studies: teachers' action research inquiries.**

Controlled experiments to illuminate reading behaviour have a place, but by definition cannot take account of the variety of texts and wide range of contexts and purposes that constitute reading behaviour. (Martin and Merritt, 1989). The surveys on reading discussed in the previous section convey important findings about existing practice.

But it is action research which can enable teacher researchers to implement promising practice. I turn now to classroom case studies which are capable of taking on the complexity of children's reading and ground the observations and evaluation in a strong context of everyday practice. The methodology chapter in this dissertation examines the strengths and limitations of approaches where it is impossible to control the variables. Bassey's concept of 'reliability' rather than the more traditional research criterion of generalisability is taken as the framework for the discussion of the example in Chapters 8 and 9. (Bassey, 1981.)

In looking at recent classroom examples this notion of 'reliability' will be useful in evaluating the studies. Thus the extent to which other practitioners are likely to be able to relate to the challenges faced by the researchers and the evidence of success in promoting reading abilities will be kept in mind.

Martin and Merritt conducted an action research study on reading to learn involving student teachers and a tutor working with a junior school class. The researchers begin their report by pointing out first that traditional comprehension exercises and tests encourage a limited kind of reading behaviour, and second that reading in school involves a wide range of contexts and a variety of texts. (Martin and Merritt, 1989.)

Mindful of this the researchers aimed to create a range of relevant experiences to help children read and use the non-fiction. Five students, and one of the researchers in his role as tutor, worked one day a week over a term with a 9 year old junior school class as part of a college IT - INSET programme.<sup>3</sup> The tutor and students aimed to extend



what was already happening in the classroom by modelling ways of sharing information for different purposes. In the context of a study of the town of Barrow the children were helped to use a range of diagrams to communicate findings about population, facilities and so on. These included bar charts, pie charts, tree and Venn diagrams and graphs. The computer was used in organizing the information. An outcome was the production of a **Guide to Barrow** booklet which was displayed in the local information office.

The researchers identify two main strengths of the study; first they noted increased competence of the children in showing information through a range of diagrams appropriate to their purposes; second the student teachers learnt how to model the different ways of sharing information.

However, although some supply cover had made possible regular consultation with the class teacher, the researchers felt their contribution was 'little more than an add-on' since it had no real roots in what had gone before or what was to follow. They were not convinced that the strategies had become integrated into the teacher's thinking. If action research is to do with achieving change in the light of promising practice the work achieved only temporary and partial success. (Martin and Merritt, 1989, p.75)

We do not know the extent to which this kind of modelling of how information can be shared through diagrams became part of the students' way of planning and carrying out work in the future. However this kind of intervention as part of initial teacher education seems to this writer to be worthwhile and alerts the students and teachers reading the research report, to the challenge of helping children use, interpret and

communicate learning from their reading.

Teaching practice can provide an opportunity for the carrying out and careful evaluation of teaching strategies. A recent study draws on the work of students and a tutor during block and serial teaching practice.

Doyle and Mallett carried out an action research study with student teacher and children working with a range of different texts in a nursery and then in the reception class of an infant school. (Doyle and Mallett, 1994). The work was built round the children's interest in whales.

The aims were: to provide a motivating context for using a range of texts, including non-fiction texts; to use spoken language to make early book-based learning collaborative; to assess how far teacher's modelling of non-fiction reading helps children learn about the conventions of the genre. The example falls into two parts, first the nursery experience in which all the later work was rooted, and second the small group follow-up work with just four of the children who had now moved to the nearby infant school. Pressure on space has made it necessary to place the detailed description of the work in Appendix 12.

The researchers conclude that the collaborative basis of the work and the teacher's active demonstration and modelling of reading behaviour, were key factors in encouraging the following achievements:

- o the children were beginning to use metalanguage to talk about the books, both fiction and non-fiction.
- o they adopted a critical approach to the information in books.
- o the book based part of the work was greatly enjoyed.

Another study in which a small group of young learners are moved forward in their reading development partly by learning to distinguish between fact and opinion was carried out by Mallett, 1992. Four nine year olds were motivated to find out about how humane or otherwise was the treatment of pigs after hearing Dick King Smith's **The Sheep Pig** read out loud. The children's information books available, for example Ruth Thompson's **Understanding Farm Animals** provided the answers to questions like: what are the main kinds of pig? What are the different ways in which pigs are reared? How many young does a sow produce? These questions are capable of straight forward answers. The books were far less useful in raising and illuminating questions of an ethical nature, to do with for example humane and less humane approaches to breeding pigs. Yet these were the very issues which interested the children. To illuminate these issues the teacher brought in a range of materials intended for older children and adults, from the RSPCA and Compassion in World Farming.

This helped teacher and children identify and articulate in discussion what the issues about pig raising and treatment were. Only then could they reflect on the implications of the 'facts'. Mallett recognises that this kind of thinking and reflecting is difficult for children still in the primary school years. However some evidence of progress is

found in the group discussion which accompanied the book research. For example after hearing about pigs kept in natural surroundings as part of a research project of the Edinburgh School of Agriculture and from other sources Stuart commented that the 'facts' about pigs were different from 'what people usually say about pigs'. First they are not 'dirty' as if allowed to nest in natural surroundings they preserve a toilet area. Second, they are not 'lazy': on the contrary if reared in family groups they are as lively and 'intelligent' as dogs. Thirdly they are not 'sweaty' since, as Wendy found they have less salt than other creatures in their body and have a relatively dry skin. (Mallett, 1992c.)

*Cherrington's study of four older juniors finding out about Circuses also indicates that consideration of sensitive issues can lead to truly reflective talk, reading and writing. (Cherrington, 1990.)*

Southgate et al observed teachers in eight junior schools and set out the features of the approach of the teacher of the class which outstripped all others for reading progress over the year of this part of the study.<sup>4</sup> There was much class discussion and writing of reviews on books. However, according to the Southgate team:

'what distinguished this class from all the others was the fact that, not only did the children engage more frequently on topic work in class time, but they were also set extension topic work for homework in the Spring term. Work on a particular topic often extended over weeks, was usually inspired by a television programme, and was twice followed up with substantial tasks to be conducted outside school time and to be written-up and reviewed in class time later. (Southgate et al 1981, p. 159.)

One such project was based on a television programme 'Fun and Games' and began

with a discussion and associated written work about leisure activities. Each child was given a type of sport or leisure to study. The task was focused by asking the following questions: how the sport began, when and where, how it spread to other countries. A thirty minute sharing session of class discussion followed the research, then a forty minute writing period when the children wrote up their findings from notes.

Bullock 1975 recommended this interrogation of broadcasting material be integrated with other activities. The class researching Fun and Games, and another class where oral discussion followed research and proceeded writing, made what the Southgate team call 'most progress as measured by A. Brimer's Widespan Reading Test (1972).' This example is a 'case study' rather than an action inquiry since observers and not the teachers analyze and evaluate the work. However since ordinary work was the focus, the example has something in common with the 'action research' examples.

The joint work in Australia of a University lecturer and a classroom teacher over many months in trying out and evaluating strategies to help children gain control in writing over different registers is reported in Cambourne and Brown, 1989. As is the case with the other studies described here, the children's reading and writing was embedded in a broad context and the teachers modelled appropriate reading and writing strategies.

What can be learnt from these classroom examples using an action inquiry approach?  
First, all place the reading of non-fiction in a motivating and rich context.

Second, particularly in the case of the studies by Doyle and Mallett, 1994; Cherrington, 1990 and Mallett, 1992, collaborative talk was shown to be important in keeping up the momentum of the work and encouraging joint reflection.

In all five studies the modelling of non-fiction reading by the teacher-researcher was believed to be very important in developing knowledge about the features of non-fiction text and about retrieval strategies.

All researchers considered that ways of interpreting ideas and communicating them to others was of great importance. This is particularly the case in the studies by Cherrington, 1990; Mallett, 1992 and Martin and Merritt, 1992.

In all cases, except Martin and Merritt, 1992, the work was carried out with small groups of children. The classroom example which is the main study in this dissertation draws on the strength of these studies in the context of work with a whole class (See Chapter 8).

## **6.6 Some problems in reading non-fiction.**

**The problem of copying and closely paraphrasing from non-fiction.**

The tendency of primary age children when required to read independently for research, to copy or closely paraphrase from books has been noted by those concerned with reading progress, over a number of years. (Cox and Dyson, 1971; Mallett and

Newsome, 1977; Cox and Boyson, 1977, Bullock Report, 1975; HMI Reports, 1978, 1989; a.) Southgate et al, 1981; Wray, 1985; Cherrington, 1990; Mallett, 1992; Neate, 1992; Wray and Lewis, 1992.)

Mallett and Newsome found that project based work, both in the primary and early secondary school, often involved children in working independently with information books, unsupported by the kind of teacher mediation which would have helped with difficult texts.

Elizabeth Cartland a teacher working with 12 year olds on an integrated studies project entitled 'The Medieval World', explained the problem as follows:

'...I found myself looking at text books because the children were having difficulty with them. For example, when we were looking at something in the medieval period, we worked with a splendidly illustrated book about knights - illustrations of clothes and armour - which contained passages about chivalry ... Chivalry is a concept which needs illuminating but what the children were doing *was copying out of the book and drawing the pictures...* we were constantly finding concepts like this which were just "dead on the page!" (Mallett and Newsome, 1977, p.100)

This fits with the comment in a recent HMI report which is critical of the reading to learn abilities of older juniors. They identify three element in the process of reading to learn which are conspicuous by their absence. 'The threefold process of forming

appropriate questions, selecting and reading texts to find information and writing it up in their own words had not been taught to or acquired by many pupils. (DES/WO, 1989a. p.6.)

The problem is that there has been no general agreement about how such abilities are best taught and supported. A strategy some teachers try is to ask the children to put the information from a secondary source into their own words. (Mallett, 1992b; Neate, 1992; Wray and Lewis, 1992). This presents young readers and writers with the task of changing text already tightly edited and organized. Neate explains the difficulties thus:

'...authors have usually chosen the best words and have the freedom to put them in any order. The note maker has to choose words of similar meaning and to alter the order of presentation. This is a very difficult job for an adult, and even more so for a child.' (Neate, 1992. p.20).

Children search for synonyms in an anxious attempt to make changes; we get 'small' for 'little' and the omission of words like 'very' and 'quite' which are thought not to be essential to conveying the meaning of a text. Some apparently small changes do make a difference, actually distorting the meaning. Wray and Lewis give an example of how a child writing about starfish unwittingly changed the whole sense of what the author intended. The text said:

"its colour varies from brown to purple". He wrote down, "*The* colour



*changes from brown to purple*" and said, "I used different words so I wasn't copying'. (Wray and Lewis, 1992).

This example reveals a pupil feeling under pressure to tinker with individual words and being distracted from any real effort to make sense of the information.

As the Non Statutory Guidance at Key Stage 2 (English) maintains, it is at least partly a matter of inviting tasks which require **interpretation** of the information.

'They (the children) will need activities which lead them to formulate their own questions, identify main points and gather relevant evidence from a number of sources'. (National Curriculum Council, 1990, B5.)

The abilities mentioned above are intellectually demanding.<sup>5</sup> Many adults would find producing a synthesis of information from different sources daunting. Children, even the oldest juniors, need much help and support to manage this. This study attempts to identify the kinds of help most appropriate.

However, to concentrate too much attention here risks a leaning towards the 'study skills' approach which views learning from books as a special kind of learning, distanced from the rest of the programme. The setting in which the reading is done is most important. Young learners need to feel some genuine interest in and commitment to their learning. One way in which teachers have tried to create a strong context for children's learning is to embed it in project or topic work as the classroom

action inquiries in 6.5 show. The next section looks at the potential of topic work as a motivating framework for reading for learning and a possible way of inviting tasks which require interpretation thus making copying less likely.

### **Project work as a context for using non-fiction.**

Project, topic or thematic work tends not to be tied to a particular subject area. The terms are sometimes used loosely to mean any individual or group work, so that we hear pupils and teachers refer to 'history' and 'geography' projects. It is associated with certain kinds of classroom organization where group or individual work is pursued sometimes with the help of work cards and supported by use of information and reference books. In the Scottish survey **Children's Reading 8-15**, projects varied widely and included Fish, EEC, Transport, Chocolate, Edinburgh, Pirates and Costume, (Maxwell, 1972). Project work in all its forms has been a strong feature of primary school work over the last thirty years<sup>6</sup>. It drew encouragement from the Plowden Report (1965). The Bullock committee during their research in 1972-1974 found that 94% of all 9 year olds were carrying out topic work involving use of books and their own writing. The written work varied considerably some being described as of a very high standard, some little more than copying out of books. (Bullock, 1975). Teachers and educationists in favour of project work in principle give two main reasons for their view.

First it is claimed that what is worth studying does not always fit neatly into one school subject area. Second, the range of what is covered and the number of activities

to choose from can be particularly motivating for young learners. (Mallett and Newsome, 1977; Wray, 1985; Mallett, 1992; Neate, 1992). The tendency for some of the work to be group based emphasized collaborative learning. The interest and commitment often invested in project work can make it a particularly strong context for using information and reference books. The tradition to offer large amounts of time makes it more likely, in well organized work at least, that children will achieve the quality of concentration that accompanies successful learning. It is for these reasons that the classroom example in this study is based on project work.

However a number of potential weaknesses have been pointed out by teachers, researchers and educationists. (Cox and Dyson, 1971; Cox and Boyson, 1977; Bullock Report, 1975; Maxwell, 1977; Maxwell, 1972; Mallett and Newsome, 1977; Lunzer and Gardner, 1979; Wray, 1985, 1989; Wray and Lewis, 1993; Arnold, 1992; Whysall, 1992).

Critics fall into those who object to project work in principle; for example the authors of the Black papers of the 1970s, who refer to a programme based on projects as 'a rag-bag curriculum', and those like Robin Alexander who qualify their criticism by referring to work not carefully planned and monitored leading to 'fragmentary teaching and learning'. (Alexander et al, 1992). Writing about Scottish schools in 1972 Maxwell comments directly on teachers' tendency not to teach the study skills for topic work or reading across the curriculum.' In view of the widespread use of project methods, where over 90 per cent of the classes employed them, and of those 60 per cent used them as the main method of teaching outside the three Rs, it again

seems that teachers are tending to set pupils reading tasks without giving them adequate guidance and practice on how to perform these tasks efficiently'. (Maxwell, 1972, p.51).

The main criticisms are summarised as follows:

- o project work, drawing on more than one discipline, is harder to plan into a sequence of coherent concepts and skills to be gained. This links with the danger of fragmenting learning mentioned above.
- o Because of the potential breadth of the content of projects children are often called upon to make choices of sub topics and activities which might distort their learning. They might, for example, spend a lot of time working on a very limited aspect of the topic.
- o As the section on the problem of copying makes clear, unsupported and individual 'finding out' from secondary sources often leads to children closely paraphrasing from books in their own writing.
- o Study skills tend not to be taught to support reading across the curriculum.

The first criticism does pinpoint a genuine area of concern. Topic work needs particularly careful planning to make sure a core of the most important information and the main issues are covered. Deciding on what this core and these issues should be is part of a reflective practitioner's professional role. Collaborative planning with colleagues is one way of making it more likely that a coherent programme with some built in choices is achieved. But the problem of good planning of project work only intensifies the challenge that more subject orientated work involves. The strength of

motivation good project work inspires claims for it a place in the primary school programme. Beverley Anderson supports it thus:

'(topic work) offers, probably uniquely, the chance for children to understand and exploit the common elements of problem solving'. (Anderson, TES, 31.1.'92, p.45.)

The second potential weakness, that children might be allowed to spend disproportionate amounts of time on sub topics peripheral to the main topic, could occur in subject organized work but is more likely to arise in the context of a project. This is because the subject organized approach tends to have a content which is more narrowly focused. It is the potential breadth of project work which is the source of both strengths and weaknesses. In the classroom example in this study the recognition of certain key concepts was a way of covering a core of material and issues. (See Chapter 8).

The third potential weakness, that children might be left to cope unsupported with secondary sources, and particularly with information and reference books is not peculiar to topic based work. However for many years topic work tended to be the most likely context in which children were required to use secondary sources. (Southgate et al, 1981; Wray, 1985; Arnold, 1992). When children are expected to read independently as a source for their own writing, whether in the context of topic work or more subject-organized work without adequate support, close paraphrasing or copying from books is likely to be the result (Mallett, 1992,b). The problem is not

with topic work as such, but with too little help with reading for learning. Southgate found teachers in her research groups were very concerned about the prevalence of copying. 'To progress beyond this children must at some stage be trained to summarize in their own words'. (Southgate et al, 1981) Topic work is more likely to put a value on group based work, and this can be helpful in discussing and interpreting information and ideas from books so that wholesale copying is less likely. (Wray, 1985; Mallett, 1992,b).

### **6.7 Evaluation of some strategies to help non-fiction reading.**

This section examines some of the strategies which have been tried to help develop 'reading to learn' abilities. These include: reading laboratories, use of micro-computers and activities known under the acronym DARTS.

#### **Reading laboratories (Science Associates - SRA).**

SRA have published what are known as reading laboratory materials. These consist of cards, in containers, grouped according to different reading age demands. It is claimed that by working through a series of comprehension exercises improvements will be brought about in the speed and accuracy of children's reading. Fawcett studied the progress of 11-15 year olds, about of half of whom had and half of whom had not used reading laboratories intensively. The result is reported in Lunzer and

Gardner's book 'The Effective use of Reading'. He concludes that the intensive use of reading laboratories developed <sup>u</sup>pupil's abilities. There has been some criticism of the design of Fawcett's study (see Merrit, 1979 and Beard, 1987). Of course it is the decontextualised nature of the material used in reading laboratories that causes concern. We would not want to rule out anything that might help less successful readers who have reached secondary school stage. But on the whole I am in sympathy with the view that if the time, effort and expense that have gone into preparing and using reading laboratories had been put into other teaching approaches the gains might have been better.

Southgate et al found that several junior classes in the sample of eight schools in their study used Parker and Scannell's SRA programmes. The team question how far abilities developed in narrow contexts transfer to other tasks. (Southgate et al, 1981).

#### **Television programmes.**

Southgate et al observe that in five of the eight schools in their research sample, the first and second year junior classes regularly followed the television programme **Look and Read**. As shown in the classroom studies, the class whose teacher regularly based written and discussion work on a T.V. programme showed greater reading progress than the other classes of the same age under study. The Southgate team believe some kinds of television viewing at home and school plays a helpful role in vocabulary extension. (Southgate et al, 1981). In the main study in this work a recorded 'Wildlife' television programme, **Squirrel on My Shoulder**, was the focus of much discussion and interest. Not only was it motivating, it also introduced the

children to some ways of thinking and talking about the topic which linked with reading and writing.

### **The contribution of microcomputers.**

Micro computers offer programmes involving young learners in text generation and analysis, for example "Wordplay" from the MEP Primary Project pack. Young learners type in lists of nouns, verbs, adjectives and adverbs and the computer produces groupings based on a preprogrammed selected order.

"Tray" invites the reader, or better still a group of readers, to play with a hidden text using knowledge of syntactic cues and tuning in to an author's meaning and writing style. In one version the punctuation marks are the only clue! It is claimed this gives children insight into how they read. The reservation is that the emphasis should not be on what the machine can do but on what children think they can do with it (Beard, 1987; Meek, 1991). Certainly word processing functions enabling children to compose, read and then redraft their own writing and to produce and modify diagrams can be extremely helpful in the classroom. Reading drafts from a computer screen encourages children to 'read as writers' and this has a pay-off when they read other peoples' writing.

Word processing seems likely to be particularly helpful to children with special educational needs since they can produce legible script, redraft quickly rather than laboriously by hand and can use the spelling checks. (Pumfrey, 1991)



## **Directed Activities Related to Texts (DARTs)**

The acronym DARTS is associated with two Schools Council projects on **Reading to Learn**. The first resulted in Lunzer and Gardner's book **The Effective Use of Reading** and the second in **Learning from the written word**. Findings of the first study, relevant to the argument here since it investigated how well children managed to learn from their reading in the years from 10 to 15, are as follows:

- o the text books which children were often expected to read on their own to carry out homework tasks were often too difficult for the age group using them.
- o the children had difficulty in extracting the information they needed to carry out school tasks.
- o there was some evidence that pupils who worked systematically from reading laboratories were more competent readers for learning than those who had not.

The last finding seemed to contradict the beliefs of those who believe reading abilities are best learnt in context since reading laboratories used an approach which presented children with traditional decontextualized passages on which they answered typical comprehension questions. This controversial finding is discussed earlier in this section.

Lunzer and Gardner's second 'follow-up' project, resulting in **Learning From the Written Word**, investigated more dynamic approaches to reading to learn. A major

finding of this study was that on entering the secondary school children were mostly successful in learning from narrative, but found difficulty in reading expository and procedural texts reflectively. Lunzer and Gardner believe that the greater emphasis in primary schools on reading stories and narratives led to children applying the same reading approach to informational kinds of reading. They suggest that children need help in reading expository materials flexibly rather than as a story would be read from beginning to end. (Lunzer and Gardner, 1979). Doyle and Mallett describe how a very young child asked for an information book to be read out loud like a story (Doyle and Mallett, 1994). Children do need support in acquiring the ability to read flexibly. Three principles for using DARTs are suggested:

- o All DARTs are best used in the context of ordinary classroom practice.
- o Since discussion of text is an essential part of the process it is helpful for children to work on DARTs in pairs or groups.
- o DARTs do not always require 'right' or 'wrong' answers and this has the potential to stimulate discussion. (Lunzer and Gardner, 1984; Moon and Raban, 1992).

These three principles make carefully planned DARTs activities entirely compatible with the approach in this study. Many reading specialists have written about how DARTs can be integrated into children's learning programmes. (Southgate, Arnold and Johnson, 1981; Moon and Raban, 1992; Dougill, 1993)

In the classroom example in Chapters 8 and 9 of this dissertation DARTs activities

include:

- o taking their own questions to the information texts.
- o discussing diagrams and illustrations in books in group and pairs.
- o explaining on a one to one (or in some cases two) to younger children the meaning of their own writing.
- o reading out loud to the class and learning to paraphrase.

There is an evaluation of particular DARTs in Appendix 13.

### **Creating a sense of purpose.**

Progress in reading and writing expository text<sup>8</sup> lags behind progress in writing narrative. (Perera, 1984, 1986; Beard, 1984; Langer, 1985). Yet very young children use and talk about information all the time from a functional idea of discourse.

'From an early age they tell their imaginary playmates how to go about flying to the stars and share with their friends all that they know'. (Langer, 1985, pp. 157-158).

There is evidence from the work of Bissex that five year old Paul wrote mainly to inform and share his increasing knowledge about the world; much of this was gathered in his "All I know" books. (Bissex, 1980).

The important thing here is that these young children had reasons they could understand for sharing what they knew. How can we encourage this urge to find out

and share in the classroom? I maintain that a sense of purpose is encouraged by providing both a strong notion of audience for the children's writing and by encouraging children to ask their own questions as a preliminary to writing. This questioning approach to the use of books as a way of putting children in control of their own learning is recommended by a number of writers and researchers (Lunzer and Gardner, 1979, 1984; Wray, 1985; Tann, 1988, Bates, 1992; Doyle and Mallett, 1994b.) In the main study in this work both children's questions and a sense of audience were main strategies and are part of the framework for reading non-fiction set out at the end of this chapter. These strategies did not make expository writing easy, but they did make the effort more worthwhile.

The work of *Judith Langer* on children's control over different kinds of writing (see Appendix 11) suggests that in addition to those strategies it seems likely that exposure to models of non-fiction writing is likely to familiarize children with the genres.

Cambourne and Brown's study of the progress of Australian primary pupils in controlling different genres as writers draws on all the strategies. The combination of exposure to particular kinds of writing with strong purposes for writing led, in the opinion of the researchers to children's increasing control over different genres, including report (Cambourne and Brown, 1989.)

#### **Teacher as model reader.**

Several recent studies argue that the teacher can help children's progress in reading non-fiction by modelling reading behaviour (Cambourne, 1988; Wray, 1985, Wray and

Lewis, 1992; Edwards, 1993, Doyle and Mallett, 1994). All these researchers recommend that teachers' demonstration of reading behaviour should be in context. Lunzer and Gardner suggest a three stage series of processes: locating, organizing and reconstructing information, represented by mnemonic LOR (Lunzer and Gardner, 1979, 1984). This simple model of the processes involved in information retrieval is expanded in Table 29, drawing on the work of Tann, 1988 and Wray 1984 and 1985. Children do need to be helped to search for information, but as the study by Doyle and Mallett suggests, the teacher needs also to communicate the excitement of finding out and sharing (Doyle and Mallett, 1994.)

### **6.8 A framework for reading non-fiction.**

Although most practitioners fall somewhere between them there are two main approaches to supporting non-fiction reading: first, one that emphasizes the acquisition of 'study skills' and second what I suggest may be termed a 'language and learning' approach. In the first approach informational reading tends to be viewed apart from other kinds of learning. Children are coached in certain skills and strategies including finding the books they need in public, school and class libraries. Then by using retrieval devices in the books, they learn to find the necessary information to make notes from books. The philosophy behind reading laboratory approaches and some DARTs exercises, when these are not embedded in current classroom work, are consistent with this approach. The main problems with this emphasis are summarized below:-

- o skills and strategies learnt outside a strong context tend not to be transferred

to situations where children genuinely want to find information. This gap between knowledge and performance is noted by Perry (1959), Wray (1985), Cambourne (1988) and Wray and Lewis (1992).

- o Too firm an emphasis on skills risks distorting the three-pronged model provided in The Cox Report, so that the development of retrieval strategies for study crowds out the other two elements which in turn recognise both the importance of our understanding and responding, and developing knowledge about language. (DES/WO, 1989a, 16.1)
- o Drawing on both the criticisms above, a further concern about a skills approach is that it does not recognise the importance of motivation at the primary school stage. A sense of purpose comes not from learning about study skills, but from thinking in company with others about what you already know, and trying to formulate what you do not into some questions. Some of the problems associated with this kind of reading, for example copying or closely paraphrasing from books and lack of understanding of the tasks set, arise from a distorted emphasis on study skills. Having a genuine audience both for your spoken and written findings is also likely to enhance motivation and interest.

It is not the case that 'study skills' are not important since controlling them is part of being a successful reader of some kinds of non-fiction. The controversy centres on how such skills are acquired, and their appropriate place in the total development of non-fiction reading.

How, then does a 'language and learning' approach seem more promising in

developing a positive and reflective approach to reading? The potential advantages of an approach which embeds reading non-fiction in other learning are summarized below:-

- o Information retrieval strategies are firmly embedded in a strong learning framework. Where children care passionately about whether for example grey squirrels kill red squirrels (see Chapter 8 of this study) or whether some dinosaurs were bigger than whales (Doyle and Mallett, 1994) or whether certain practices in circuses are cruel (Cherrington 1990) the study skills modelled or demonstrated by the teacher are worth acquiring for a purpose even the youngest children can understand.
- o A 'language and learning' approach actively encourages children's discussion and thinking about linguistic features of the books. It recognises that part of becoming a reader is to understand the options that faced an author, and being able to evaluate their success. Are the difficult words explained well, or put in a context which helps you understand them? Does the text extend and explain information about diagrams?<sup>9</sup> Why have some books been more helpful than others in promoting the work? How can we, in our own writing, reformulate the information in a way that will interest our audience? All this is partly to do with knowledge about language, the third element in the Cox 1989 model. Some DARTs can be introduced where this is judged helpful, particularly where the teacher, and perhaps, the pupils, have devised them.
- o The recognition of the power of the spoken language, both the children's and teacher's as an agent of questioning, answering, suggesting, formulating, explaining and arguing is by definition part of a 'language and learning'

approach. It is these processes that encourage reflective reading. Children come to be in control of their own reading by adopting a reflective approach to the information. In looking at different ways of rearing pigs nine year olds found a book, Miller's **Understanding Farm Animals** which described the different ways but did not evaluate them. Facts are not neutral. Different opinions arise from the same information. (Mallett, 1992 b.) Distinguishing between fact and opinion brings children to Level 5 in National Curriculum English, Attainment Target 2. The emphasis on spoken languages makes this approach essentially one that recognizes the social and collaborative element in learning.

- o The teacher's role tends to be a more powerful one in a 'language and learning' approach since he or she mediates between children and books and supports their reflection on information as well as modelling retrieval strategies.

In short, a 'language and learning' approach holds together all three elements in the Cox model, valuing the understanding of and response to text, the acquisition of study skills in context and the developing and making explicit of knowledge about language. The four language processes, talking, listening, reading and writing are also held together in a mutually enriching way. The analysis above is brought to a more practical level in the formulation of seven strategies linked to the four principles of learning suggested in Chapter 2. These are: the placing of non-fiction in a strong, motivating context whether project based or subjected centred; the organization of prior experience about the topic and about the texts used; the encouragement for



children to formulate their own questions; nourishing a strong sense of purposes; encouraging a sense of audience for talk and writing; recognizing the importance of sharing and collaborating; acting on the acknowledgment that the teacher's role is central to success. The teacher's role is divided into seven elements: selecting and choosing books, acting as model reader, directing attention to features of text, mediating between children and books, creating contexts for sharing and discussion, suggesting tasks to use information and identifying key concepts and issues. These important features of a 'language and learning' approach, summarised in table 6, form the basis of the action research inquiry in Chapters 8 and 9. The evaluation of the seven elements in a language and learning framework for reading non-fiction in the final chapter is offered as an original contribution to understanding of how we can support the development of non-fiction reading.

Table 6. A Framework for supporting non-fiction reading.

<u>Four principles in a model of learning</u>	<u>Seven factors in developing strategies to support reflective reading of non-fiction.</u>
<p>1. Learning takes place in a framing context.</p>	<p>1. Reading non-fiction takes place best in a strong supporting context in which other activities are enjoyed as well as using the books whether the method of organization is project based or subject centred.</p>
<p>2. Children are active learners.</p>	<p>2. It is helpful to make relevant prior experience and knowledge explicit through talk -  a) about the topic  b) about the texts used.</p> <p>3. Formulation of children's own questions links existing and new knowledge.</p> <p>4. A strong sense of purpose makes finding out satisfying. This arises from an urge to answer their own questions and to share what they have found.</p> <p>5. A strong sense of audience relates to purpose and motivates young readers to shape their talk and writing appropriately.</p>
<p>3. Much learning is best grounded in social experience and collaboration.</p>	<p>6. Placing a value on sharing information and ideas recognises the benefits of a social and collaborative approach.</p>
<p>4. The teacher's role in bringing about learning is of considerable importance.</p>	<p>7. The teacher's supportive role in non-fiction reading includes the following elements:</p> <p>a.) selecting and choosing books.</p> <p>b.) acting as a model reader.</p> <p>c.) directing attention to features of text (DARTs used selectively.)</p> <p>d.) mediating between children and books.</p> <p>e.) creating contexts for class discussion and sharing.</p> <p>f.) suggesting tasks that involve interpreting and using new information.</p> <p>g.) making some of the key issues and concepts the basis of speculation and reflection.</p>

## Summary and conclusion.

This chapter has drawn on linguistics, psycholinguistics, surveys and classroom studies where these contribute to our understanding of non-fiction reading.

The underlying question is, what is reading comprehension? Lunzer and Gardner produce convincing evidence that comprehending is not to do with acquiring a number of skills but is a unitary ability.

The chapter expands on three elements in becoming a reader. First, successful reading of non-fiction, like other reading, depends on understanding and responding to the information that we read. Second, the discussion which surrounds the reading helps the development of knowledge about the language of non-fiction. A third element is specific to some kinds of non-fiction reading: the development of the ability to use retrieval devices. It has been argued that this 'study skills' element has sometimes distorted approaches to support non-fiction reading. Some of the problems which occur in reading non-fiction, for example copying or closely paraphrasing and approaching project work in too limited a way, stem from a narrow view of what becoming a reader of non-fiction involves.

Strategies often used to support children's reading, including DARTs and the demonstrating of study skills, particularly to do with retrieving information have a place but it is argued that all need to be embedded in a larger motivating context. A sense of both purpose and audience for talk and writing, and above all collaborative

talk round texts, stand out as pointers to promising practice.

The chapter ends with a proposed framework for encouraging non-fiction reading, grounded in both the four-pronged model of learning in general (see Chapter 2) and in the critical analysis of the literature and classroom studies in this chapter. This framework for reading non-fiction is the basis on which the classroom example (Chapter 8) is planned and evaluated.

## **CHAPTER SEVEN**

### **Methodology in Educational Research: The Choice of Design in this study.**

#### **Introduction.**

This chapter presents the thinking behind the choice of research approach and methodology in this study. Section 7.1 sets out a summary of the argument and evidence arising out of the preceding chapters, and 7.2 sets out the aims of the present study. Educational researchers who wish to make an informed choice need to understand the advantages and disadvantages of each style of research. Thus 7.3 defines quantitative and qualitative approaches, 7.4 examines quantitative research and 7.5 considers types of qualitative research, attending in most detail to "case study" and "action research" which are the approaches found to be most appropriate in illuminating my questions.

It is argued that the present study is pedagogic in emphasis, and that pedagogic research is a subset of educational research which examines the processes of teaching and learning. Reasons for the choice of approach are set out in 7.6, and in 7.7 the methods of data collection are explained.

## **7.1 Summary of argument and evidence of preceding chapters.**

The study began in the tradition of action research with some questions rather than a hypothesis. These are:-

1. How does becoming a reader of non-fiction relate to learning in general?
2. What do practitioners need to know about non-fiction texts?
3. What do children need to be helped to understand about non-fiction texts?
4. What are the most significant intervening factors in helping children become reflective readers of non-fiction texts?

Drawing on these central questions, the previous chapters produced a theoretical framework for the classroom inquiry described and evaluated in Chapters 8 and 9.

Part 1 of the study concentrates on children's learning and consists of two chapters. Chapter 1 sets out the broad context of reading to learn. The evidence and argument in Chapter 2 leads to some propositions which help illuminate the final question. At their most general these propositions are as follows:

1. Learning takes place in a framing context.
2. Children are essentially active in their learning.
3. Much learning is best grounded in social experience and collaboration.
4. The teacher's role in bringing about learning is of considerable importance.

Seven promising strategies for supporting children's reflective reading of non-fiction are grounded in these four central propositions. These are set out in the next section of this chapter as they link with the aims of the study.

Chapters 3-5, which form Part 2 of this study, examine the kinds of text which come under the category known generally as Children's Non-Fiction. A taxonomy is offered for discussion. The evidence and argument in these chapters aims to illuminate questions 2 and 3 which ask in turn what teachers and what children need to know about the different kinds of non-fiction texts. These propositions, set out below, inform the seven elements which arise from the seventh strategy which deals with the supportive role of the teacher. (See Table 6 **A Framework for supporting non-fiction reading.**)

1. The kinds of book gathered under the wings of "children's non-fiction" can be classified very broadly into those which have a chronological or narrative organization - information stories, biography and procedural texts, and those which are organized on a non-chronological or non-narrative basis - reference books and information books.
2. The different kinds of non-fiction have distinctive features and conventions which a young learner needs to understand if he or she is to control the kinds of reading involved.
3. The language of texts organised on a narrative and those on a non-narrative.

basis differ in important ways from each other and from oral language. In the primary years many non-fiction texts are 'transitional' genres, still retaining some features familiar in speech. (Baker and Freebody, 1989).

4. Certain features of books in each category which make the text easier to read have been identified. (Beard, 1984; Perera, 1984, 1987; Pappas, 1986; Von Schweinitz, 1989.) There is a summary in Appendix 5.
5. It is argued that informational narrative may be a more sympathetic form for very young readers than non-fiction forms for two main reasons. A time sequence organization is close to human thinking and experiencing (Hardy, 1975, 1977). Children may be more familiar with chronological organization because of the stories they have had told and read to them. (Fox, 1989; Meek, 1982). Evidence from the children's writing in this study suggests that the narrower rules about appropriate focus and content may make some kinds of informational narrative challenging for young writers.

Part 3 of the study draws on the argument and evidence in Parts 1 and 2 in arriving at some promising strategies to support children's reading to learn. Chapter 6 identifies some features of the written form which teachers need to understand to help support children's reading. These are now summarized under four main points.

1. In general written texts have to stand on their own without the physical contact of oral communication (this is true of both narrative and non-narrative forms).



2. The speaker's tone, speed of speech and use of pause are lacking in all written forms. Writers of non-fiction for children can partially compensate by careful use of punctuation, layout and line divisions.
3. Readers of non-fiction have to hold the developing text rather carefully in their memory so that they can identify the information focus even where it does not occur in the more usual position at the end of a clause. Visual clues which can compensate (in non-fiction texts) include: punctuation; top and side headlining; the use of different kinds of type to indicate the status of different kinds of information; the organization of the book into chapters or sections.
4. Certain grammatical constructions like embedding of sentences, use of the passive rather than the active voice and use of a technical vocabulary make some kinds of writing more difficult than everyday speech.

Chapter 6 goes on to propose that it is spoken language, teacher's and children's around the ideas and information in books which can significantly promote learning.

Olson's argument (1984) that conversational language is a powerful instrument for understanding concrete situations, but a poor instrument for exploring more abstract ideas, is modified in this study. It is maintained here that it is by listening to the teacher's talk about the book information, and talking about it themselves that children can begin to assimilate new material. The teacher, as a maturer reader, offers a model of reading behaviour and introduces the children to information book language by

demonstrating, paraphrasing and reading out loud from the books.

Seven promising strategies, grounded in the argument and evidence of Chapters 2-6, are proposed as a framework for supporting children's non-fiction reading. These are included in the next section on the aims of this study.

## **7.2 Aims of the present study.**

It is intended that the classroom example described and evaluated in Chapters 8 and 9 will show how insights from knowledge about how children learn can be combined with knowledge about children's non-fiction genres to create an environment favourable to reflective reading. While it is not intended as a blue print, I believe other practitioners will relate to the challenges I faced and the ways in which I tried to meet them.

A framework of seven promising strategies, related to the four principles of the model of learning proposed in Chapter 2, arise out of the analysis of what is involved in becoming a reader of non-fiction in Chapter 6. These seven strategies are a response to the fourth research question which asks what might be the most significant intervening factors which help children become readers of non-fiction. They are as follows:

1. the placing of non-fiction reading in a strong motivating context, whether topic or subject centred.

2. the organization of prior experience about the topic and about the texts used as a preliminary to new experience.
3. encouraging children to formulate their own questions.
4. nourishing a sense of purpose.
5. encouraging a sense of audience for children's talk and writing.
6. recognizing the importance of sharing and collaborating round texts and therefore the central role of talk.
7. acting on the acknowledgement that the teacher's role as selector and provider of the texts, director of the work, mediator between children and texts and as mature model reader is central to success.

Table 6 sets out a summary of these proposed strategies as they relate to the more general learning model arrived at a result of my analysis of theoretical positions on learning in Chapter 2. The seventh strategy is further divided into seven aspects of the teacher's supporting role. It is argued that the teacher needs to know both about how children learn and about the different kinds of non-fiction texts in order to support children's reading. By developing his or her own knowledge about the features of the books, the teacher is able to show through discussion and demonstration what young readers need to understand about the way non-fiction texts work.

My aim was to choose a general approach and a methodology which would enable me as teacher-researcher to plan, carry out and evaluate a sustained classroom example which would incorporate these promising strategies.

The following sections now move to an account of the main approaches open to the educational researcher, and to methods of data collection.

### **7.3 Quantitative and qualitative research approaches.**

Investigators taking up an objective or positive approach to the social world, tending to see it like the natural world as external to the individual, engage in quantitative research. However if one takes the view that acknowledges the importance of the subjective experience of individuals in the creation of the social world the more interpretative or qualitative approach is preferred.

This is to put the positions at their starkest and a flexible approach is now accepted in which educational researchers use both kinds of research. The choice depends on the particular purposes of the researcher and the questions he or she wishes to illuminate. Approaches may be combined. A survey might show that fewer girls than boys took a GCSE in Mathematics. This might be fruitfully followed by a small scale qualitative study to discover how girls perceived their own mathematical ability. Since an informed choice about approach and methodology should be made, I look now in more detail at quantitative and qualitative styles.

### **7.4 Quantitative Research.**

Quantitative researchers collect information and compare different sets of facts. They use research techniques that produce data which is capable of leading to conclusions

which can be generalized. The two main kinds of quantitative research are experimental and survey.

#### **7.4.1 Experimental Approaches.**

This method of research has been adopted from science by social scientists and it works where phenomena are measurable. However even the simplest experiment can raise problems of interpretation. Bell describes some apparently simple scientific experiments set up to see how far the use of fluorinated toothpaste discouraged dental decay. Two groups were matched for sex, age and social class and given dental examinations. The experimental group were given fluorinated toothpaste, the control group unfluorinated toothpaste and the number of new dental cavities was observed after a year so that a comparison could be made. Experimental studies work on the principle that control and experimental groups are as similar as possible so that a causal relationship between a treatment and its effect can be made. However, even in what seems like a relatively straight forward experiment the researchers cannot be certain the dental cavities were not caused by other factors not controlled by the experiment (Bell, 1987, p. 9). In the social sciences much more complicated matters are under investigation. The causes of low achievement or school phobia are usually the result of several interacting variables and a sound experimental design is much more problematic. Wilson draws attention to the multiple causes of social phenomena and the need often for large numbers of people for lengthy periods (Wilson, 1979). Like every research method experimental approaches have potential limitations. Nevertheless these approaches have a place in pedagogical research. As well as

making a strong theoretical contribution to our understanding of concept development, Vygotsky carried out many interesting experiments with both children and adults, and those suffering from psychotic illness. (Davydoc and Zinchenk, in Daniels, 1993.)

Some of the techniques associated with experimental research can be used in research which is predominantly qualitative in approach. In this study it was decided not to use experimental procedures, for example it was not considered appropriate to have a control group as part of the design.

#### **7.4.2 Surveys.**

A well constructed survey is a relatively cheap and quick way of fact-finding. Information can be analyzed and comparisons made. The important factor is to make sure that the sample is a representative one. Recent experience with opinion polls for the April 1992 election shows the pit falls. The researcher using this technique needs to consider which characteristics of the total population need to be represented to be confident the sample is reasonably representative (Bell, 1987; Hitchcock and Hughes, 1989). Questions have to be carefully constructed to communicate the same thing to all respondents. A pilot study helps refine questions. Some researchers design questionnaires for a written response, others checklists which are used by interviewers. In both approaches the information received from a large number of individuals allows the researcher to describe, compare and point to the existence of certain features in certain categories, assuming, of course, that respondents answer truthfully.

Well known educational surveys include those used by Jackson and Marsden in their

study of the background and values of 88 adults who had achieved success through selective secondary education. (Jackson and Marsden 1962). On a larger scale were the surveys undertaken by the Plowden Committee which aimed to collect data on children, teachers and parents. (Plowden, 1965).

A detailed account of the issues of each stage of carrying out an educational survey is set out in Cohen and Manion, 1989 edition, pages 97 - 118.

A survey approach would help discover information like - how many non-fiction books school libraries possessed, the relative proportion of fiction and non-fiction, the impact of National Curriculum on information book purchases, the time spent on teaching library and study skills at particular stages in the primary years. That these would be useful areas to find out about is not in dispute. However a detailed assessment of one classroom situation seemed most likely to help illuminate the four questions about non-fiction reading at the centre of this work.

### **7.5 Kinds of Qualitative Research.**

Qualitative approaches value the subjective interpretation of individuals in the creation of the social world. The general and universal laws so important in quantitative research are replaced by an emphasis on explaining and understanding the way individuals perceive aspects of their world. Qualitative research is systematically planned and data carefully collected and interpreted. The main styles of qualitative research, including ethnography, ethnomethodology, case study and action research, are now considered.

### 7.5.1 Ethnography.

In ethnographic research, or fieldwork as it is sometimes termed, the researcher takes up a "naturalistic" stance. "That is, social life is studied as it goes on; the ethnographic researcher observes it first hand, often participating in the social activity under investigation". (Bulmer and Atkinson, 1979, p. 60). This avoids setting up contrived exercises and activities. The research style was first developed by anthropologists who sought a way of completely or partially integrating with the society they studied. This meant they could understand behaviour and beliefs from the inside, from the point of view of the subjects. The approach is no longer limited to anthropology and is used by educational researchers and other social scientists.

An example of a recent ethnographic study illuminating educational and linguistic issues is Brice Heath's study of the patterns of language learning in three communities in the United States (1983). The data was collected in situ and depended on extensive field notes.

The individuals or groups under study have to accept the researcher and, in the case of anthropologists, this often means working for many months, eleven years in the case of Brice Heath, to gain confidence. However, the general approach is increasingly being adopted by small scale educational researchers. For example Gregory examines teacher child interaction in learning to read, taking up an ethnographic stance by becoming accepted in the classroom. (Gregory, 1992).

The design and development of ethnographic studies is necessarily flexible. Bulmer



and Atkinson point out that the investigator's recognition and exploration of research problems tends to emerge in the conduct of the field work itself.

"There is a continuous process of definition, redefinition, and progressive focusing on working hypotheses and categories of data collection". (Bulmer and Atkinson, 1979, p. 61).

This does not mean that an ethnographic researcher cannot bring theoretical insight to the field work. However there tends to be an interplay between theory, problems as the work proceeds and issues from emerging data. This recognition that research progress is not always a neatly unfolding process is welcome, particularly in the context of the rich mix of variables in a primary school classroom.

Another strong feature of the ethnographic style is the value it places on the subjective meanings of those studied in a particular context. This makes it a sympathetic approach for the study of young learners. As Hitchcock and Hughes observe:

"... the subjects themselves become part of the research and can in fact help the researcher by actually doing the research themselves" (Hitchcock and Hughes, 1989, p. 36). In the present study the pupils evaluate the books they have been using.

The limitations of the ethnographic approach are, in common with the "case study", to do with problems of generalizability. How far are the individuals under study,

whether they are teachers, pupils, post office workers or members of a tribal society, typical? Bassey's argument that the important thing is relatability, how far members of similar groups see ways of solving similar if not identical problems, is relevant here. (Bassey, 1981, p. 86).

From the point of view of choosing an approach for the present study, it is the conduct and role of the researcher which is problematic. Although the observation may be participant it would be unusual for an ethnographic researcher to take on the role of teacher. There are exceptions: David Hargreaves in his study of social relations in the secondary school does some teaching. However, this is only for some of the time (Hargreaves, 1970). In the example in this study the researcher is always in the teaching role and perceived as teacher by the children.

In ethnographic research, as in the case study approach, researchers tend to observe what already exists, rather than introduce and evaluate something new.

These considerations mean that the ethnographic approach was not used, in its purest form, for the present study. However some of the implicit values of ethnographic research do inform the present work: valuing of subject's views and perspectives and the flexibility between theory, practice and data collection. This seems in line with the suggestion of Hitchcock and Hughes that:

"interpretative, ethnographic research is best seen as an attitude of mind which embodies a certain orientation towards investigating schools and classrooms" (Hitchcock and Hughes, 1989, p. 35).

### **7.5.2 Ethnomethodology.**

Ethnomethodology is concerned with how people make sense of the social world made up of shared meanings and shared viewpoints. The common place activities of everyday life are studied to help illuminate 'taken for granted' assumptions. The term "indexicality" is used to refer to the ways, in which actions and statements are related to the social contexts producing them. Attention is drawn to shared meanings which may not necessarily be made explicit by participants. Cohen and Manion suggest that:

"indexical expressions are thus the designations imputed to a particular social occasion by the participants in order to locate the event in the sphere of reality" (Cohen and Manion, 1989, p.33).

Another important notion, "reflexivity", refers to the interdependence of social settings and ways of describing them. The concepts of indexicality and reflexivity are important in ethnomethodological analysis. For reasons to do with word limit further analysis of ethnomethodology is presented in Appendix 23.

### **7.5.3 Case Study.**

The case study approach makes possible a close, detailed study over a certain period of time of the interaction of factors and events in a particular context.

Thus enquiry is focused around an instance of what is to be considered. (Adelman et al, 1977; Bell, 1987; Hitchcock and Hughes, 1989; Cohen and Manion, 1989).

Some research questions, including my own about how to involve children with non-fiction types of reading, need to be explored through the kind of deep analysis most likely to be possible if there is a focus on one example of an instance or situation.

As Bell points out:

"The great strength of the case study method is that it allows the researcher to concentrate on a specific instance or situation and to identify, or attempt to identify, the various interactive processes at work. These processes may remain hidden in a large scale survey but may be crucial to the success or failure of systems or organizations" (Bell, 1987, p. 6).

All research approaches have limitations and the main concern about the case study, particularly when there is a single researcher, is that it is subjective. It is the researcher who decides on the area, selects what to concentrate on and chooses the material to be written in the final report. Bell draws attention to the difficulty of cross-checking information and ruling out possible distortion. (Bell, 1987, p. 7). The question of generalisation of conclusions is a problem for all small scale researchers whether their approach is a case study or not. Bassey suggests that what he terms "reliability" is more important than "generalisability" in judging the merit of particular case studies. He suggests we ask how far the details are sufficient and appropriate for a teacher working in a similar situation to relate his or her decision making to that described in the study. (Bassey, 1981, p. 85). In the present study it is claimed that a detailed classroom case study, grounded in what is known about learning in general and learning from non-fiction in particular, does add to our

knowledge and understanding of an important area. As I show later the rigour of such a project depends on meticulous planning and identification of dimensions to study and on systematic collection of data, in this case by field notes, cassette tapes and children's writing [See 7.6]. The relationship between variables is examined and the whole study is subject to close evaluation. Bassey claims that if case studies:

"are carried out systematically and critically, if they are aimed at the improvement of education, if they are relatable, and if by publication of the findings they extend the boundaries of existing knowledge, then they are valid forms of educational research" (Bassey, 1981, p. 86).

How far then, can the classroom example in this study be described as a pedagogic case study? It does give detailed attention to one example and, as I show in Section 7.6, data is collected as a result of observation, tape recording of teacher and children at work and children's writing. It is based on the assumption that case studies are not open-minded but are grounded in the theoretical framework adopted by the researcher. This should be made explicit since it influences how the work is planned, which data is selected and how the material is ordered in the final writing up. (Smith, 1980, Dombey, 1986, p. 293; Cohen and Manion, 1989, p. 141). Most case studies can be placed within ethnographic, sociological or phenomenological theoretical frameworks. This example draws mainly on social psychology and linguistics in as far as they inform pedagogy in creating a framework of helpful theory.

The main problem with describing the present example as a "case study" is that the

term implies an unobtrusive observer. The approach does not rule out the participation of the observer. Dombey, for example, found King's non participation approach in his study of an infant classroom (King, 1979) unacceptable in the nursery school where she carried out her study of children's oral experience of stories. However, Dombey did not take on the role of practitioner in her study, but rather behaved in a way consistent with what very young children expect of adults by comforting, supporting them and so on (Dombey, 1986).

The term "case study" is sometimes used rather loosely and this dilutes its power as an approach in its own right (Bell, G H, 1985). However, a researcher is entitled to draw on different approaches and methodologies to answer their questions (Bell, J, 1987). The later sections of this chapter show the contribution of the case study approach to the present study.

In the main study here the roles of teacher and researcher are combined and therefore I turn now to "teacher" or "action" research.

#### **7.5.4 Action Research.**

##### **Defining action research**

This is an essentially dynamic, problem solving approach in which particular questions or issues are approached in a specific context. The scope of action research is very wide: at one extreme we might have a teacher trying out a new approach to a curriculum area with one class over a timescale of a few weeks, while at the other

extreme we might have a large scale long term study of organizational change in industry with a team of researchers and government sponsors. Whatever the situation, however, the method's "evaluative frame of reference remains the same, namely, to add to the practitioner's functional knowledge of the phenomena he or she deals with" (Cohen and Manion, 1989, p. 218). This emphasis on systematic planned action on which the researcher reflects in a specific context distinguishes action research from "applied" research which tends to use many cases, and techniques like sampling to test theories.

Action research is used in many areas including community projects, medical and business management as well as in educational settings. It can be carried out collaboratively or by individuals, by those involved and sometimes by people brought in from outside.

Action research is an approach, not a research technique. A number of research methods can be used to collect data including interviews, questionnaires, field notes, diaries and tape and video recording. Although this kind of research is often thought of as essentially qualitative, where appropriate experimental techniques are used. Some researchers feel the use of control groups in assessing the value of innovation may make findings more generalisable. In the Schools Council/Nuffield sponsored Humanities Curriculum Project psychometric tests were used to assess change (Elliot and MacDonald, 1975, p. 1) . There need be no end point to this kind of research since participants can continue to evaluate, review, modify and refine their work (Bell, 1987; Brown and McIntyre, 1981; Cohen and Manion, 1980; Hitchcock and Hughes,

1989). At some point a report is written so that others can scrutinise hypotheses generated and evaluate the success of the strategies.

Unlike the case study approach where what exists already is usually described, action research involves intervention, and it is the success of this intervention that is assessed.

The relationship of action research to theory is problematic and there is some implied tension between the terms "action" and "research". Cohen and Manion point out that "action" and "research" as separate activities have their own *modus operandi* "and when conjoined in this way, lie as uneasy bed fellows" (Cohen and Manion, 1989, p. 217). "Research" traditionally implies the testing out of hypotheses. Some action research and case study approaches work on the principle that categories and hypotheses should emerge in the course of the inquiry rather than preceding it (King, 1979). The action research presented in this study is set explicitly in a theoretical framework of what is known about the role of language in thinking and learning. It will be argued later that every researcher begins with a theory, and since to be completely open minded is impossible it is safer to make theoretical influences and assumptions explicit. Dombey makes this point about the case study approach (Dombey, 1986, p. 293). This question of the role of theory in teacher action research is returned to in the next section and in Chapter 8 when the present study is planned.

### **Strengths of Action Research in Educational Settings**



This approach is particularly appropriate for the practising teacher for several reasons. Firstly, as implied above, the *cyclic* rhythm of action research - identifying a problem, planning ameliorating action, evaluating that solution, refining the action and so on - fits with the patterns of teaching.

Secondly, the practical nature of the approach, which can if required be focused on ordinary developing practice, makes it appropriate for the classroom. There is no need for an experimental and control group as in the traditional research design. A teacher's primary role is to teach and experimental research involves some interference in that role. Thus action research, which does not attempt to identify one particular factor studied in isolation but rather recognizes the context that gives practice its meaning, is compatible with the practitioner's role (Cohen and Manion, 1989). Teachers respond positively to a research approach where action, and critical initial reflection on that action is very directly concerned with the improvement of daily practice. This contrasts with the difficulty in applying traditional research findings to the classroom, and in achieving some interaction between research and the work of the classroom (Best, 1959; Peters and White, 1973; Bolster, 1983; Hopkins, 1985; Somekh, 1993).

Thirdly, since action research can be grafted on to an existing system teachers' levels of motivation and involvement are likely to be high. (Cohen and Manion, 1989). In a sense all teachers are action researchers in that they are constantly planning, carrying out, evaluating and refining their classroom practice (Bartholomew 1977; Cope and Gray 1979; Raven and Parker 1981; Elliot 1979). Since the purpose of this approach

is to improve an aspect of practice over time there is a positive advantage in the teacher combining his or her role into that of researcher. (Bell, 1987; Hitchcock and Hughes, 1989). Hopkins draws attention to the role of action research in motivating the teacher and helping create a more energetic and dynamic learning environment for the pupils. (Hopkins, 1985).

Action research is an approach or style of research rather than a research method. The action research needs to be planned systematically, bearing in mind the particular questions it aims to answer; like all research, the methodology must be clear and justifiable.

### **Criticisms of the Action Research Approach**

Three main criticisms are made of the action research approach: Firstly, that the term is so imprecise that it can be taken to mean any well planned teaching episode (Travers, 1958); secondly, that it tends not to be pursued in the framework of theoretical knowledge and aims to improve practice "on the spot" rather than contributing to the development of explanatory theory (Peters and White, (1973), p. 101); thirdly, that findings in one classroom setting may not be capable of transfer move generally.

**Action Research in this Study: Avoiding Some Potential Weaknesses in the Approach.**

The three potential weaknesses in the action research model<sup>1</sup> made explicit above will be examined in more detail and an account of how they were avoided, or at least lessened, provided.

*I turn to the criticism*

Firstly that what often passes for action research does not meet the criteria of what is normally conceived of as research. Michael Young describes an example of action research at its simplest: following through an idea in the classroom and "seeing if it appears to work" (Young, (1965), p. 89). A geography teacher used clay to make an island on a sheet of paper, shaped into hills and valleys. The idea was to show the children how a contour map might be made by slicing off sections of clay, placing them on the sheet of paper and drawing in their outlines. In describing much action research as mere "good management" Travers seems to have such simple examples in mind (Travers, (1958), p. 66). It is the rigour of the planning and evaluating and the controlled collection of data which makes a classroom example systematic and therefore worthy of being described as research. I have tried to describe and evaluate the classroom work in great detail making careful observations about each stage of the work and presenting substantial examples of talk and writing. The latter are used selectively in Chapters 8 and 9 and fuller data are included in Appendices 2 and 3.

Secondly, the tension in some action research between theory and practice<sup>2</sup> is resolved by making the theoretical framework explicit, see Chapters 1 - 6.

Thirdly, action research is criticized on the grounds that the findings may not be generalisable. Here I have taken up Bassey's notion of "relatability": how far can

other practitioners relate to the challenges and problems in the study? (Bassey, 1981, p. 84). The planning of whole class work on a topic in which different kinds of non-fiction text is used seems likely to be an area of importance primary teachers would relate to. Another action taken was to ask the class teacher to expand his notes on the value of the work under headings. (See Appendix 4). This triangulation, together with the other actions, mentioned in this section, goes some way to reduce the problem of generalisability.<sup>3</sup>

### **Action Research and the National Curriculum.**

There may be some tension between the image presented here of the teacher as creative theorizer about practice, with the "autonomous professional judgement" so valued by Stenhouse (1979, 1983) and the image of the National Curriculum practitioner required to put into practice ideas developed elsewhere. I believe it is still possible, and even more desirable in the 1990s, that teachers should reflect critically on their practice and generate hypotheses about teaching. Further I believe that this activity should be carried out sufficiently systematically to make possible the kind of public scrutiny of which Hopkins and Bell write, (Hopkins, 1985; Bell, G.H., 1985). In this way teachers will be less likely to allow themselves to be relegated to an instrumental role.

## 7.6 Choice of Approach for the Present Study.

The earlier sections of this chapter looked at the range of approaches open to the educational researcher. It was clear that a qualitative approach was appropriate for the present study, since it is essentially pedagogic and therefore concerned with processes of teaching and learning.

There are several possible kinds of research consistent with an overall qualitative approach: ethnography, case study and action research.

The ethnographic researcher studies one aspect of social life first hand as it goes on. Some classroom "case studies" are ethnographic in approach. However two main characteristics of this approach make it inappropriate for the present study. Firstly, the observation is centred on what exists. The researcher does not introduce an innovation and reflect on it, as in the present study. Secondly, while some kind of participant observation as a strategy is not ruled out, non participatory observation is more usual. In his study of an infant classroom King describes in some detail how he managed to distance himself from the children whose activities he was observing (King, 1978). In the present study teacher and researcher are one person.

Although "case study" is a term used rather loosely to refer to a number of kinds of research in which an instance or example of a phenomenon is studied, it is a distinct type of qualitative research. Case studies in an educational setting are usually either ethnographic, as for example King's study of an infant classroom, phenomenological

or sociological as for example, Dombey's study of nursery school children's experience of narrative. It has been explained that ethnographic researchers tend not to use participant observation as a means of gathering data and this is also true of most case study approaches. Nevertheless, there are some features of the case study approach which can be drawn on in the present study. Firstly, it is a study of a carefully considered example of what is under scrutiny, i.e. children using non-fiction in the context of a sustained programme of work. Secondly, the example is placed in a theoretical framework consistent with a case study approach. The purpose of the classroom study was to bring together what is known in theory about language and learning and about the challenge of certain kinds of non-fiction texts in planning and evaluating a classroom example. It is these two aspects of the "case study" approach that I draw on in the study.

The third qualitative approach considered is known as "action" or "teacher" research. This approach is considered in considerable detail, in Section 7.5.4 of this chapter, as it offers the sort of framework most helpful to my purpose. Firstly, the roles of teacher and researcher are combined. My aim was to place reading non-fiction in a broad framework of language and learning and knowledge about non-fiction genres. To my knowledge this has not been done systematically before, and the complexity and richness of the enterprise made it appropriate that I should be the teacher and researcher. The action research approach sanctions and encourages reflective practice and is a powerful way of conceiving of pedagogic research. It allowed me to direct my reflection to a particular classroom example and to whole class participation. Although some of the practice was innovatory, it was intended to be ordinary good

practice.

However, two conventions of action research did not fit in with my purposes. There is a tendency for action researchers to seek a theoretical perspective after the episode under study is complete. Stenhouse believed the cumulative effect of a number of studies makes the findings approach generalisability. This contrasts with the present study which is grounded in a theoretical framework set out in Chapters 1 - 6.

The second problem with an "action research" approach is that the classroom example under scrutiny is the critical presentation of one example. It is bounded in time as a "case study" is, while "action research" is often conceived as a continuing process of refining and developing professional practice. However, the success of curriculum innovation is often assessed by participating teachers' reports bounded by time. These might be termed "action research" case studies, even though, as I have pointed out, there is some tension between the idea of "case study", in which the researcher tries to be unobtrusive, and "action research" which is to do with planned and evaluated change.

School based researchers are tending to regard action research and the case study approach more flexibly. Because the design of a study draws mostly on one approach, does not mean that use cannot be made of strategies associated with another. (Hitchcock and Hughes, 1989, p. 217; Cohen and Manion, 1989, p. 42; Bell J., 1987, p. 10; Bell. G. H., 1985, p. 181).

## **7.7 Methods of data collection in the present study.**

Teachers plan and monitor work whether it consists of a short term activity or lesson, perhaps not extending beyond an hour or so, or whether it is a more sustained programme like the present study. The research I carried out differed from ordinary classroom practice in the rather more detailed and systematic way in which I monitored the work and in the special focus on one main aspect: children's use and reflection on non-fiction. It is also true that my approach was in the theoretical framework set out in the early chapters and thus my practice was more self conscious than is the case with most teaching. This is not to say that teachers do not inform their practice with theory, but rather that they tend not to make their assumptions explicit in planning and evaluation. This project took place in 1989, just before the National Curriculum guidelines had taken a firm hold on the upper primary school curriculum and assessment processes.

Action researchers in the classroom use a number of data collecting techniques. I now discuss in turn my chosen methods: participant observation (which was the overall context for data collection); field notes; mechanical devices to produce transcripts of teacher and children's talk; children's writing. As Hopkins points out we need to bear in mind that separate explanation of each method may give a false impression of orderliness and discreteness while often the methods are used eclectically and in combination (Hopkins, 1985). In the interests of clarity I examine each method in turn.

### **7.7.1 Participant observation in the present study.**



In some kinds of qualitative research the researcher participates in the activities observed. This is true of ethnographic studies where an anthropologist may need to be accepted by the subjects studied in order to prevent self-conscious, atypical behaviour. Research carried out by practitioners unites the roles of teacher and researcher so that innovation can be carefully monitored, reflected on and evaluated. The main criticism made of participant observation is that it runs the risk of the researcher missing things that would be obvious to the more distanced non-participant researcher.

One response to such criticism is to point out that non-participant observers are not invisible and may have an intrusive effect on subjects' behaviour. Dombey suggests that an investigator who 'aims for a low profile could well produce findings more distorted (and therefore less valid) than those of a participant observer' (Dombey, 1986, p.297). In the present study my participating role was accepted by the children who saw their activities as a normal part of classroom work. At this point it is helpful to make my relationship with the school clear since it has a bearing on the children's acceptance of my work as teacher. The granting of a weekly 'research day' by the college where I am a tutor enabled me to visit and sometimes teach in a small junior school in Croydon. I met the head teacher when she joined my MA in Language and Literature seminar group, and an invitation to visit and teach in my area of curriculum strength was made. Most of my work was with the class who were in their third year at the time of the study. I had worked with them from time to time from their entry to the school as seven year olds, and I continued to work with them after the present project was ended until they left for secondary school.

At the time the present study was carried out I was accepted by the children as Mrs M. who was a teacher who taught them from time to time, sometimes taking the whole class, sometimes a group and sometimes giving special help to individuals. The children were able to see that my presence enabled Mr P, the class teacher in the children's second and third years, to take up other tasks including special help to individuals. Sometimes we worked together in a form of team teaching.

Thus I had a foothold in this classroom while retaining some distance since my visits were episodic. The children and teacher felt comfortable with me and the work was seen as 'normal'. Use of the tape recorder, video recorder and my own constant jottings in a note book had been a constant feature of my behaviour through all the years I visited the children. I was quite open about my other work as a tutor to student teachers, and often asked the children if I could display their work or play the tape recordings to my students. This happened throughout my time at the school, not just during the project which is the study presented here.

#### **7.7.2 Field Notes.**

My participant observation produced several books of notes and many tape recordings which formed the main data drawn on for the final report.

I took a looseleaf notebook to all my classroom sessions to jot down anything of interest. Alongside the tape and video recordings these notes reminded me of the atmosphere and texture of particular occasions. Although I read Hopkins'

categorization of field note uses only after the work was underway I found I had used the technique for the three main purposes he pinpoints. (Hopkins, 1985). First the notes can help focus attention on a particular issue, or teaching or learning behaviour over a period of time. I was always quick to write down any observation of the children's interaction with the books. Any comments of particular interest made by children to the whole class, to a peer or to me were jotted down. This provided extra security for while much use was made of the tape recorder occasionally recordings are difficult to hear and individual utterances of significance can sometimes be lost in the middle of a long tape. It also means all is not lost if the cassette is!

Secondly notes taken at the time can bring back the climate of the classroom on a particular occasion. With practice I became quite quick at deciding what was worth noting and committing it to paper swiftly. Dimensions like how the children were collaborating with each other, and the atmosphere when the whole class gathered together to share plans and progress made at the beginning and end of each session came into this category.

Perhaps the third use of field notes is the one most teachers would think of first, the careful description of the behaviour and progress of particular children as ground work for a case study of an individual. Particularly detailed notes were taken on three children: Andrew, Greg and Rakhee. However their interaction with others was one of the most important aspects to observe. The advantages of using field notes include the simplicity of the method and the usefulness of the notes as an aide-mémoire. They proved to be a helpful background source of information alongside other data

producing methods like tape recordings. As Hitchcock and Hughes observe, the field notes of a person who is jointly teacher and researcher are likely to be very rough. I aimed to add background and to extend the notes the same day (Hitchcock and Hughes, 1989).

Disadvantages include the intrusive nature of the activity when interacting with the children. One of the children asked 'Are you writing things down to help the students?' The children seemed to become quickly accustomed to my note taking. Of course the assessment procedures of the National Curriculum make such note taking on the part of teachers now much more commonplace.

Another well documented limitation is the essentially subjective nature of the method. (Hopkins, 1985; Bell, 1987; Hitchcock and Hughes, 1989; Stierer 1983; Dombey, 1986). In this case my decisions as teacher researcher about what was worth recording were to do with my teaching experience with this age group over many years and with my knowledge about non-fiction reading. In studies, like for example Dombey's in a nursery class, the researcher is not also the teacher and therefore her observations were more distanced than in a case like my own where teacher and researcher are one person. (Dombey, 1986). As Dombey makes clear, the opinions of others can be a way of at least partially validating our intuitions. This seems to be what Bassey has in mind in suggesting that the 'relatability' of teacher research, the extent to which other practitioners would recognize the problems and challenges, is one way of deciding on its worth. (Bassey, 1981).

My field notes were chronologically ordered and told 'the story' of my work with children. It was a carefully organized and inevitably selective 'story', but one which I aimed to make credible and useful to any teacher aiming to place reading non-fiction genres in a worthwhile context.

### **7.7.3 Mechanical methods of collecting data.**

Qualitative research has for a long time made use of the tape recorder, and more recently, the video film recorder. The latter is more obtrusive and more difficult for the lone teacher researcher to use. It can also turn a situation into a performance. These shortcomings have to be balanced against the valuable non linguistic information the video film provides.<sup>4</sup> In this study the main mechanical method of collecting data was the portable cassette tape recorder operated by batteries to provide greater flexibility.<sup>5</sup>

The audio recordings complemented the extensive field notes made during each of the ten sessions. The careful dating of tapes and notes meant each recording was placed in the rich context of a whole afternoon's work. This aided interpretation of the recordings.

### **7.7.4 Purpose of collection of children's talk.**

Children's talk in different contexts, including class discussion led by the teacher researcher, small group discussion and one to one conversations was recorded as evidence of reflection first on the ideas and information in the books and, second on

the features of the books as genres. The second kind of evidence helped illuminate the third research question about what children need to know about non-fiction texts.

### **Selecting what to record and transcribe.**

The recording equipment was as simple as possible. For recordings made when the whole class sat together in a particular location, usually on the carpet in the discussion area, multi-directional fixed microphones were used. The machine was a simple rectangular portable battery operated tape recorder. A tiny six inch mini recorder was used when I was on the move, recording the utterances of individuals. These recordings were transcribed and ordered firstly according to whether they were in whole class contexts, between peers (groups and pairs) or teacher child conversations. A cross classification was necessary to divide topic centred comments (about squirrels) from text centred comments (books and materials about squirrels). Some transcripts were cross classified where they fitted into more than one category.

I aimed to record complete units of discourse and this involved making a judgement above when an episode began and when it ended.

An enormous amount of tape recorded data was produced and the transcribing began by being systematic and total, but ended in being less likely to be immediately transcribed and more selective. A lone researcher without secretarial help with transcribing, may feel overwhelmed by the sheer amount of audio recorded data. In this case too severe a selection at the recording stage might have caused the loss of some of the richness and complexity of a whole class project and the secondary

sources which nourished it. A substantial selection of transcript material is presented in Appendix 2. The symbols used in the transcript are set out in Table 6 in Appendix 5.

#### **7.7.5 Purpose of examples of children's writing.**

There were two main kinds of written response: first the children's expository writing in their own information books for a younger class; secondly the narrative writing about squirrels. Evaluation of the writing in Chapter 9 centred round three interrelated questions.

How far does scrutiny of the writing suggest the child has gained some control over the register of the particular genre or form? Is there evidence of the writing leading to reflection on the ideas and information? How far did the scaffolding approach (the teacher support in inviting and supporting the writing) contribute to the degree of success of each of these aspects.

Some consideration was given to ethical issues involved in the research. To keep within word limits this is presented in Appendix 19.

#### **Summary and conclusion**

The purpose of the present study is to try to pinpoint some promising strategies in

helping children use and reflect on information in non-fiction texts. A range of both quantitative and qualitative research approaches are considered and reasons given for selecting a broadly based inquiry. What is needed is a careful study of an example of promising practice. This focused examination of an instance is at the heart of a case-study approach. Educational case-studies do often involve the participation of the researcher in some capacity. Dombey, for example, behaved as young children expect an adult to in helping and comforting the children in the nursery class she was studying. However, her investigation concerned the experience with books that the children were enjoying with Mrs G, their regular teacher (Dombey, 1986).

The present study involves the total participation of the researcher as the teacher, as is typical in action research approaches. While case studies tend to present and reflect on what exists, action research involves intervention. Thus case study and action research perspectives are regarded flexibly and combined in a way compatible with what Bell terms "action inquiry" (Bell, 1985). Bassey's notion of 'relatability' informed the choice of research design which needed to be planned and presented so that other practitioners could relate to the problems and partial solutions in the classroom example. (Bassey, 1981).

Some researchers taking up action research and case study approaches prefer to let theory follow from the data collected. However choices about what is worth trying out, observing and how it is evaluated depend not only on what has been learnt in practice, but also on the theoretical frameworks the practitioner has encountered in all previous reading and study. Since it is not possible to be entirely open minded, it is



important that a researcher is aware of theoretical assumptions and makes these explicit. (Smith, 1980). In the present study the provision of children's work and activities are placed explicitly in a language and learning framework set out in the early chapters. What is known about the challenge of informational texts, particularly those with a non-chronological organization, informs the choices made in planning, carrying out and evaluating the work.

The strengths and limitations of the methods of collecting data, in this case participant observation, field notes, transcripts obtained by mechanical methods of the audio cassette and children's writing, need to be borne in mind.

## **CHAPTER EIGHT**

### **The Practitioner Case Study : Nine Year Olds Using Non-Fiction Texts in the Context of Project Work on 'Squirrels'.**

#### **Introduction.**

This case study is a structured attempt to apply what is known both about how children learn, (Chapter 2) and about non-fiction genres, (Chapters 3-5) to helping children use non-fiction texts. The four informing principles about learning are that it is active, social, aided by the right kind of intervention from adults and takes place in a framing context. These four general principles are realized as seven factors or promising strategies which form a framework for non-fiction reading. Factor 7, to do with the Teacher's Role, is viewed in terms of seven elements.

This framework for reading is set out in Table 6, Chapter 6 and underpins this classroom example at each stage. I attempt to describe the planning and execution of the work in keeping with Bassey's notion of 'reliability': i.e. making the account capable of communicating to other practitioners in a manner that seems relevant to their own practice. The progress of the work over ten half days in Summer term 1989, is described and reflected on in this chapter. In Section 8.1 the background to the project is set out, 8.2 presents the pre-reading stages, 8.3 describes the first use of books, 8.4 attends to the children's sense of audience and 8.5 explains how the

children planned their own books. Section 8.6 focuses on the books and resources used and in 8.7 the collaborative centre to the work is established by a consideration of the role of talk in the children's assimilation and sharing of ideas from books. The main 'scientific' concepts encountered during the work are examined and the 'key concepts' which helped structure the work are considered in 8.8. Finally in 8.9 the sharing of the children's own writing with younger pupils is described and evaluated through 'vignettes' - illuminating glimpses of children's talk and activities.

This chapter tells the 'story' of the work, but since it is action research, analysis and evaluation interpenetrate the account. The final chapter, 9, provides a critical analysis of how far the children progressed as reflective readers, and examines the teacher's role.

### **8.1 Background.**

The junior school where the work took place is situated in New Addington, Croydon, an outer London suburb adjoining the Green Belt. My drive there via Biggin Hill is along the steeply descending and rising Salt Box Hill, a road which cuts through a valley of wooded areas and farmland. After several winding miles through a landscape little changed for centuries, the entry to the main road through New Addington is reached. The houses lining the road soon give way to a long row of small factories which include local car repair and welding businesses as well as factories established by such major companies as Unichem and Smiths' Industries. These factories provide employment for the parents and older siblings of some of the children at the school.

A left hand turn brings us past a small row of shops, some of which are protected out of working hours by sturdy metal grills, and an abandoned sub post office to find the 1950s built junior school in the same grounds as the infant school. Private and council estates surround the schools. Small parks with children's swings and play areas and grassy areas in front of groups of houses relieve the dense effect of so many buildings and reveal the shape of the countryside that was once there. Council signs refer to the names of former woods and copses. Another reminder of the past is the old village of Addington with its beautiful church. Thus the area the school serves is typical of the mixed housing and industrial development found across the country, and is evidence of the urban expansion of the immediate pre and post second world war period.

### **8.1.1 The School.**

In the late 1980s the school served a community where many males were without work; most others were engaged in unskilled or semi-skilled jobs. Many of the children's mothers did some work, often part-time, in the nearby factories and as dinner ladies and cleaners. About 30% of the 216 children were entitled to free school meals at the time of the research in 1989. Learning 'special needs' have been identified in 25%-30% while behavioural 'special needs' are not quantified at the time of writing.<sup>1</sup> Few children were from bookish or literary homes, but they benefited from a school environment where books were valued. There had been initiatives with local libraries, with other schools and with the National Writing Project. The National Curriculum changes were just beginning after the 1988 Education Reform Act. In the area of the language curriculum there was expertise amongst the staff including the

enthusiasm and knowledge of the headteacher who was a linguist who had recently gained a Master of Arts degree in Language and Literature. The role of talk and collaboration in learning was well understood generally, and both fiction and non-fiction books and resources were thoughtfully ordered and used, within the economic restraints in which schools work. I think it is true to say that reading fiction was particularly strongly promoted. There was an inviting library and many book-based displays in the entrance hall and corridors.

### **8.1.2 The children.**

The 9-10 year olds with whom I worked were in the final term of their third year in the junior school. I had worked with them during their first year from time to time and in the spring and summer terms of their second year. Much of my work had been with the whole class, but on occasion I had worked with groups and sometimes with individuals with learning special needs usually in my area of curriculum strength, language and literature. Two out of the 24 children were statemented on account of learning special needs. The teacher found one child uncooperative and aggressive towards other children and help from the educational psychologist was underway. (See Appendix 1).

In general the children were lively, friendly and enjoying school. The two statemented children were still at an early stage in learning to read, about two years behind their chronological age. I had worked with one of them, Andrew, from time to time during the previous two years and knew most of the available information

books to support the project I planned were too difficult for him, the other 'special needs' pupil and some of the other less advanced readers. I sought out 'information stories', accounts with a narrative structure, since I felt these would be relatively accessible. This was one of the conclusions of my analysis in Chapter 4.

I knew from my other work with this class that the ablest fourteen would be able to manage, with some help, most of the texts I had obtained to support the work (see Table 17). Their reading abilities were about what we would expect at age 9-10 years. Another eight were further in their reading progress than the two stated children, but less confident than the ablest fourteen. 21 out of the 24 children were tested on the Borough Standardization of the Hunter-Grundin 4 reading test.<sup>2</sup> For the purpose of this general discussion of reading ability I have, on the strength of my own observation, added two of the three untested children to the 'average' category and one to the 'below average' category. While all these children needed help in understanding how information books, and other kinds of non-fiction like encyclopaedias and dictionaries, are organized, support was needed particularly for the nine less forward readers including the two children stated for special learning needs.

I judged that all of the children would benefit from talking about the new information they were reading and about the conventions and qualities of the texts they were using (see Section 8.6).

Provision was made for all the individuals who made up the class and the names of

many of them occur as the 'story' of the work unfolds: they contribute to discussion, ask questions and write down their ideas. For the purpose of my analysis I have chosen a child out of each group for special attention. Of course this kind of grouping is a crude way of introducing children who are individual learners. Table 8 is useful in indicating very broadly the reading levels within the class.

### Andrew (Group A)

I knew Andrew particularly well as I had from time to time since he was 7 years helped him with his reading. His difficulty was that he was locked into a mechanistic decoding strategy, and seemed for a long time unable to use non linguistic clues like pictures to help him make intelligent predictions about the unfolding story or account. The most successful story session we had had together was when I invited him to provide his own story to the illustrations in the Ahlberg's picture book about skeletons, entitled *Funnybones*. He managed his own fluent account and then was prepared at my suggestion to try to read the actual text. He was now prepared to anticipate and to make sensible guesses. By the time the present study began Andrew had made much reading progress, but he was at least two years behind most children of his chronological age. He managed, with help, some of the non-fiction texts organized on a narrative basis: for example Sheehan's *The Squirrel* (1976), and simple non-narrative like Bomford's *Squirrels* (1986).

Andrew enjoyed the class discussions and contributed quite well. He was not yet able to listen thoughtfully to the contributions of others.

### Gregory (Group B)

Gregory is able to write sustained stories with lively dialogue and convincing story lines. He enjoys stories and particularly appreciated our shared reading of Dick King-Smith's **The Sheep Pig** when I worked with the class in their second junior year.

At the beginning of the present study there was evidence of an increasing capacity to use non-fiction including dictionaries, encyclopaedias and information books.

He was able to use the conventions of the information book in making his own book. Contents page, headlining and illustrations were all used appropriately.

The written element was brief, but he contributed very well to class discussion and was one of the most successful when it came to reading his book out loud to the seven year olds. He showed mature communication skills and some more than superficial understanding of his material.

### Rakhee (Group C)

Rakhee's roots are in Pakistan, but she is second generation and English is her first language. She is very well motivated and talked a great deal about the video films which were part of the work. She produced the longest list of questions to take to the information books: fifteen in total.



She enjoys stories like Dick King-Smith's *The Sheep Pig* and seeks out non-fiction about animals. Her written response was more substantial than that of most of the other children, and she also contributed well to discussion.

**Table 8.      The Children in the Squirrel Project.**

Group A	Group B	Group C
2	8	14
<u>Andrew</u>	<u>Gregory</u>	<u>Rakhee</u>
Jack	Grahame	Ben
	Stephen	Claire H
	Michael	Kerry
	Paul	Maria B
	Kim	Stuart
	Lee	Carrie
	Peter	Tara
		Mark
		Charmaine
		Marie
		Sarah
		Pauline
		Wendy

### **8.1.3 Negotiation of the choice of topic and work plan with the class teacher**

Mr P was class teacher during the second and third junior years of this class. He had studied to become a teacher in Australia, and the class had just enjoyed sustained topic work on that country. I explained I wished to carry out a project which would involve the children in using non-fiction texts. He agreed with me that some kinds of reading presented a particular challenge to young learners and was interested in my plans to try to put into practice some strategies to help. Since the project the children had just carried out had a geographical emphasis a different approach, in fact a science or nature study approach, seemed appropriate. We sought a topic where children were

likely to have a personal foothold so that they would bring some 'common sense' knowledge and ideas to the books. These 'spontaneous' concepts, would thus provide the framework for taking on the 'scientific' concepts in the reading material. The notion of these different kinds of concept, first named by Piaget and then applied by Vygotsky, are discussed in Chapter 2.

The teacher and I also sought a topic which would encourage the classification of phenomena, since information books describe and define categories and hierarchies. 'Squirrels' was chosen as a topic which would meet both requirements. Grey squirrels are common in Kent and all the children were familiar with them. There are many different kinds of squirrel so that classification was appropriate. The teacher also felt that how structure and function are related would be a valuable scientific idea to explore in relation to a squirrel's body and movement. Our choice was not, at this stage in history, limited by National Curriculum requirements. The value of the work to the children was an important factor in all the planning, in line with the policy on ethics in research set out in *Appendix 19*.

#### **8.1.4 The roles of class teacher and researcher.**

It was agreed that I would be the main teacher on the 10 Thursday afternoons of Summer term 1989, (the first Thursday of term and the Thursday of half term were excluded). The class teacher would be an extra resource and provide some help when children were reading the books. On some occasions he would work on other tasks and with individual children who needed help with their regular work. I read of

Cambourne and Brown's team work only much later, but was interested to read of their teacher/university lecturer partnership in helping junior aged children in Australia write in a range of different registers (Cambourne and Brown, 1989). Although I consulted the class teacher constantly and explained what I wanted to do, it was not joint work to the same extent as Cambourne and Brown's.

The structure of the Thursday afternoons followed a general pattern. First at 1.15 p.m. there would usually be discussion with the whole class in the carpeted area of the classroom. Special input might be provided such as a video tape film or my sharing of some information of particular interest. For example in session 8 I read from and paraphrased an article from *Country Life Magazine* about the relationship between red and grey squirrels. (*Country Life* 4 May, 1989) Children also provided input in terms of anecdotes, pictures and information they had found between sessions and wished to share. A work plan for the afternoon would be negotiated.

Usually by 1.45 p.m. the children were working at tables of four, sometimes all concentrating on using the texts, but sometimes there were art and writing tables. This meant that the most used texts could be shared fairly.

I worked with groups and individuals, mediating between children and texts, explaining diagrams and listening to the talking through of new information and ideas. Sometimes I demonstrated in context how one skims and scans for information, and how retrieval devices are used.

Often children would be asked (or offered themselves) to contribute special input to a second class discussion in the carpeted area from about 3.00 - 3.30 p.m. (this did not happen every week). Sometimes they would explain a diagram or read out a particularly interesting section from a book or their own synthesis from several books. I would mention some of the 'key concepts' which were emerging, like the relationship between the squirrel's bodily structure and the function of tail, feet and teeth, and the role of the grey squirrel in the red squirrel's decline. Sometimes part of Jan Taylor's *Scirus: the story of a Grey Squirrel* was read out. The book, a mature 'information story', was not read completely or in chapter order. For example the chapter on *Scirus* making a home was read to complement the children's work on dreys.

## **8.2 Pre-reading activities.**

In Chapter 2 it is argued that Piaget's adaptive model of learning is a useful way of conceiving how individuals take new information into an existing framework of knowledge. This model presents an essentially active learner. Because of the way non-fiction, particularly the non-narrative kinds, is organized there is a danger that young readers may be overwhelmed by a text which tends to be the edited and condensed result of much research and thought. Strategies to help support active reading, it is suggested, are: the organization of prior knowledge; starting with a specific example; reinforcing a sense of purpose; encouraging a sense of audience. The way in which these strategies were carried out is now explained.

### 8.2.1 The organisation of prior knowledge. (Factor 2 in Table 6) .

The work began with the children sitting on a small carpet in the discussion area of the classroom. I explained we would be following a project on 'Squirrels' and that the purpose of this first session was to share what each of us knew already and to begin planning together how we would like the work to develop.

The many anecdotes revealed that the children's spontaneous knowledge included the following insights: that in Kent the grey squirrel predominates; that in some circumstances squirrels are shy but when encountered in parks they can be tame enough to take food by hand; that in urban areas the squirrel is often perceived as a 'pest' as it damages lofts and forages in domestic dustbins; foxes, cats and owls eat baby squirrels but squirrels are as likely to meet their death on the road in urban areas; squirrels are small, furry, have bushy tails and climb trees; they eat nuts and berries. (see transcript 1 in Appendix 2).

I saw my role as interested listener to the anecdotes and as reformulator of common sense observations to make them compatible with school learning. The anecdotes also suggested the kind of books the children could manage and find interesting. Towards the end of the session I attempted a summing up on the lines of the garnering of insights described above.

As we would expect at this stage the children did not use book terms like 'habitat', 'rodent' and 'predator' although one child mentioned that the squirrel's nest was

called a 'drey'. It seemed helpful to introduce some of these terms before they used the books, and this I did as I judged appropriate. Terms like 'habitat', 'gestation' and 'predator' came up later in a wildlife video film. By the time children formulated their questions scientific concepts like 'rodent', 'habitat' and 'hibernate' are used (See Table 21).

When I asked how they thought we could learn more about squirrels, answers included 'observing them in parks', 'drawing and painting them', 'making models putting squirrels in their woodland environment' and 'looking in books for information and pictures'. One girl, Rakhee, thought they could learn about them 'by writing things down'. Following up this suggestion I asked if they liked the idea of making information books. They told me they had made story books for their classroom, written stories for younger children and had carried out projects accompanied by writing. They had not previously made information books for a particular audience, and it was decided that they would write up their 'Squirrel' work in the form of information books for the seven year olds in the school.

In this first session the children's existing knowledge about the topic was made explicit in a collaborative context. My role was to help reformulate the information and ideas the children brought to the discussion so that their prior knowledge was organised. The children were then in a good position to help decide how to learn more. (Part of this discussion is presented as Transcript 1 in Appendix 2.)

### 8.2.2 Placing non-fiction reading in a strong supporting context (Factor 1, Table 6).

One of the difficulties children experience with non-fiction organized on a non-narrative basis is with the relatively abstract or general nature of the information therein. As the theories of Piaget and Vygotsky (see Chapter 2) make clear, all that we know about how children learn suggests they move from the specific to the general. How could the children be prepared to use the information in the books? Their common sense notions about squirrels had been made explicit through discussion. It seemed to me that we needed an interesting shared experience to bridge their discussion and their work with the books. This could have taken the form of a visit to a park to see squirrels or of an expert's talk on the topic. However I thought a powerful visual input might interest this class.

Thus I chose to begin the second session with a showing of the wildlife film **Squirrel on my Shoulder**. This true story of Jon Paling's attempt to bring up an orphaned baby squirrel with his cat and her kittens proved an inviting beginning. Indeed the children still mentioned the film many weeks after this showing. As well as beginning with a specific focus 'the story of a very special grey squirrel', I also wanted a sympathetic way of confronting the children with book language. David Attenborough's narration takes us through a sequence of events - the finding of the motherless squirrel, the stages of its development, its preparation for release as a mature squirrel, its actual release and apparent loss and the final happy rediscovery. But within this broad framework the commentary breaks off frequently to make

generalisations about squirrels. For example, 'the safest nests are cradles of dry grass and twigs hidden in tree forks' and 'blind and helpless they are totally dependent on the mother for protection'. Much of the actual language was thus close to book language. Sammy's story was accompanied by asides about squirrels in general; their preferred habitat-'oakwoods are ideal habitats for grey squirrels'; how they eat-'squirrels tear into the bark'; and how they behave-'squirrels don't really hibernate for long periods but to conserve energy in winter they sometimes stay in their dreys'. The children were being introduced in a sympathetic way to the syntax and vocabulary of non-narrative text. Few would have managed to read the written down script themselves, but listening to the reading, together with the appealing visual element, made some difficult concepts and ideas accessible.

I did not interrupt the flow of the narration by pausing to encourage reflection. The children were absorbed and I felt more would be lost than gained by an intervention, however well intentioned. Before the film began I suggested they notice some of the differences between squirrel and kitten behaviour. The videofilm invited them to make comparisons - 'differences in species were beginning to become apparent'. At the end they were asked to give examples of Sammy's typically rodent behaviour and to compare it to feline behaviour. Examples the children picked up were that kittens lap milk easily from a saucer while Sammy, a rodent, tries to 'gnaw' the milk. The mother cat can teach the kittens to use the litter tray but she cannot stop Sammy from indulging his instinct to bury food in the sand. Sammy eats leaves and buds and, if these are not quickly provided, will eat the flowers and plants in the house. He tries to strip electric wiring as if it was tree bark. Kittens as carnivores are adapted to



eating meat and they have a "capture to kill instinct". The children were fascinated to note that the kittens in play located the part of Sammy's head that they would crack as adult cats with a captive mouse. They observed that the kittens used Sammy's tail as target practice, but his speed was superior. The children also remarked on Sammy's nesting instinct made manifest by his use of the food mixer! They heard the words 'expertly performed with totally untaught technique' in the narration and the accompanying film helped them interpret this book language as meaning 'instinctive'.

The video-film brought home to the children how much of an animal's behaviour is instinctive; it unfolds as the animal matures even if, as in Sammy's case, there are no parent squirrels to teach it. Sammy is a rodent and observing him in this way helps prepare us for looking at this whole class of creatures - it brings us nearer to knowing what their distinguishing characteristics are.

The nudging into looking at the creatures in this way was good preparation for reading information books since these by definition include descriptions of attributes of the phenomena under scrutiny (Pappas 1986, see Chapter 5 of this thesis).

The children were able to say what they had seen in the film and to comment on typical feline and rodent behaviour. However, as we might expect, they were also eager to share further examples of their own experience. These anecdotes - about squirrels foraging in domestic dustbins, being found dead on roads, and becoming the victims of dogs or cats - were not linked explicitly to events or comments in the video film. Here perhaps the teacher has the sensitive role of helping children reformulate

their anecdote in a way that makes it useful for school learning (Brice Heath, 1983). For example, Michael told us of his recent experience of offering a squirrel a peanut in a local park. '... they were scared ... instead of coming straight to us he scampered in a kind of zig zag and then grabbed the nut'. I tried to make a link with the video film by saying 'Yes that's interesting. Jon Paling was worried about Sammy losing his shyness of human beings. Do you remember how Sammy was helped to become wild and cautious again for his own safety?' This making explicit links between knowledge from different sources is most pertinent to the matter of becoming able to assimilate what we read with what we already know, and children of this age may need some help.

I noted that some of the children were now using terms like 'predator', 'prey' and 'habitat'. They were ready to learn from the books but I judged that we needed a way of making the books serve their purposes.

### **8.2.3 A sense of purpose. (Factors 3 and 4 Table 6).**

It has long been a concern of teachers that when children are asked to use information books as a source for their own writing they tend to copy or very closely paraphrase what is written in the books. (Mallett and Newsome, 1977; Littlefair, 1991; Wray and Lewis, 1992). In Chapter 6 of this thesis some of the reasons for this are set out.

The main difficulty for young readers is that non-fiction text with a non-narrative organisation is the final outcome of considerable research, drafting and editing. The final account is the condensed result of a cleansing away of all the rich jumble of

thinking and speculating that accompanied the first research and drafting. Section and chapter headings often provide quite a tight global organisation of the material. Some of the vocabulary used may be technical, and the syntax tends to be more involved and different from the linguistic patterns of children's everyday conversation. Information is often abstract and decontextualized. This latter tendency is considerably modified in the transitional genres, the non-fiction books written more invitingly for an audience of young readers, that publishers are now favouring. (For example, books like **Apple Tree, Tomato and Spider's Web**, The Stopwatch Series, A & C Black, and **Think of a Beaver, A Piece of String and Caterpillar, Caterpillar**, Walker Books. Think and Wonder series, see my detailed analysis in Chapter 5).

It is suggested that three possible strategies might help children become active in organising information for their own purposes: approaching the text with their own questions; summarising orally a topic read about in a book; making notes which will guide written accounts, thus releasing the young readers from too great an influence from the precise language of the text. The second of these is a main theme in this chapter, but particularly of Section 8.7 and the third is considered in Section 8.5. This Section sets out how the first, approaching texts with their own questions, was put into practice in this classroom study.

After the showing of the video **Squirrel on my Shoulder** the children discussed some of the differences between feline and rodent behaviour (see Section 8.2.2). At the end of this second session I asked the children what they would like to find out from

the books. First we talked generally about the sort of things the books could tell us. At this stage the questions were about food, life cycle and predators. Using a flip chart we began to compile a collaborative list and I suggested that we collect the questions together in groups. The children were thus being encouraged to think in categories which they had helped to choose. We agreed to have a page for behaviour, kinds of squirrel, appearance, predators, food and breeding. We decided on using a separate page for 'general' questions which seemed not to fit into other categories. Children's information books treat phenomena in categories and this was the reason for encouraging a classificatory organisation.

**Table 9. Children's Questions on the Flip Chart.**

The flip chart list was as follows:-

***General***

Where does a squirrel get its name?

***Behaviour***

Do squirrels really hibernate?

How do they climb trees so well?

Do grey squirrels kill red squirrels?

How do squirrels crack nuts?

***Kinds of Squirrel***

How many kinds of squirrel are there in the world?

How do flying squirrels fly?

### *Appearance*

How do they use their tail?

What are their teeth like?

### *Predators etc*

Which creatures kill squirrels?

Which creatures are killed by squirrels?

What diseases do squirrels suffer from?

### *Food*

What kinds of nuts do squirrels like best?

Do squirrels eat eggs and baby birds?

What do squirrels eat?

### *Breeding etc*

What do they build their nests with?

How many babies do squirrels have?

I believe this collaborative formulating of questions was pedagogically justified: hearing what someone else wonders expands one's own repertoire of ideas about the scope of possible questions. Rather than ask the children to copy the list I asked them to make their own selection, including any questions they personally had contributed, some that they liked of those formulated by others and any extra questions that occurred to them. Some of the children took their jotters home to add

to their lists over the weekend. I explained that in the next session I would provide more books and resources to add to the display of books already in place so that we could research the questions.

At the beginning of Session 3 the children brought their lists to the discussion in the carpeted area. Some of the children said they had talked about the questions with their parents. Others had looked up 'squirrels' in encyclopaedias at home or in the public library over the weekend. Except for those children for example Paul, Lee and Pauline who said they did not wish to, all the children read out their personal lists to the group. There follow the lists of the three children referred to earlier who each represent a group within the class: Rakhee, Gregory and Andrew.

Rakhee's list was the longest out of the whole class.

**Table 10.**

**Rakhee's Questions**

1. How do squirrels climb trees so fast?
2. Which kind of nut do they like best?
3. Why do they call squirrels squirrels?
4. How many squirrels are there in the world? (As this would be difficult to estimate Rakhee was helped to rephrase this to - How many different kinds of squirrel are there in the world?)
5. What is a habitat?\*
6. Why are red squirrels smaller than grey squirrels?
7. Do grey squirrels eat more than red squirrels?\*
8. What do squirrels eat a lot of?

9. How do we control squirrels? (Rakhee explained she meant population control).\*
10. What is different about grey and red squirrels' looks?\*
11. Can a squirrel make you laugh?\*
12. How can you find out how much a squirrel weighs?\*
13. Do some squirrels live underground?\*
14. Do squirrels eat birds' eggs?
15. How do squirrels survive in the woodland?

**\* Questions not on the collaborative list**

---

Seven of Rakhee's questions arose from her thinking after the collaborative discussion and shared formulation of questions. Her questions range from those capable of a short answer easily obtained from a book, for example the question about the origin of the squirrel's name (question 3), what they eat (question 8) and whether they eat birds' eggs (question 14), to those which would require more sustained research, for example - how do we control squirrels? (when populations rise too much - question 9) and how do squirrels survive in the woodland (question 15). The delightfully humorous question, 'Can a squirrel make you laugh' refers to the playful behaviour of the creature in trees, parks and domestic gardens. This, and some of Rakhee's other questions, would not have occurred to me at this stage in the work. It does suggest that children are quite able to formulate their own questions to take to library research. The practice of teachers providing ready made question lists seems much less likely to result in motivated research activity.

Gregory and Andrew produced shorter lists as tables 11 and 12 show.

Table 11 Gregory's Questions

1. What do squirrels eat?
  2. Do they eat bird's eggs?
  3. What are squirrels' enemies?
  4. What creatures have squirrels as their enemies?
  5. How many kinds of squirrel are there?
  6. Do they hibernate? \*
  7. Where do they live?\* (Question about habitat.)
- 

Gregory's question 6 about hibernation and habitat have been added to his selection from the collaborative list.

Table 12 Andrew's Questions

1. What is a squirrel's best food best nuts?
  2. What is a squirrel's enemy?
  3. How many squirrels are there? (Became 'How many kinds of squirrels are there?')
- 

Andrew's list is brief, partly because he is not a confident writer. He needed help in writing these three questions, although he knew what he wanted to include. He has expressed some of the questions arising from our collaborative discussion in his



own way. By 'best' food, he explained to me, he meant 'favourite' food. However, he adds no extra questions.

All the children who handed in a question list (twenty out of the twenty four) asked the question about numbers of squirrels. Some had not qualified their question by adding 'kinds of squirrel' and I suggested it was unlikely we could estimate the number of squirrels in the world.

### Table 13 CHILDREN'S QUESTIONS

These questions arose in the course of discussion. Each child then compiled his/her own list to take to the books in Sessions 3 and 4.

	No of children asking this or similar questions
<u>General</u>	
1. Where does the squirrel get its name?	4
2. Why is a squirrel's nest called a "drey"*	1
3. What is a habitat? (and where do squirrels live?*	2
4. What is a 'rodent'?*	1
5. How can you study squirrels?*	1
6. How many kinds of squirrel are there in the world?	20
<u>Behaviour</u>	
7. How do squirrels survive in the woodland?*	1
8. Do squirrels really hibernate?	10
9. Do squirrels have any interesting habits?	1
10. How do squirrels climb trees so fast?*	1
11. Do grey squirrels kill red squirrels?	11
12. Can a squirrel make you laugh?*	1
13. How do they crack nuts?	2
14. Do squirrels attack people and bite them?*	1
15. Do some squirrels live underground?*	1
16. How do flying squirrels fly?	2

### Appearance

17. What is different about red and grey squirrel's looks?	1
18. How do they use their tail? (Could also be categorized under 'Behaviour'. Links with question 10).	2
19. How big is the biggest squirrel and how small is the tiniest?	1
20. What are their teeth like?	2
21. Are males and females the same size?*	1
22. Why are red squirrels smaller than grey squirrels?	1

### Health, predators prey etc

23. Which creatures kill squirrels?	8
24. How do we control squirrels? (When population gets too great)	1
25. What creatures are killed by squirrels?	4
26. Have squirrels a good sense of smell & hearing?*	1
27. What diseases do squirrels suffer from?	3
28. How long do squirrels live?*	1
29. How much does a squirrel weigh?*( & how do you weigh it)	2

### Feeding

30. What kinds of nuts do squirrels like best?	5
31. Is it true that squirrels kill baby birds and eat eggs from nests?	3
32. What do squirrels eat?	18
33. Do grey squirrels eat more than red squirrels?*	1

### Breeding etc

34. What do they build their nests with?	4
35. How many litters do they have each year?*	2
36. How many babies do they have? (in each litter)	10
37. Are squirrels good parents?*	1
38. When do squirrels mate?*	1
Total number of different questions	38
Total number of questions	133

\* questions not on the collaborative list.

---

Table 13 shows the total number of questions asked in the children's lists under the

categories used for the flip chart list.<sup>3</sup> There were individual quirks in the way the same sort of question was framed, and the most typical wording was adopted - for example Andrew's question about 'best food best nuts' was incorporated into the question 'what kind of nut do squirrels like best? Although the children helped me to put the questions into 'common sense' categories like 'food', physical characteristics' and so on during the collaborative discussions, they did not organise their individual lists under these headings. With the benefit of hindsight perhaps I should have asked them to do so. Information books organise their content round section and chapter headings and the young reader needs to understand how this convention works if he or she is to develop as a reader of non-fiction genres.

### **8.3 Researching their questions. (Factors 7b, 7c and 7d, Table 6)**

The children took their own lists of questions to their first book research. (See section 8.6 for detailed information on the books available). There are three interrelated advantages of this strategy. First the children are likely to feel actively involved in their investigations : they were reading for their own purposes. This would not have been the case if a teacher's list of questions had structured the first foray into books. The collaborative formulation of the joint list, that preceded personal selection, contributed to their understanding of what might be useful questions to ask. The second advantage is that their own sense of purpose prevented them, to some extent at least, from being overwhelmed and controlled by the organization and language of the books. Thirdly the important strategies of skimming and scanning were capable of being taught and learnt in context.

Just before their research began I demonstrated how a reader in search of a specific piece of information begins by skimming quickly through contents pages and indexes. Some questions might be answered under more than one main section: for example 'What are their teeth like?' would be covered in what Pappas calls 'topic presentation', where, by definition as a rodent, the squirrel's teeth as gnawing tools would be explained. (Pappas, 1986). We would also expect information on this under a heading like 'The Squirrel's Body' or 'The Squirrel's Appearance'. Further elaboration, and possibly helpful illustrations, would fall under a section on 'Feeding'. How the teeth are constructed makes sense in terms of how they are used. [Later on in section 8.4 Rakhee picks up and shares this question of the relation of function to structure.] Scanning for answers to questions is more difficult than for a date or name of a city. Questions are worded in different ways making recognition of the answers less mechanistic. I showed both individuals, and groups, how once a promising passage has been located, one can skim through to get the gist of what was being communicated. These strategies are only gradually acquired. The children in Group C were already able to search out information, in this way, while Group B, and to an even greater extent, Group A needed much help and support. Once the research started the help of parents in the classroom would have been invaluable. I was not able to organise this but the class teacher joined me in helping individuals find the information they wanted. The children helped each other and this co-operative approach seemed to follow from the collaborative structure of the work from the first session onwards.

### 8.3.1. Sharing answers to questions. (Factors 5, 6 and 7d and 7e, Table 6)

The children used the books and resources to answer their questions in Sessions 3 and 4. (see Table 17 for an annotated list). The use of several libraries, school, college and public, meant second and third copies of some texts were available and everyone had at least one book. Not all the books were equally useful for all of the questions, and the research sessions were quite noisy. There was some frustration experienced by the children when they were not able to find the information they wanted quickly. The class teacher and I acted as models of mature readers, demonstrating how to 'skim' a text for a specific piece of information, for example when the squirrel's young are born, and how to 'scan' a promising paragraph to get the gist of a topic like 'Feeding' or 'Hibernation'.

At the end of Session 3 the children brought their question lists and jotters to the discussion area. I explained that while I knew everyone wanted to share their findings it was also important to listen to the contributions of others. Not only was it courteous, but it might also help them in their own continuing research next session by directing them to particular books and sections in books.

Rakhee began the discussion by telling us she had found that a squirrel gets its name from a Greek word meaning 'shade' or 'shadowtail'. In Coldrey's 'Squirrel in the Trees' it mentioned that this was an appropriate name because squirrels often use their tails 'like a parasol to shade their bodies from the sun'. (Coldrey, 1986). Rakhee read directly from the book at this point.

Greg told us he could not find a book that explained why a squirrel's nest was called a 'drey'. Marie suggested 'if you just say 'nest' people would think of birds, so you need a special word to show it is a squirrel's home'. I told the children I thought that some questions were not directly answered in books : sometimes we have to infer what seems likely from other information. This was a step forward in coming to understand what books can and cannot provide. It also brings the children closer to the idea of reading as a reflective activity.

Ben and Andrew had been looking at a diagram of a flying squirrel and had asked if they could explain it to the other children. The question was 'How do flying squirrels fly?' Ben began by saying there were three kinds of squirrels 'tree squirrels, flying squirrels and ground squirrels'. This information came from Davies' book 'Discovering Squirrels' (Davies 1986). Michael broke in at this point saying that in Bomford's 'Squirrels' it said there were at least two hundred different kinds of squirrel - (Bomford 1986) Michael's implicit question was - how could both Ben's answer and his own be compatible. We talked about how creatures were classified. I explained there were broader classifications into mammals, and within that category rodents, and the squirrel belonged to both the categories. The two hundred kinds of squirrels mentioned by Michael could all be classified according to their habitat as Ben's research had suggested : tree, ground and air. [It could be argued that 'flying squirrels' are a sub category of tree squirrels.] I suggested Michael's research and Ben's research showed that you could classify creatures according to your particular purpose. As Rakhee pointed out, U.K. squirrels, for example, could be simply classified into greys and reds.

The questions continued to be important throughout the work. In a later session Ben and Stuart explain to the class how a flying squirrel flies. Ben showed us the illustration (Davies, 1986) and talked us through how this squirrel moves through the air. 'He has a special bit of skin and this skin stretches from his front legs to his back legs and opens up a bit like a parachute when he wants to glide through the air'. Ben had assimilated the information well enough to paraphrase from the book, and to answer the children's questions. Greg wanted to know if the skin was 'a kind of folding wing'. Ben thought it was and said this 'wing' made of skin was called a 'patagium'. (Before their contribution to the whole class Ben and Stuart begin their reflecting on Flying Squirrels in a small group with T-R. (See Transcript 7, utterances 24-35.)

At the end of the third session I realized the discussion had centred on 'topic presentation' (Pappas' obligatory feature of information books, 1986) and 'category companion' (Pappas' optional feature of information books, 1986).

The discussion after the children's further research in Session 4 centred on feeding, mating, hibernating and appearance. Certain 'key concepts' (Langer, 1981) started to emerge : what is the relationship between red and grey squirrels; how true it is that squirrels hibernate ; the squirrel as both prey and predator. There is further comment on this in section 8.8.1 and 8.8.2. (See Transcripts 4-7 in Appendix 2.)

These first forays into the books and resources encouraged the children's progress as readers of non-fiction in the following ways. It was becoming evident that a reader

is unlikely to find all they need to know from one book. Sometimes you have to infer possible answers to questions from other information, using your imagination and speculative powers. The questions, comments and partial answers of others enrich one's own developing understanding. Some books are better for particular purposes than others.

In the fifth session the children brought the information books they had been using to the carpet area to discuss their relative merit. This discussion is considered in the analysis in Chapter 9 Section 2 and part of it is in transcript form, (transcript 8 in Appendix 2).

#### **8.4 Planning their own information books. (Factor 4 and 7f, Table 6).**

My own observations of the class over several years and the comments of the teacher suggested that most of the children were more advanced in their spoken language development than in their control over written forms. This is in line with thinking and research over a long period (Vygotsky, 1962; Mallett & Newsome, 1977; Kress, 1982; Beard, 1984; Perera, 1984). The Schools Council Writing Research team suggest two helpful ways of regarding writing tasks: What is the 'function' or purpose of a particular writing task and for what kind of 'audience' is it written (Britton et al, 1975).

While the main focus of this classroom example is children's reading and children's talking and listening I wanted them to organize some of their developing ideas in

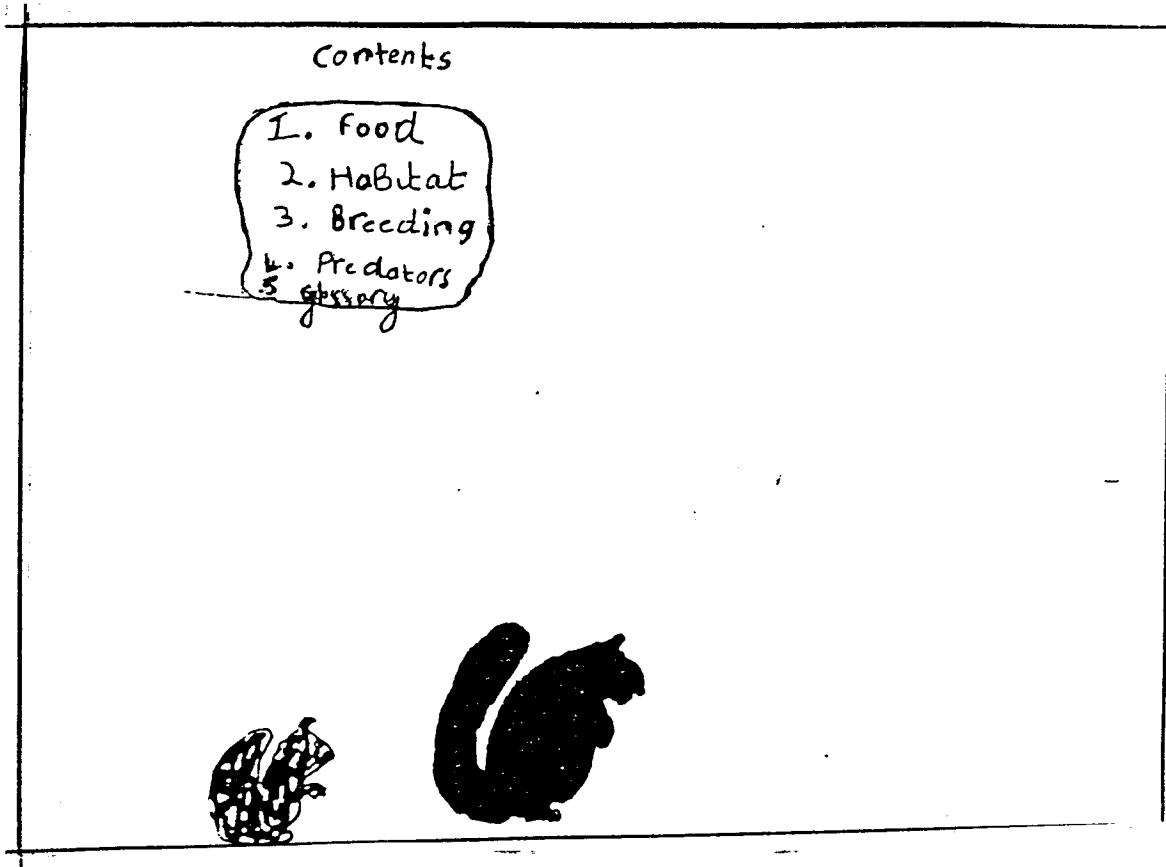


writing. Further, the four language processes are mutually supportive. Early in the project I suggested the children should each make an information book for the 7 year olds in the school. Nearly all the writing the children did was in connection with this task. There was a task to do with 'A day in a squirrel's life': this is discussed in detail in Chapter 9. It was chosen for the following reasons. It gave the children a strong sense of audience for their writing, and a related sense of purpose. An important effect of this was that they were encouraged to use information from the books and mediate it for their young audience : thus their reading and research was fitted to their own agenda. A framework for essentially active reading was created.

In line with Pappas' work I decided to invite the children to make their own Contents Lists for the books so that they focussed on the global organisation (Pappas, 1986; see this study Chapter 5).

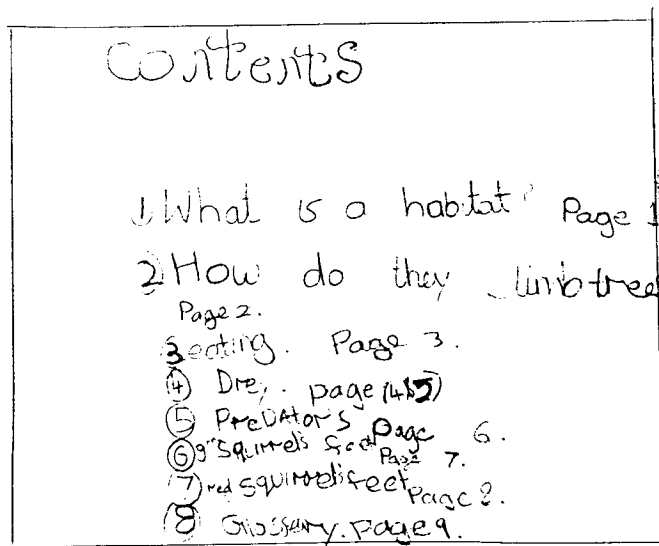
Making lists is one of the earliest forms of non-narrative writing children appear to acquire. Barrs suggests lists can help organize a young learner's thinking and experience (1987). I suggested they first made a list of all the elements they wanted to include, and then made another list when they had decided on the order in which the topics were best presented. I found some of the children wanted to stay with their first drafts even if there was no logical order in their listing of topics and sub topics. Some contents pages were like Greg's, (Table 14) extremely succinct.

Table 14. Greg's Contents Page.



Others like Maria's (see Table 15) incorporated some of the questions which had begun their book research.<sup>4</sup>

Table 15. Maria's Contents Page.



I asked her about items six and seven and she told me she had liked the diagrams in one of the books and used them. (P. 19 A. Reuscher 1979). She has not yet managed to subsume this kind of detail under a more general heading, for example 'some differences between grey and red squirrels': this indicates the stage her thinking has reached, and the kind of problem she might have with hierarchically organised material in some non-narrative writing and reading.

Many of the children are, like Maria, in a transitional stage. While some of their headings have the status of a section others are too specific. Wendy, for example, has sections on 'what they eat', 'dreys' and 'litters', but she also has a section on 'when do squirrels mate?' which could have been included with 'litters'. This same mixture of general and more specific items appears in Rakhee's contents page too. (Table 16).

Table 16. Rakhee's Contents Page.

1.	Drey
2	Food they eat
3.	where they come from?
4	enemy
5.	starting a family
6.	Teeth.
7	What colour they are
8	CLAWS.
9	Cruelty to squirrels.
10	Why fed squirrels are disappearing.
11.	questions.
12	story.

'Teeth and Claws' could perhaps have been combined into a more general section looking at the relationship between structure and function. In fact Rakhee is well aware that the purpose of teeth and claws is related to their structure as is evident from her written account:-

'The squirrel's teeth always grow because when they eat the nuts bits of their teeth break off and if the teeth did not grow all the time they would not be able to eat their nuts and berries. Their front teeth are most important because they have to gnaw the nut and split it open. They have two big teeth at the front and two big teeth at the bottom. They gnaw the nut from the end of the teeth.'

The syntax reveals that this is her own account - a genuine attempt to make sense of the nut-gnawing process. It is a clear description which would help the younger children for whom her book is intended understand.

However, like the other children, Rakhee seemed to find it difficult to organize globally: making a contents page which followed the usual conventions along the lines of Christine Pappas' outline for example (See Chapter 5) seemed beyond her present capacity.

Teachers have a dilemma here, on the one hand we are always eager to move pupils forward and help them improve their work, on the other hand we know it is dispiriting for a young learner to get the impression that what they have done is unsatisfactory, particularly if it is the best they can manage at a point in time. This study raises the question of how children learn about the larger structures of particular texts. The

Australian genre theorists, for example Kress, 1982, have drawn attention to a text's global structure.

I wanted the children to feel the information books were the result of their choices and researches. While I made comments and suggestions constructively, for example, mentioning to Wendy that mating and litters go together, I left the final choice to the children. Others, for example Barrs, 1990, caution against a mechanistic approach. Further experience of how information books are organized, and just becoming more intellectually mature, would make the kind of global thinking and planning involved in preparing a book develop. Planning this simple first information book is thus a beginning to a long term process.

#### **8.5 Awareness of 'audience'. (Factor 5, Table 6).**

Because most of the session began and ended with a whole class discussion the children came to perceive myself and each other as the primary audience for their findings and reflections. The class teacher sometimes joined the discussion and on those occasions his questions were genuine requests for information. (See 8.7 for discussion of oral work).

However the children had in mind another audience - the younger children who were to be the recipients of the squirrel books. They had been consulting the children informally at lunchtime and breaks about what sort of books they would like.

This had a considerable effect on the children's writing and in a sense made them mediators between the texts they were using and the material they were producing for the seven year olds. They were impressively aware of motivational factors and were particularly eager to include a great number of illustrations and some quizzes and ingenious games on the lines of 'Find the Acorns' or 'Count the Squirrels'. Further material was used to make the squirrel pictures attractive and little doors opened in trees to reveal winter and summer dreys. However extended written accounts on the different sections were infrequent. In spite of nudging most children made picture books with short written accounts. The written response is evaluated in Chapter 9, Section 2.

The final reading and paraphrasing of their books for the younger children during the final session was accompanied by much enthusiasm.

#### **8.6 The Texts and Resources. (Factor 7, Table 6).**

As Table 17 Appendix 14 shows there were ten different books provided for the children's research. The use of school, college and public libraries meant some were available in duplicate, even triplicate. The following resources were also provided: **Sciurus: The Story of a Grey Squirrel** used for reading out to the whole class; a World Wildlife wall chart on **The Grey Squirrel**; a Jackdaw folder with photographs and a magazine article from *Country Life*; two wildlife videos **Squirrel on my shoulder** and **The Case of the Vanishing Squirrel**. The latter was made by a parent from a television programme and shown to the children towards the end of the work.

### 8.6.1 Criteria for Choosing. (Factor 7a, Table 6).

Ideally all the books offered would be good of their kind, embodying the desirable features set out in Chapters 3 and 5. Publishers have taken note of what teachers and review writers have suggested and many non-fiction texts are now useful and inviting. However economic factors prohibit discarding all texts which fail to meet the highest standards. Even if money were available books on all possible primary school topics meeting standards of excellence on all criteria do not exist. In this study books were included in spite of some deficiencies, if some good features were evident: for example, useful illustrations or lively text suitable for a particular reading level within the class. Thus Coldrey's **Grey Squirrels** was included in spite of the absence of retrieval devices because the photographs were so inviting. **The Squirrel in the Trees** also by Coldrey, provided a text suitable for the abler readers in spite of lacking a contents page.

Becoming a critical reader involves a developing understanding of strengths and weaknesses in particular texts. Older juniors are becoming able to see that some of the available books do their job better than others. This developing ability was exploited in this study (See Appendix 2, transcript 7).

As Table 17 shows two of the texts were simple accounts in narrative form: **The Squirrel** by Angela Shehan and **The Squirrel** by Propper. In chapter 4 it is argued that information provided in narrative form is accessible to younger readers, and older readers just breaking through to independent reading. Butterworth's **Squirrels**,

Davies' *Discovering Squirrels* and Bomford's *Squirrels* are typical of transitional genres which help familiarise children with non-narrative text while retaining some of the rhythms of conversation. The text in Coldrey's *Grey Squirrels* and *Squirrel in the Tree* and Tittensor's *The Red Squirrel* was close to mature non-narrative. Pappas' essential defining features of information books are present in all of these: topic presentation, description of attributes, characteristic events. Whitlock's *Squirrels* and Holm's *Squirrels* are more challenging in the complexity of the text than the other books. However in both cases the writing was lively and inviting. The evidence and argument in Part 2, Chapters 3-5, helps illuminate research question 2 - what do teachers need to know about Non-Fiction texts? This kind of knowledge and understanding informs both a teacher's selection criteria and how he or she involves the children with the different kinds of text.

### **8.7 The role of talk in assimilating new ideas. (Factor 6, Table 6).**

Spoken language has been recognised in the last few decades as a powerful potential agent for learning. (Vygotsky, 1962; Britton, 1970; Barnes, Britton & Rosen, 1969; Barnes and Todd, 1975; Bullock Report, 1975; *English 5-16*, 1988, 1989). This classroom example is based on the assumption that talk with the teacher as enabling adult, and collaborative talk with the peer group, can provide a useful mediation between children and their reading. In this study there are two main roles for talk. First as a means of assimilating information and ideas from books. Second in its expression as a metalanguage to refer to the actual features of particular books and their relative merits when compared with one another. Cambourne refers to this



ability as metatextual awareness. (Cambourne, 1988). The second function of talk is examined in Chapter 9, The first is considered here.

### **Talk to assimilate information and ideas from books.**

It is helpful at this point to list the ways in which talk was important in the work.

#### **1. Pre-reading activities:**

- i) Teacher and the whole class talked together in the discussion area about prior knowledge of the topic, squirrels. 'Spontaneous concepts' were made explicit. (See Appendix 2, Transcript 1.)
- ii) Children formulated orally, with the teacher's help, questions to take to the secondary sources, before writing out personal lists.

#### **2. Mediating between children and books.**

- i) Teacher demonstrates scanning and skimming to whole class and individuals.
- ii) Teacher circulated to help children find answers to their own questions.
- iii) Children and teacher read out loud from books to class in discussion area.
- iv) Children shared findings with the whole class, giving paraphrases from books or working from their notes.
- v) Teacher provided input to support developing understanding of 'scientific' concepts (8.8.1) and of 'key concepts' (8.8.2)

3. Children mediated between their own information books and the younger

audience (8.9). Some of these conversations are presented as vignettes in Appendix 2, Transcript 9.

In numbers 2 and 3 above talk was used mainly to illuminate the new concepts the children were uncovering in the secondary sources.

## **8.8 Concepts.**

Talk contributed to the clarification of both 'scientific' concepts and 'key' concepts. These will be considered in turn.

### **8.8.1 'Scientific' concepts. (Factors 7g, Table 6).**

In Chapter 2 Piaget and Vygotsky's distinction between 'spontaneous' concepts which we tend to acquire in the process of living and 'non-spontaneous' or 'scientific' concepts which are acquired in a school context like the present example is explained. The distinction between the two is not total in this work. In the first discussion some of the children were referring to the squirrel's home as a 'drey'. They had acquired some 'scientific' concepts about squirrels. However, the children's talk revealed an increasing control over the 'scientific' concepts presented in the books they were reading. Table 21 sets out the main 'scientific' concepts arising in the class discussion.

Many of these 'scientific' concepts were made available to the children through our

shared reading out loud from information and reference books.

**Reading out loud from information texts. (7b, 7e and 7b, Table 6).**

Let us draw together the reasons for reading out loud and talking with children about the ideas in information books as a means of illuminating 'scientific' concepts.

First when we attempt something quite difficult, especially if we are a very young learner, we need to feel motivated - to find our task rewarding and enjoyable. Recent thinking suggests that for too long too many of us have favoured individual rather than collaborative learning when all the evidence shows the child to be an essentially social being. (Bruner 1987). By reading out loud from the parts of information books on which they were working children shared their learning and often got some feedback from the other children. I was surprised at how willing even some of the less confident readers were to read from both the books they were using and their own writing.

Secondly once reading out loud was given a value children were eager to volunteer to read their selected parts of the books they were using and this was likely to lead to an increased sense of taking some responsibility for their own learning.

Thirdly, these sessions gave an opportunity for teacher and children to make links between existing knowledge and the new information in the books. Listening to how

a mature reader does this helps move the children forward.

Fourthly, in listening to teacher and abler children reading out loud from books, the less mature readers were exposed to the kind of book language they would not have been able to read for themselves. (Examples of teacher and children reading out loud from books are included in Appendix 2, Transcripts 2, 3, 4, 5 and 6).

Many of the 'scientific' concepts in Table 21 arose in the context of our discussion of 'Key concepts'. These are discussed below.

### **8.8.2 Key concepts. (Factor 7g, Table 6).**

In sustained work of the kind in this study children's preoccupation with certain issues and ideas within the topic often become evident as the teacher circulates among the children. During this project several of what Langer calls 'key concepts' were taken up and explored further in class discussion (Langer, 1981). Four main conceptual themes emerged: the relation of the squirrel's physical structure to function; the squirrel life cycle; squirrels as prey and predators and squirrels' health; the puzzle of the possible role of the grey squirrel in the red squirrel's decline in Britain. Detecting what is of special interest is an important part of the teacher's role since children need to keep up the momentum and involvement in their work. Feeling puzzled about something puts a learner into a state which Piaget terms 'disequilibrium'. (See Chapter 2). The learner then struggles to achieve 'equilibrium' by resolving the puzzle. A short vignette is helpful in illuminating this.

Andrew found it difficult to become engaged in his book research. He was not a confident reader and tended to look only at the illustrations in the books and resources. I had observed over the time I had worked with Andrew that his concentration span was short. The breakthrough came when Andrew came across a photograph of a squirrel suffering from mange in Coldrey's **The Grey Squirrel**. (Coldrey 1982). He asked me to read the text below the illustration out loud. 'This squirrel is suffering from mange, a disease which causes the skin to scab and the hair to fall out' (P.31 Coldrey, 1982). Andrew began to ask questions, for example he wanted to know if the squirrel would die and if 'mange' was passed on from squirrel to squirrel. (Appendix 2, Transcript 6, conversation 1).

Andrew's interest in the condition of the squirrels with mange related to the key concept about prey, predators and health. He shared this in class discussion and I helped him show the photograph and the writing underneath.

Another illuminating vignette occurred in connection with our work on the 'key' concept about the relationship between red and grey squirrels. Here is Tara reading to the whole class from Coldrey's **The Grey Squirrel** in the context of our discussion about the relationship between red and grey squirrels. 'The grey squirrel is less prone to disease'. Earlier I had asked Tara what she thought this meant and she suggested that 'The grey ones might catch it but it don't harm them much, but the red ones die if they catch the disease'. Perhaps Tara has not quite got the idea that 'not being prone' means grey squirrels probably will not get ill at all. Nevertheless she comes close and if a context is strong enough children can often be helped to understand

quite challenging book language. (Appendix 2, Transcript 4, utterances 86-89).

The next section examines the role of talk in the sharing of the children's own information books with a younger audience.

### **8.9 Sharing their knowledge with younger children. (Factor b, 7f, Table 6).**

The children perceived each other as an interested and participant audience for sharing new ideas and information since this was built, as section 2 of this chapter makes clear, into the structure of each working session. Their work was also affected by the knowledge that the seven year olds, whom they had consulted informally, would be the readers of their books. The evidence for this stems from the frequent comments children made to each other, to me and the class teacher about their task. Here is a vignette which was typical. I remarked to Tara 'I can see as you write you are trying to make the book interesting for the younger ones'. Tara replied, 'Yes, and pictures. You could have a squirrel saying "Where's my nut?"... then you could have a flap in the page - lift it up and there could be the nuts and fruits squirrels eat!' (See Transcript 4 in Appendix 2, utterances 75 and 76).

Overhearing us Ben remarked that it was best to draw a squirrel 'doing something' in the pictures in the books for the younger ones since 'pictures can tell you a lot about the creatures' looks and habits'. 'And habitats', added Greg.

Other children designed puzzles like 'Hunt the acorn', and drew dreys which opened

to show baby squirrels. Most of the children had to be nudged into writing full accounts of all the topics in their contents pages. They could nearly all talk in an articulate way about what they had read, discussed and seen on the video, but many would have made picture books with little writing if this had been acceptable. This was the case with Andrew, Jack and Peter. Lee's book did not emerge at all because of his absences, special work with the class teacher some afternoons, and his lack of identification with the purposes of the work. He had a few fragments, questions, drawings and minimal accounts in his desk. Maria confided to me at the end of the project that what she had enjoyed most was: 'When you brought in those materials for us to use for our books and Tara and me found some grey fur and cut it out to give our squirrels beautiful real fur tails'. When pressed Maria and Tara had gained satisfaction from learning about squirrels' feeding, life cycle and so on, and had written some accounts.

I felt uneasy when some children appeared to have done little more than a few labelled drawings in an afternoon. It was the learning though collaboration and talk, which was successful rather than the writing (see Chapter 9).

However the afternoon on which the books were read to the younger children revealed that much had been learnt from the project and the secondary sources. Each 10 year old read his or her book to a 7 year old and then swapped for another audience. Some children read to two younger children. The teacher of the 7 year old class was impressed by the mature way in which the older children took the younger ones to the library, corridor and the two classrooms to enjoy the books together and with the

quality of their explanations.

It was possible only to tape record some of the children's conversation as they read their books. I particularly concentrated on Rakhee, Greg and Andrew as representatives in the three reading levels in the Class. My notes made that afternoon stress the 'genuine enjoyment' the children showed without exception, and the ability of the older children to take up a 'teaching' role: 'the ten year olds read out loud from their books, pausing to explain vocabulary they thought the seven year olds might not understand, even from the context'. Maria explained to her audience that a 'light hibernator' was a creature that slowed down in the winter months, sleeping more frequently but waking up to find food from time to time.' (Research notebook 3)

Andrew was heard reading out his list of 'squirrels' best foods' to his audience, and raising the question of whether squirrels really do 'eat birds eggs'.

Rakhee read out her list of fifteen questions and the answers she had found. She also explained carefully how the structure of the squirrel's teeth was closely related to the gnawing function.

The following vignette giving a picture of Gregory reading to Wayne and Michael is a typical example of the older children's efforts to communicate with skill and sensitivity what the younger children are likely to need explained.

Gregory: that's a drey (pointing to his drawing). Do you know what a drey is?...it is



a kind of nest squirrels have.

Now there's two kinds of drey, a winter one and a summer one. The summer drey is out on the branches, cooler, the winter drey is closer to the tree trunk...so they don't get cold.

Now (turning page) there are two kinds of squirrel here, the red squirrel and the grey squirrel. The red squirrels are disappearing because they cannot get enough food....(pointing to his pictures) that is a red squirrel and that is a grey one. Now can you tell me the difference?

Michael: (Looking at Gregory's drawings) Well that one has pointed ears (indicating the drawing of the red squirrel).

Gregory: Yes that one has pointed ears and that one there has rounded ears (pointing to the picture of the grey squirrel). 'The grey squirrel is more vicious than the red squirrel. And red squirrels have more predators!' (reading from his book). (Next utterance not clear on tape recording. We take up the conversation again as Gregory explains to Michael and Wayne what a predator is).

Gregory: Well, if I was a squirrel, and a lot of animals are after me - right? - they are predators. Like an owl or snake is to a mouse. What do you think the squirrel's predators are?

Wayne: A fox?

Gregory: Yes, and hawks.

Michael: How high do they climb?

Gregory: Well, to the top of an oak tree.

(See also Appendix 2, Transcript 9).

The main benefits of writing for a particular audience are as follows:

Firstly it gave the children's writing and illustrating a purpose they could understand and feel some interest in.

Secondly it encouraged them to focus on how to communicate what they had been learning in an accessible way. They had already explained their research orally to the whole class and to me. Now they needed to reformulate the material both in writing and in explaining that writing to a younger audience who had not been involved in the other learning experiences. This was partly a matter of getting their own thinking organized and partly a metalingual task in communicating what they knew in language accessible to younger children.

Thirdly it indicated to me as the teacher some of the things the children had learnt about book language. This was evident in the way they organized their oral explanations. For example, while Greg's written accounts are satisfactory but unremarkable, the conversation quoted above reveals a growing understanding of how information is organized in a non-fiction text. 'Now there's two kinds of drey' is followed by some identifying features of the summer drey which is 'out on the branches, cooler' and the winter drey which is 'closer to the tree trunk...so they don't get cold'. This is followed by an invitation to his young audience to attempt some 'Category Comparison' (Optional element of children's Information Books, Pappas, 1986) 'There are two kinds of squirrel here, the red squirrel and the grey squirrel' and, pointing to his illustrations, 'How can you tell the difference?' Greg has left his written text to involve his young audience conversationally, but returns to reading out loud

from his book about predators. Not only has he become a skillful mediator between his own text and the young audience, he has also taken up the role of 'expert' on certain aspects of squirrel behaviour. He and a number of the other children have, on the evidence of these vignettes, made progress in becoming reflective readers of non-fiction.

### **Summary**

This Chapter has described the sequence of activities as the "Squirrel" project progressed. Description and evaluation have been integrated in line with the conventions of action research. The seven factors for developing promising strategies for reading non-fiction are all built into the planning of the work, together with the seven elements of the teacher's role arrived at in Chapter 6 and set out in Table 6. Some evidence of successful learning and of enthusiasm is evident in the children's talk and activities. The vignette of Greg's conversation with younger readers indicates an increasing understanding of how non-fiction text works.

In Chapter 9 the evidence that the children made progress in becoming reflective readers, able to evaluate the books they were using, is assessed.

## CHAPTER NINE.

### Becoming reflective readers: an evaluation of some factors associated with success.

#### Introduction.

This work began with four questions, firstly about how reading relates to learning, secondly and thirdly about what teachers and what children need to know about non-fiction texts, and fourthly about what might be helpful factors and strategies to support young readers of non-fiction.

We have considered the classroom study in Chapter 8 and in this chapter I will return to the evidence more critically and reflectively.

In brief, children's talk showed evidence of reflection on material being learned and developing insight about both metatextual awareness and discrimination between texts.<sup>1</sup> The role of writing proved more problematic. However, while it showed evidence of some difficulty with non-fiction genre it also confirmed the value of children learning to make their own non-fiction books.

In the first part of the chapter that follows, in 9.1 and 9.2, these insights about talking and writing are set out in more detail, while in the later part of the chapter two axes of evaluative comment about the project as a whole are pursued. These are, first the

success of the classroom work from a pedagogic point of view, and second as an example of action research. Thus in 9.3 I analyze the success of this example as a piece of classroom practice, adopting in this the role of the teacher making a series of judgements in developing tasks for children. I examine in detail what is a crucial aspect of the fourth question: what aspects of the teacher's role in formulating strategies for reading are most helpful?

Finally, in the Conclusion to the study, I return to my four questions and reconsider them in light of the whole work.

### **9.1 Learning through talk.**

The central role of talk in learning has been recognized for the last two decades in Britain. (Barnes, Britton and Rosen, 1969; Bullock Report, 1975; Barnes and Todd, 1976; Barnes, 1976; Britton, 1970; Torbe and Medway, 1981). Interest in talking to learn is evident also in other countries in for example the work of Cambourne in Australia, 1988, Carson in New Zealand, 1988, and Goodman, 1987 in North America. This considerable body of work has informed the argument in Chapter 6 and Chapter 8, and in the form of 'Collaboration and Sharing' becomes Factor 4 and relates also to Factor 7b, 7c, 7d and 7g of Table 6 which presents a framework for non-fiction reading.

A recent addition to this work is **Thinking Voices** which celebrates the work of the National Oracy Project in England. (Norman, 1992). The great strength of the

National Oracy Project is its grounding in the practice of a large number of classroom teachers.<sup>2</sup> The approach can be described as action inquiry since it is dynamic, involving the changing of teaching and learning in the light of new findings. Working collaboratively teachers and others constantly share and refine research questions. The present classroom example is entirely compatible with this approach, and is not offered as perfect practice, but as work in development that raises questions. The focus of this study is on talk about texts, and while both teacher and children often **struggled** to 'make sense' together, the case is made for the potentially powerful role of talk to illuminate this kind of reading.

The analysis of the role of spoken language, teacher's and children's permeates the whole chapter, but is concentrated on most intensely in this section. Discussion falls into two main parts. First I examine how teacher and children make sense of the **content** of the books, how they reflect on the ideas and information. Second the focus shifts to efforts to orient children's thinking towards features of the texts as genres. The children were helped to make explicit some of their tacit knowledge about information books.

Discussion frequently moves from talk about information to what Cambourne terms 'metatextual' talk about features of the books, (Cambourne, 1988), but in the interests of clarity each is considered in turn.

### 9.1.1 Talk to reflect on information and ideas in books.

In this classroom example the emphasis is on discourse as a way of teacher and pupils interacting to make sense of the information in texts. This involves the teacher in helping pupils use the appropriate form of discourse for the topic under study. It is not just a matter of helping children to receive the knowledge imparted by the texts.

This transmission model of learning has been rejected in favour of one in which the learner actively constructs knowledge and meaning. However the teacher takes up an important 'scaffolding' role in encouraging the children to think about what they are reading. The body of transcript material in Appendix 2 provides evidence of the 'sustained exploratory discussion' which helped bring about more developed thinking in the children. (Latham, 1992, p. 261.)<sup>3</sup>

It is this 'dialogic' approach that brings together helpfully Bruner's powerful 'scaffolding' metaphor and Vygotsky's notion of the 'zone of proximal development' explored in Chapter 2 of this study.

Thus we have a model of the teacher as participating member of the conversational group, and at the same time taking up a diagnostic role in terms of response to pupils' needs evidenced in their discourse.

However some tension in the theoretical model which is often described as 'social constructivist' that is to do with young learners actively constructing their knowledge and understanding is reflected in parts of the classroom example.<sup>4</sup>

On the one hand the teacher is in the role of initiator of pupils into the culture. Now that the National Curriculum is in place quite specific content and ways of thinking about it are required. However, the teacher's role has always been partly to do with putting across what is valued in the culture and particularly ways of thinking, talking and writing about the different discourses associated with academic subjects.

On the other hand too great an emphasis here might lead to a relatively controlling discourse genre in which it is nearly always the teacher who decides how meaning should be made. Discourse analysts, for example Flanders, maintain the prevalence in classrooms of the 'three phase' question structure - teacher's initiating question, pupil's response and teacher feedback: commenting on, reformulating or extending what pupils have said. (Flanders, 1970; Wells, 1992). This pattern of discourse is quite an effective way of helping pupils shape their thinking and understanding so that teacher's knowledge becomes 'common knowledge' and accessible to the pupils (Edwards and Mercer, 1987; Mercer, 1992; Wells, 1992).

A series of 'vignettes' from the classroom example help reveal the different contexts in which discussions took place.

In Vignette I the teacher tries to lead the children through how a particular creature like a squirrel is placed in a conventional hierarchy of classes.



Vignette 1, whole class, Session 2.

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'... and when I asked you what you wanted to find out about squirrels that you don't already know some of you asked about their teeth, why do they have such sharp teeth, and some of you remembered the squirrel on the video biting the man because the teeth are so sharp. I wonder if any of you have thought about why squirrels have these very sharp teeth ... Yes?

Michael. They are to bite their nuts.

T.R. Yes they need these very sharp teeth to cope with the nuts and the plants that they eat.

Pupil. They have to be sharp because they have to get through the shell of the nut.

T.R. Yes. Now this leads to something else very interesting. (Conversation leads to placing of squirrels in the broad category of mammals)

T.R. But as well as being in the large group of mammals they are also in a smaller group of mammals.

Ben. Rodents, they're called rodents.

T.R. Yes rodents, well done Ben. And we know a creature is a rodent partly by its teeth.

(Children are now invited to name other rodents and to look at pictures of rodent teeth, Transcript 2, Appendix 2)

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Here the teacher is inviting answers, but the questions are to some extent 'display'

questions since the children are being invited to show what they have learnt from the video.

Quite a lot of the class discussion was of this kind. The transcripts in Appendix 2 show the teacher making links with the video, with children's questions and with pictures in books to help children towards acquiring key terminology and ways of organizing experience. Part of acquiring control over a genre is to know the key terminology (Barnes, 1992). In the long transcript from which the example above comes the teacher defines **habitat**, **drey**, **vegetarian**, **fungi**, **mammal** and **rodent** in an attempt to secure some of the new terms mentioned by the narrator in the video film.

However, as Wells argues, there is a middle position between extreme transmission and extreme social constructivism models.

'As important as teacher input ... is the opportunity for pupils to pose their own problems, either individually or in collaboration with their peers, and to ask questions to which they themselves wish to find the answers. (Wells, 1992 p.297)

Later in the same <sup>conversation</sup> Peter asks a question and he and Andrew insist on having it answered.

T.R. (reading from an information book to the whole class) 'During the winter grey squirrels would eat mushrooms.' - did you know they ate mushrooms and other fungi? But there is not much goodness in fungi Peter?

Peter. How do they know if they are toadstools or mushrooms?

T.R. That's an interesting question. You've probably heard of people who've eaten toadstools and been poisoned. Anyone know about how squirrels might know?

Tara. They might smell different. Mushrooms smell different.

T.R. Yes - and animals have often got a better sense of smell than humans and they would know what was poisonous.

Andrew. But what if they did eat them and got poisoned with toadstools. They might die.

T.R. Yes, but Peter and Tara have just been saying that animals have a very sensitive sense of smell and this helps them to sniff a fungus and decide whether to eat it or not.

---

Here, while in the last resort the teacher still evaluates children's solutions, the question is more evenly negotiated between pupils and teacher. This is an example of children trying to **reflect** as the teacher pauses in the reading of the information book.

This kind of reflection on book information is a struggle for many children in the

junior years. It is not a natural ability, but acquired through the teacher's demonstration and by suggesting links and relating book knowledge to what interests the children. Transcripts 2-8, in Appendix 2, provide evidence of my efforts as Teacher Researcher to build these bridges. In Vignette 2 the teacher<sup>5</sup> uses Ben and Stuart's interest in flying squirrels as a way of encouraging them to explain about the patagium clearly.

### **Vignette 2**

Ben, Stuart and Wendy are in a small group with the teacher. Ben has read out loud the following passage from Coldrey's **The Squirrel in the Trees**.

'Flying squirrels are found in parts of Asia, Europe and America. These animals have two flaps of furry skin stretching between their front and back legs. These flaps open out like a parachute when the squirrel jumps, allowing it to glide from tree to tree...'

The teacher invites Ben to reformulate what the book says:

'Ben one of your questions was 'how do flying squirrels fly? Does that explanation tell you clearly? Can you tell us then, what it is about the flying squirrel that enables it to fly?'

Ben responds with a conventional sort of response to a teacher question:

'... the special skin under their arms and legs.'

Stuart is prepared to expand in response to the teacher's request for more detail.

'The special skin stretches flat and their tail as well - and that helps them with the steering. It would swivel its tail'.

The next teacher question : 'So the special flaps of skin open?' seems to encourage Stuart to respond as an expert, as someone who has been reading a bit more about the topic. He replies 'Only when it is flying ... if it is heading for a branch - then with its tail it swivels round the branch and lands.'

Pressed further about the function of the flaps Ben uses the metaphor in the passage reminding us that the flaps open out like a parachute.

Ben has been searching for a picture in the same book, and the teacher's comment emphasises the feeling of collaborative exploration with : 'Those parachute things are quite large aren't they? They must look quite a sight flying through the air!' (Transcript 7, Appendix 2, utterances 27-35).

While trying to make this small group discussion as much like a conversation as possible, the teacher helps the children extend their reflection.

### **Vignette 3**

Later the same three children are looking at an illustration of a flying squirrel (p.17 in *Discovering Squirrels*, Davies)

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Teacher-researcher. I wonder why that is a drawing while all the other illustrations are photographs?

Stuart. It can show you more clearly in a drawing ... like those special bits of skin for flying.

Teacher-researcher. So the purpose of that illustration was to show the parachute flaps and how they open in flight, and you are saying it is made clearer in this drawing?

---

The focus here is first on metatextual features - the author/illustrator team have chosen to use a drawing for a special reason - to **communicate** a piece of information as clearly as possible. But a second focus is on **understanding** the information. You have to know how the flaps of the platagium function before you can recognize that a drawing might communicate more than the photograph. We can see the conversation above, in terms of the traditional teacher initiation, pupil response and teacher feedback pattern. But this does not get us very far. More interesting is the teacher's 'I wonder why'? question which tries to encourage a feeling of a conversation between equals. This can never be the case completely when a member of the group has a special status because of maturity, role or knowledge. It does seem to make possible a thoughtful response from Stuart which is then confirmed and extended by the teacher.

Of course the degree to which children are confident enough to raise their own problems in their own way depends on the context. In Vignette 4 Stephen and Mark are telling the teacher about the video film on Jessica Holm's work brought in by Tara and which the teacher has not seen. Thus teacher questions had to be genuine!

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#### **Vignette 4.**

T-R So they are more nocturnal than the grey ones?

Stephen. Yes ... and Mrs M, when there is not a lot of food the grey ones get it all.

Mark. Her dog didn't do nothing - just sat there.

#### **Vignette 5.**

Greg reads and talks through his writing with two 7 year olds. (Conversation 1, Transcript 9, Appendix 2.)

Greg. Now (turning the page in his own book) there are two kinds of squirrel here, the red squirrel and the grey squirrel. The red squirrels are disappearing because they cannot get enough food.

That is a red squirrel and that is a grey squirrel (pointing to his picture). Now can you tell me the difference?

Greg's ability to use his own knowledge to share with a younger audience is partly to do with the power of the context created with what Jenny Des-Fountain terms the 'task design'. (Des-Fountain, Jackson, Loader and Williams, 1992, p.49). Greg's way of anticipating and explaining what the 7 year olds need to know is partly to do with what he has taken from the approach in the project and partly to do with being put in the role of the expert.

### Summary.

- o this section gives examples of the range of talk contexts typical of this classroom study. The 'task design' of the context affects the way in which teacher and children contribute to the conversation.
  
- o the traditional class discussion puts the teacher in a central position. This context has a place in making it possible for the children to take over knowledge valued by the culture and to learn how a mature reader and language user thinks and reflects.
  
- o the small group context, even where the teacher is a member of the group, allows children to think through and share their ideas.



### 9.1.2 Metatextual talk.

There is growing recognition that certain kinds of **knowledge** about language are linked with children's increasing ability to control their language **use**, particularly in reading and writing. (Donaldson, 1978; Cambourne, 1988; Cox reports, 1988, 1989; Carter, 1990; Norman, 1992). The developing ability to make conscious and talk about language processes and knowledge is sometimes referred to as 'metalinguistic awareness'. (Cazden, 1974; Mercer, 1992). Margaret Donaldson views this as part of a child's more general cognitive development. Gradually, instead of trying to achieve goals purely by actions, the child becomes able to reflect on a possible set of actions before performing them.

'This latter activity - the planning kind - involves the temporary suspension of overt action and a turning of attention inwards upon mental acts instead. Developmentally, the course of events is from an awareness of what is without to an awareness of what is within'. (Donaldson, 1978, p.87)

This development takes place in linguistic skills since children acquire these skills before they become conscious of them. Children's awareness of what they talk about, the thing to which language refers (as the previous sections shows) takes precedence over their awareness of what they talk with, the words, phrases and sentences.

'... the normal child comes to school with well-established skills as a thinker. But his thinking is directed outwards on to the real, meaningful, shifting,

distracting world. What is going to be required for our success in our educational system is that he should turn language and thought upon themselves. He must become able to direct his own thought processes in a thoughtful manner. He must become able not just to talk but to choose what he will say, not just to interpret but to weigh possible interpretations. His conceptual system must expand in the direction of increasing ability to represent itself. He must become capable of manipulating symbols' (Donaldson, 1978, p.89)

It is particularly in contexts where children are required to read and to write that this kind of reflection is encouraged. But it is talk about both the task itself (metalinguage), about thinking (metacognition) and about texts (metatextual) that is the agent of making language and thinking processes conscious and explicit.

An examination of the considerable amount of transcript material, arising from tape recordings made throughout the work, reveals that teacher and children swing easily from talking about the information and ideas in the books to talk about the features of the texts. On the whole the children talk spontaneously about the content but need the teacher's encouragement to make explicit their tacit knowledge about features of the particular texts. The kind of discussion I term 'metatextual' (after Cambourne, 1988), can be organized under the following headings: making explicit certain understanding about features of non-fiction books; comparisons between particular information books; talk about options open to them as writers of information books. There is much interrelationship between what is gathered under each heading, but it

is helpful to examine each in turn.

### **Making explicit certain understandings about features of non-fiction books.**

Within the general category of children's non-fiction are a collection of different forms of writing. Chapters 3-5 examine the features of some of these different forms. The following conversation between Wendy, Ben, Stuart and myself reveals the stage of thinking about these forms the children have reached. Stuart has just been invited to read the beginning of *Scuirus: The Story of a Grey Squirrel* by Jan Taylor starting:

'Scuirus woke up with a start; something strange had given him a fright. He knew very little of the world as he was only 32 days old...'

This follows discussion about some conventional non-narrative information books.

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#### **Vignette 6.**

T-R. Just pause, Stuart, do any of you see any difference between what Stuart is reading and the other books you have looked at?

All. This one is a story.

Wendy & Ben. An information story

T-R. Can you say anything else about how they are different? Is one easier than the other?

Ben. You could use these (pointing to the information books) if you were doing a topic - and the story if you wanted a break and you were interested in squirrels.

- Wendy. Those ones give more information. (pointing to conventional informational books).
- T-R. You think the information books tell you more?
- Ben. Well, like professionals have looked at squirrels for the information books, but not for the stories.
- Stuart. Yes, you don't have to be an expert on squirrels to write a story about them.
- T-R. Well, let's just see about the author. Wendy?
- Wendy. (reading from cover of **Scirus**) 'Jan Taylor has always been interested in natural history...'
- T-R. So the author is an expert. Do you think you can learn from stories?
- Wendy. Yes.
- T-R. Would you ever have a contents page for a **Scirus** type book?
- Wendy. No
- Ben. You could have one - there is chapters written near the front. (See transcript 7, Appendix 2).

Although the children understand **Scirus** is a special kind of story - they actually say it is an 'information' story - they seem still to think of books as belonging to two categories. First there are books to entertain - to turn to, as Ben suggests, if you wanted a break from the real learning. You do not, thought the children, need to be an expert or squirrels to write **Scirus**. It is the conventional information books that are written by experts. The irony is that many children's information books are not

written by experts (Meek, 1977; Arnold, 1992). Jan Taylor, on the other hand, writes his information narrative from years of careful observation of squirrels. He makes explicit the sound underpinnings of his writing in a short introduction to the reader. While the information narrative seems, with its time sequence organization, a sympathetic form for young readers and listeners it may be that the narrower content appropriate makes it a difficult form to define and to write in. The difficulty of some of the children in controlling this form as writers seems support for this view (see section 2 in this chapter).

With some encouragement from me the three children - Ben, Wendy and Stuart - were able to make explicit their understanding of certain features of conventional non narrative information books.

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#### **Vignette 7.**

T-R. What would you say is the difference between an index and a glossary?

Ben. In the index or contents page you would just find something like 'baby squirrels' but in the glossary it gives meanings

T-R. '...and the index is in alphabetical order isn't it? whereas the contents page is according to ...

Wendy. - the topic.

(Appendix 2. Transcript 7)

Ben applies this developing knowledge in his own information book by including a four-item glossary. (See Appendix 3, writing example a.)

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**Summary of what children seem to know about non-fiction genre.**

- o Some of the children are beginning to recognise that one kind of non-fiction is in story form while other kinds are not. They are not yet able to see it is a matter of similar information being organized differently.
  
- o Nearly all of the children, to some extent at least as a result of this work, know that conventional information books have certain features including retrieval devices and expert information that helps you research topics.
  
- o That primary purpose of conventional non fiction is to inform.

**Comparisons between particular information books.**

Part of becoming a critical reader is knowing some books do the job better than others, or at least, are more helpful for some aspect of the task. In the conversation with three children that follows the teacher invites a comparison between two books:

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**Vignette 8.**

T-R. Now having looked at the Butterworth book, how would you say this one

(Davies' **Discovering Squirrels** ) is different?

Ben. The print is smaller and there is an index and a glossary.

T-R. What sorts of words are in the glossary?

Ben. 'Drey : a squirrel's nest in the trees made out of twigs.'

'Habitat : the natural home of any plant or animal.'

T-R. Suppose someone from a younger class asked you what a glossary is - what would you say?

Ben. It is a list of hard words together with sentences to say what they mean. "Predator : an animal that kills...".

By being helped to make what he understands a glossary to be explicit, Ben makes his concept of it more secure. He has also shared it with Wendy and Stuart. Further it has been made clear that a glossary serves a useful function and affects the quality of a particular book.

The following conversation shows the teacher working with the same group of three children, helping them reflect on the strengths of particular books they have used:

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T-R. So the book's strong points? (*My World of Squirrels* by A. Butterworth.)

Stuart. Good on predators, enemies. You can find out about a squirrel's activities, how they jump ... what their predators are. The pictures are photographs and they are very colourful. (Appendix 2, Transcript 7).

T-R. What about the writing - any difficult words or ideas?

---

Children tend to comment on content and illustrations as Stuart does, rather than on the writing. So the teacher invites the children to think about the writing.

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### **Vignette 9.**

T-R. You were saying, Stuart, that the book is strong on predators. Does the book tell you what a predator is? I know you all know but younger children might not.

Stuart. Predators are things that hunt and hurt you. (Stuart provides this definition from other reading as no definition of 'predator' is included in this book)

T-R. Suppose a child read the word 'predator' for the first time, would they have any way of knowing what it probably meant?

Stuart. The pictures would help (reads from text near picture) 'The squirrel keeps a sharp look out for danger. This hawk is hungry ... the squirrel sees the hawk and quickly makes her way up the tree.'

---

Stuart is coming to understand that in a successful book pictures and text are mutually supportive. Pictures are part of the context which help us understand new terms.

Control over a genre implies the ability to have preferences when it comes to choosing particular books. In the following conversation Michael is able to say why he likes Jessica Holm's *Squirrels* when asked.

---

### **Vignette 10.**

Michael. I liked the humour of it and two bits were really funny. There were four men shooting squirrels.



T-R. Do you like the way the page numbers are encased in squirrel shapes?

Michael. (he has been searching through Holm's book to find a favourite drawing, and spots it on page 39 he reads it from the cartoon-like balloon). Yes, look. 'I've just been posing for a new car sticker. One of a series I'm told. Probably a tame the squirrel campaign.'

---

Michael is beginning to appreciate that even a topic-organized information book can entertain as well as inform. Teachers know that the non narrative information book genre can pose problems for young readers. I wondered how far some of the children, Ben, Wendy and Stuart, could make some of these difficulties explicit.

---

#### Vignette 11.

T-R. What do you think some children might find hard about information books?

Ben. If they have no glossary...

Wendy. Some of the words can be hard.

T-R. If you had some ideas to put across and you are working with an information book, how can you help the reader a bit?

Stuart. Glossaries.

Ben. Pictures.

T-R. Yes or diagrams to help. You were saying the Butterworth book looks as if it is for younger children. What about this one? **Squirrel in the Trees** (pictures by Oxford Scientific).

Stuart. The cover makes it look a harder book.

Ben. Well, yes 'Oxford' and 'Scientific' suggest it is hard.

Wendy. Yes but in this one (**Squirrels** by Butterworth) - the sky is an unlikely blue, and a big squirrel - it looks for younger ones.

---

Perhaps children are not usually invited to make this kind of knowledge explicit. I believe articulating and sharing it makes it more secure.

**Summary of children's knowledge about differences between particular texts.**

- o you can tell by an information book's cover, print size, nature of illustrations, possibly presence or absence of retrieval devices whether it is 'easy' (for young children) or 'hard' (for older children).
- o pictures are cues that can help contextualize new vocabulary and, by implication the better information books do this well.
- o presence of good retrieval devices, where appropriate, is one way of distinguishing a 'good' information book.
- o refinements like putting 'hard' words in bold print throughout the text and gathering them into a glossary at the end are a factor in judging a book's usefulness.
- o the illustrations used are important and there are reasons why drawings,

photographs (colour and black and white) might be preferred for a particular purpose. Illustrations need to relate to the written text.

**Talk about options open to them as writers of information books.**

There seems to be a connection between making pupils' metatextual knowledge explicit and becoming able to make choices in their own reading and writing (Donaldson, 1978; Cambourne, 1988, 1989). Most children need help in making this developing knowledge conscious. In the following vignette, Tara explains to me how she is thinking about the task of making an information book for younger children. She has been using Davies' *Discovering Squirrels* and Bomford's *Squirrels*.

---

**Vignette 12.**

T-R. You are writing about 'dreys' - would you read it to me?

Tara. (reading from her book). 'They build nests out of twigs and leaves. They build their dreys in trees'.

T-R. Did you write that down using what you know about squirrels or did you use a book?

Tara. A bit of both. I knew a bit myself but I wanted to be sure what they made their nest with.

T-R. So you looked in a book to check? Good. Are you thinking about what might make the book interesting for the younger ones?

Tara. Yes - pictures. You could have a squirrel saying 'Where's my nut?' Then you could have a flap in the page, lift it up and there could be the

nuts and foods squirrels eat. (Transcript 4, Appendix 2).

---

Tara clearly understands that an information book is to be used for a writer's own purpose, in this case to confirm and extend existing knowledge. She is impressively aware of the need to interest young readers and suggests a strategy to impart information in an interesting way. Tara carried through her idea of the flap revealing the foods to her information book.

As I circulated while the children were researching for the information books I made field notes on their comments to me, some similar to Tara's, about how certain options open to them as writers and designers of the books would affect the level of enjoyment of their young audience.

- o Rakhee. 'I'm going to include a story at the end for them to enjoy after all the information.'
- o Gregory. 'I'm drawing a winter drey and a summer drey to show them the difference ... and I'll put labels on them.'
- o Ben. 'My glossary puts in all the hard words for them'.
- o Wendy. 'I think she's drawn the wrong kind of squirrels' (referring to a 'disney-like' illustration in someone else's book).

- o Stuart. 'I'm doing a lot of drawings of food with all the headings so they can see what a squirrel eats from the pictures.'
- o Mark. 'I've lost my contents page in my desk'. Tara replies - if you have got your writing you can use it to make another list'.
- o Kim. 'Mrs M, can I put my questions at the front of the book then the children can see if they can answer them?'

**Summary of evidence of children's development in making their options as writers explicit.**

Interestingly, although the children often give the impression that they view the purpose of informational texts as exclusively for informing (see Transcript 4, Appendix 2) and Rakhee's comment above, there are signs that some of them recognise that an information book can be presented in an interesting even humorous way. Michael praises the humour in Holm's *Squirrels* (Transcript 4, Appendix 2) and some of the children's comments on their book making task reveal an awareness that ways have to be found to keep up their interest. Tara suggests a question with the answer in the form of a drawing under a flap.

Holm's *Squirrels* was the only playful book and none of the books we used had questions and flaps revealing information. Thus I conclude the children's response were their original solutions to potential problems in presenting information to young

readers. In some cases they developed their own versions of transitional genre and they could give reasons for their decision.

## **9.2 The children's writing.**

Before turning to the two kinds of writing task introduced in the present study it is helpful to look briefly at current approaches to supporting children's writing in so far as they relate to this work.

### **9.2.1 Background to the approach to the writing tasks.**

During the 1970s, 1980s and 1990s there has been a shift in emphasis from analysing writing products to examining writing processes. What has become known as the 'process movement' investigates the interconnections between thinking, learning and writing'. (Hayes and Flower, 1981, 1989; Schriver, Startman and Carey, 1985; Bereita and Scardamalia, 1981; Scardamalia and Bereita, 1983; Applebee, 1989).

The National Writing Project in Britain has made the work of Moffett, Britton, Graves, and Kress more widely known. (Moffett, 1968; Britton, 1970; Burgess, Britton, Martin & McLeod, 1975; Graves, 1983; Kress, 1984.)

The National Curriculum English Cox reports drew on recent research and thinking about writing, and played a part in bringing process writing into the classroom. (DES,

Nov. 1988; DES, May, 1989.)

In process orientated instruction teachers attempt to intervene in the writing process itself - to teach students what to do when they write.<sup>6</sup>

They are marked by instructional activities intended to help students think through and organize their ideas before writing, and to rethink and revise their initial drafts. Ablebee lists instructional activities typically associated with process approaches as

'brainstorming, journal writing, focus on the students' ideas and experiences, small-group activities, teacher/student conferences, the provision of audiences other than the teacher, emphasis on multiple drafts, postponement of attention to editing skills until the final draft, and elimination or deferment of grading.'

(Applebee, 1989, p. 88.)

Classroom teachers following a process approach to writing tend to divide it into stages: 'conference' about the writing task and other pre-writing activities; drafting; revising and editing.' (Graves, 1983; Applebee, 1989). However different kinds of writing require different processes and process activities are not appropriate for all writing tasks.<sup>7</sup> There are other, possibly more flexible ways of supporting writing drawing on for example Vygotsky's notion of instructional scaffolding, and Gordon Wells' notion of negotiation of meaning between parents and young children. The strengths of a 'scaffolding' approach to supporting children's writing are now summarized, drawing on Applebee's analysis, 1989.

- o any technique useful in providing scaffolding for a particular task is appropriate.
- o this approach allows students to make their own contribution to the activity as it evolves. Such writing activities need to have some real language functions beyond the simple desire to please the teacher.
- o the appropriateness of the writing task needs to be considered. How far does it build on children's knowledge and experience while offering enough challenge to allow for new learning?
- o the learning environment is structured so that children can learn new skills in the context of a meaningful task. The instruction in this context provides appropriate scaffolding.
- o teacher and children can collaborate over the tasks.

Within my own limitation as a practitioner my approach was in line with these principles which can together be described as a 'scaffolding' approach. This released me from what can turn out to be the straight jacket of a 'process' approach in its extreme form. I did not, for example, feel it was appropriate to insist on several drafts of writing from children who managed one draft with some difficulty.

### **9.2.2      Children's written response**

The children carried out two main kinds of writing tasks. First they were invited at an early stage in the work to start planning an information book for the seven year



olds in the school. This writing was expository: writing to describe, inform and sometimes to persuade.

Second, some weeks into the work, the children were asked to write what is termed in this study 'informational narratives' based on the same content.

The writing tasks paralleled two main kinds of non-fiction reading which they had been doing. While it is generally agreed that reading and writing are complementary processes, being able to read and understand might not be matched by competence in writing. However it is assumed that there is some relationship between the two in this study.

Three interrelated questions structure the consideration of the children's written work. How far does scrutiny of the writing suggest the child has gained some control over the register of a particular genre or form? Is there evidence of the writing leading to reflection on the ideas and information? How far did the scaffolding approach contribute to the degree of success of each of these aspects?

### **9.2.3            The expository texts.**

Chapter 8 describes how the main writing task, the making of an illustrated information book for younger children, was invited and carried out. After informal discussions with the younger audience the children began to plan the global structure of their books by setting out a contents page. This planning followed other

experiences, including the viewing of the video film **Squirrel on My Shoulder**, the collaborative formulation of questions and the selecting of a personal list to guide book research. These pre-writing activities were intended to put the children in an active relationship to the material, while at the same time, exposing them to informational text. The contents lists were clearly not copied from books. Evidence for this claim is based on the idiosyncratic nature of some of the lists and the 'non-book sounding' language describing some of the items. The contents pages are considered in detail in Chapter 8.

A summary of the children's work on the information books is presented in Table 24, Appendix 3. Because of some children's absence, the loss of some books (some being left at home), only 17 out of 24 books were actually handed in.

How successful was the children's expository writing judged by the criteria set out earlier in this section? These criteria are: how far does scrutiny of the writing suggest the children had gained some control over the genre; how far did they use the writing task to think and reflect on ideas and information; how far did the 'scaffolding' approach help.

### Control over the genre.

Some control over the expository genre was shown but progress was modest in most cases. The less forward readers and writers, some of whom we must remember, were statemented because of special learning needs, produced only a contents list and

a list of food items and predators. However, listing is an early stage in writing and organizing non narrative. (Barrs, 1987).

The children who were more forward in general literacy were showing signs of controlling the expository register. More specifically they showed signs of understanding how the children's information book worked. Stuart, for example (See no. 2 in Table 24, Appendix 3) uses information boxes, and many of the children, for example Carrie, Stuart, Wendy, Ben, Maria and Tara show understanding of how to integrate illustrations with text by providing comments introducing them. (nos. 1,2,3,5,12 respectively in Table 24) Marie, for example, writes 'Here is a picture of the Squirrel in the drey, eating seeds and nuts, pull out the flap to show it'. The use of information boxes in Stuart's work, and the glossary in Ben's are also signs of developing control over the register.

The amount of writing was not great, and in many cases the books were really information picture books. Nevertheless the very positive attitude of the children towards the task may augur well for future progress. While the written response was not lengthy, the signs were that they had managed mostly to work independently, using the books as a resource, but placing their own contents pages at the centre of their work. An outstandingly strong sense of the young audience for whom they were writing had, I feel sure something to do with the children organizing their own accounts rather than copying from books. The pictures and text provide much evidence of audience consciousness. Often after a term like 'predators' we find 'enemies' in parenthesis, and after 'habitat' 'where they live'. This was the case in

Stuart's book.

How far did the children show signs of controlling the typical syntactic constructions and the technical vocabulary of the expository register? Here we have to remember that many authors of children's information books modify these features in the light of the abilities and experience of their young readers. In Chapter 5 of this study the 'transitional' forms that include many of the familiar rhythms of spoken language are considered.

The children did mostly write in the third person, but seemed to have in mind the needs of their young audience when it came to producing text. When technical terms were used they were well explained or contextualised, but the accounts seemed not to use many of the new terms evident in both teacher and children's conversation, and in the video films and of course the texts being used. Few children included more than terms like 'habitat', 'fungi', 'predators', 'hibernation' and 'dreys'. Yet terms like 'kittens', 'structure' and 'function', 'population control', 'omnivores', 'arboreal' and 'membrane' were used in talk. (See Table 21, Appendix 1.)

### **Using the writing task to think and reflect.**

The challenge expository writing poses for young writers and readers has already been discussed in Chapters 5 and 6. In an interesting recent paper Marlene Scardemalia et al try out strategies to help elementary age children to use their writing to think independently. They note some success as a result of their special teaching

programme but comment in their conclusion that in spite of the strategies used with the experimental group:

'Reflection appeared to be mainly at a local level, however focussed on individual ideas. Reflection having to do with the reshaping and elaboration of goals and central ideas, so noteworthy in expert writers had yet to gain a secure foothold in the composing processes.'

(Scardamalia, Bereiter and Steinbach, 1989, p. 114).

The children's reluctance in the present study to take even the global structure of their books to a second draft fits with the above conclusion. In Chapter 8 I discuss the reluctance of the children to change their list once formulated. The drafting and editing of writing, so much stressed by advocates of the 'process' approach to writing, was also not acceptable to this class. Most children found one draft all they could manage and could only see the point of redrafting to put right superficial errors of spelling and to produce better handwriting.

It would not, however, be true to suppose that there was no evidence that the children were using the writing to reflect. Particular passages do show signs of this. Rakhee describes how a squirrel's teeth and claws aid eating very much in her own way (see Appendix 3b). Other children explain about winter and summer dreys. But little of the argument in our interesting discussion about the possible role of the grey squirrels in the red squirrel's decline finds its way into the information book accounts.

Nevertheless the beginning made in planning global structure, using illustrations to extend text and trying out strategies like information boxes does, I believe, open up the way for future thinking in this register.

### **The contribution of the strategies used.**

How far did the general approach contribute to the success of the children's information books? Scardamadia et al (1989) had an experimental and control group to help them judge the success of their strategies. This was not the case in the present action inquiry. However I believe the following strategies were helpful in making the writing a positive experience.

- o the strong sense of audience seemed to be motivating and to give the children a sound basis on which to plan their books and formulate a text. The importance of this being perceived by the children as a real task cannot be underestimated.
  
- o the collaborative centre to the work meant the children enjoyed talking, and sharing their writing and particularly their illustrations. Opportunities for sharing with the whole class were built into the work.
  
- o In line with the 'scaffolding approach' outlined by Applebee, 1989, teaching about study skills, for example using a book's retrieval devices, learning how to make a glossary, were built into the instructional context of the work.

This class of lively communicative children were not from bookish families. In terms of the crude measurement of a reading test about half of them were reading below their chronological age. Writing was hard for them. I believe this work nurtured a positive attitude towards their task, and in Britton's terms, made 'the struggle worthwhile' (Britton, 1970.)

#### **9.2.4 The Children's 'Squirrel' Narratives.**

It was argued in Chapter 4 that an information text which followed a time sequence organization was a particularly sympathetic kind of non-fiction, particularly for younger and less forward readers. These texts were compared to children's information books which were organized on an alternative principle, such as the demands of the topic. It was argued that the latter sometimes present a challenge to young readers.

Several models of narrative kinds of informational writing were available including Sheehan's **The Squirrel**, Propper's **The Squirrel** and Jan Taylor's **Sciurus: the story of a grey squirrel**. All three of these texts were read and talked about during the lessons. The children had also seen Jon Paling's video film **Squirrel on my Shoulder** which arranges events through time. (See Chapter 8)

What are the main features of these texts? First they fit with the features of narrative, as defined by Martin and Rothery, 1981, which are as follows:-

- o an orientation sets the scene and introduces the main characters;
  - o something happens - a complication;
  - o resolution - the complication is resolved;
  - o a number of different complications and resolutions may occur in the one narrative; and
  - o a coda, or a comment on the story as a whole, may be tacked onto the end.
- (Martin and Rothery, 1981 quoted on page 45, Cambourne and Brown, 1989, in Andrews, R. **Narrative and Argument**.)

In addition a children's informational narrative has the following features which were discussed with the children at several points in the work.

- o there are narrower conventions about what is appropriate in the content; the writer takes up a narrower focus than other narratives sticking to what is factually known about the phenomena which are the subject. These conventions are reflected in global structure and in vocabulary.
- o optional feature: a contents page detailing chapters (**Sciurus**, Taylor, 1981)
- o optional feature: nature notes, further reading advice, useful addresses at the end.

(Mallett, 1992, p. 23)

The narrative in Taylor's **Sciurus** takes us through the squirrel's life cycle: its time as a kitten, making dreys and dens, breeding, confrontation with predators and so on, and draws on the author's knowledge and understanding as an amateur naturalist.



The main **function** of an informational narrative is to inform, although like other narratives it may also entertain. It is the primary function to inform which necessitates the distinctive features of an informational narrative.

The features of narrative (Martin and Rothery, 1981), and the additional feature of an informational narrative as defined above, provide a framework for assessing how far the children showed control as **writers** of this form. The writing is also to be examined for evidence of children using the narrative form to reflect on ideas and information.

#### **How the task was set up.**

The way in which a writing task is set up is important and I now set down this invitation from Notebook 2.

'You have been making information books for Mrs L's class. Most of you have headings like 'Kinds of squirrel', 'Food', 'Predators' and so on. That is the kind of writing you often do in topic work and we have a lot of books like that (pointing to display of information books). But some of the books, like Sheehan's and Propper's, both called **The Squirrel**, do not have those headings, and are in a story form.

I have been reading **Sciurus** to you and some of you have read some of it out loud. This book follows the life story of a grey squirrel from when it was a squirrel kitten,

through its time as a young squirrel making a drey, hibernating, breeding and facing dangers until the end of its life.

Mr P and I thought you might write an information story like this. Your writing will go through time - it could be just an hour or a day or a week, or even a squirrel year. You can use all the knowledge we have now about squirrels - how they feed, move, what they look like, how they behave what they are frightened of and so on. We can make a start this afternoon, but don't rush this as Mr P will give you some more time this week. Remember in this kind of information story we have to stick to what a real squirrel would do. We could put this writing into a book so we can all read them."

The children's questions about the task included: how long the piece should be; whether they could include illustrations; could they give the squirrel a name. Although the 'audience' for the work was to be the children in their own class, some of the children said they would like to read their stories to the seven year olds along with the information book.

In summary the reasons for inviting this task were as follows:-

- o to provide a context for children to reflect on, formulate and use what they had learned about the topic in a sustained account different from the expository writing they had already been doing.
- o to create a setting for children to show how far they had control over the kind of writing known as 'informational narrative'.

- o to create another writing 'audience': while the information books were aimed at a younger audience, this writing was to be made into a class book added to the classroom collection. (Some of the children did also want to read the writing to the younger children.)
- o Mr P invited one sustained writing task every other week, usually fictional but sometimes of an informational nature. He felt that the not inconsiderable time and effort the Squirrel work involved could reasonably be drawn on in one of these writing tasks.

### What is meant by control over genre?

Cambourne and Brown, using the term 'register' rather than 'genre', consider control implies the ability to read and write independently in that register.<sup>8</sup>

'This entails not only being aware of what the organizational shape of any discourse is, but also being able to bring into play the thinking and 'languageing' processes that have to go into the production of a text that conforms to a specific register's conventional organizational 'shape'.  
(Cambourne and Brown, 1989 p.43.)

### The Children's Response.

#### Control over the informational narrative 'form'.

If we keep to the definition of controlling a register above (Cambourne and Brown, 1989) only seven out of the sixteen accounts handed in showed some progress in the two areas defined: writing independently and appropriately in the form and engaging in the kind of thinking the form makes possible. The other ten children wrote fictional narratives often with a fairy tale element. In Appendix 3c I consider first the six accounts which, to some extent, conform to the informational narrative form and second I turn to the fairy tales the other children wrote. In the main text I suggest possible reasons why, in spite of the invitation to one kind of writing they produced another kind.

### Evaluation of the Squirrel Narratives.

#### Evidence of control over genre.

The explicit invitation to this piece of writing was to produce an **informational** narrative on the lines of some of the texts the children had used. These included the text of the video film **Squirrel on my Shoulder** shown early in the work, the reading out loud of Jan Taylor's information story **Sciurus** and two of the books in our project collection - Sheehan's **The Squirrel** and Propper's **The Squirrel**.

In Chapter 4 it is argued that informational narratives, particularly those which fall into natural life cycles like tadpoles into frogs, caterpillars into butterflies, or stories of lives, a day in a postwoman's working life or first visit to nursery or the dentist are a sympathetic way of organising information for young readers. The task was set as an invitation to use the narrative form primarily to inform and share, but as the explicit audience was their peers, also to entertain. As the short descriptions of the

children's work in Appendix 3 shows six children showed not only control over narrative but also some sense of what was appropriate in an informational narrative. Rakhee and Kerry showed particular control in their selection of both events and vocabulary.

The other children wrote fairy tales with squirrel characters. The writing was successful in that lively, exciting illustrated stories resulted which the children found satisfaction in. The children used the task to play with the idea of squirrels and woodland environments. There is potentially a playful fantasy aspect to most topics and neither the teacher nor myself criticized the accounts. Indeed we praised the stories and the attractive illustrations that accompanied them.

The accounts were read out loud by those children who wished to do so, and we talked about how some of the accounts like Rakhee's and Kerry's were 'information stories' like *Sciurus*, while others like Ben's and Stuart's were fairy stories using a squirrel theme.

On the whole the children did not in these accounts show themselves able to sustain the style of an informational narrative. Nevertheless the accounts did conform to the features of narrative outlined by Martin and Rothery, 1981.

**Evidence of thinking appropriate to the genre.**

The six children who responded to the invitation to write by producing informational narratives did to varying degrees show themselves able to reflect in a way appropriate to the chosen form. For example Rakhee uses a question answer device to think about and share her knowledge about winter and summer dreys. Kerry too tries to imagine how a squirrel would behave and feel by stressing its nut-seeking movement and its keen sense of smell. The other four children are not yet in sufficient control over the form to use it to reflect.

The children writing the fairy tales show a secure ability to think through the kinds of 'resolutions;' typical of fictional narratives. Squirrels overcome the threat of predators, sometimes, as in the stories by Stuart, Marie and Mark, by the use of ingenious machines and vehicles. They are sufficiently in control of the conventions of form and language of narrative, and sufficiently aware of their audience to be able to use their writing in a playful way.

### **Reasons for the kind of writing the children produced.**

There are several possible reasons why 9 of the 16 accounts handed in were written in a different form to that invited i.e narratives with fairy tale elements rather than informational narratives.

First there are reasons to do with the challenge this form presents for the young writer. While it is argued earlier in this study that some informational narrative is a sympathetic introduction of non-fiction, its relatively narrow focus as far as content is concerned and its more specialist vocabulary are probably more difficult to control

as a writer than a reader.

Thus while the children listened carefully to the 'invitation' to the writing task, it may be that once they began to write, the sheer power of the narrative organization nudged them into the more familiar kind of narrative where the writer's options are much wider: the inner world of the imagination can be drawn upon as well as experience and knowledge about the world. Some evidence that this might have been true in some cases is suggested by those fairy tales which **begin** by setting up an 'orientation' that promises to be an information story, but which soon change to a content and style appropriate to a fairy tale. Mark's account, for example, begins with a squirrel family waking up in the drey and Wendy and Ben also start off in a way not very different from the beginning of Jan Taylor's *Sciurus*, but soon reveal by their selection of events and squirrel behaviour that their form is really a fairy tale.

A second set of reasons for fairy tale being the preferred mode in some cases seems linked to the children's sense of purpose and audience. Children learn through their experience of fiction that a primary function of narrative is usually to entertain. This emphasis on enjoyment rather than on imparting information may have been further reinforced by my suggesting that the 'audience' was the other children in the class. This was a very familiar audience, and some of the accounts with their playful story lines and pictures, and squirrel names paralleling members of the class, reveal the writers know very well what will amuse their peers.

This urge to entertain, once the chronological patterning of their thinking began, seems

to have pressed away the informing function of the kind of narrative they were invited to try.

Ofcourse fictional narratives can inform as well as entertain: in the hands of a gifted adult writer fairy tale or fable can tell us much about phenomena in the real world. We do learn something about the nature of squirrels in Beatrix Potter's Squirrel Nutkin and something about spiders in Charlotte's Web. In the children's fairy tales we learn more about what children of this age think and do although the liveliness and resourcefulness of squirrels as a species does come through.

How do children increase the number of forms or registers in which they can write? Langer suggests that the familiar forms children hear spoken serve as models. Report or expositions is a form children are unlikely to encounter in conversation at home (Langer, 1985, p. 185.) This means not only that such forms are unfamiliar, but that their purposes are less obvious. One way of helping may be to encourage young readers and writers to make explicit in conversation what they know about the purpose of different textual forms: in other words supporting their developing 'meta-textual awareness', (Cambourne, 1988.)

Part of a conversation about different kinds of writing (see transcript in Appendix 7) is illuminating here. Ben and Wendy have just heard Stuart's reading of the beginning of Jan Taylor's *Sciurus* ;

T-R            Just pause Stuart, do any of you see any difference between what Stuart



is reading and the other books we have looked at?

All This one is a story.

Wendy

& Ben An **information** story.

T-R Can you say anything else about how they are different? Is one kind easier than the other.

Ben You could use these (pointing to the information books) if you were doing a topic - and the story if you wanted a break and you were interested in squirrels'.

Wendy Those ones give more information.

In fact Jan Taylor imparts considerable information about wildlife in general and squirrels in particular in **Sciurus**. The information is organized differently from a conventional information book. Yet Ben goes on to comment:

"Well like professionals have looked at squirrels for the information books, but not for the stories." and Stuart adds: "Yes. You don't need to be an expert on squirrels to write a story about them." (Transcript 7, Appendix 2).

I continued by trying to persuade them that Jan Taylor was an expert hoping to impart his knowledge and understanding through an informational narrative, with a vocabulary more typical of the expository register of an information book, which is also enjoyable. However this conversation, and the written response of some of the children (including incidentally the three in conversation with me in the transcript

quoted) suggests that they see books in two main categories: stories to entertain and information books to inform and explain.

When the present study was complete and my analysis written I was interested to read of Cambourne and Brown's action inquiry reported in **Narrative and Argument**, Andrews, 1989, which presents two pieces of writing by an Australian child of the same age as the class whose work is described here. Using the same content, information about Lemmings, nine year old Peter writes a factual report and then a fairy tale. The first two paragraphs of the fairy tale would be consistent with what I would describe as an informational narrative. No fairy tale element intrudes although the very first sentences suggests a story.

'Far, far away in the Arctic Circle in a small burrow under the shore lived Leppy the Lemming.' However it is only later when Leppy takes out a sewing kit to solve a problem that the 'fairy tale' form is fully secure.

Both the report and the fairy tale were written in the context of a topic theme on 'Arctic Animals'. It was very interesting to find this urge to express the playful side of a topic noted in the present work also evident in this study.

#### Relationship between contexts provided and children's written response

In this study there were two major aims: to discover ways of helping children to reflect on and use information and ideas in books; to use 'natural' classroom contexts

and particularly topic work as a means of helping children strengthen their control over different genres or forms. In other words learning about squirrels was also the context for learning about books.

The context intended to support a growing control over what has been termed here 'informational narrative' were as follows:

- o introduction of this form in the wildlife video film, the class reading of Jan Taylor's informational narrative **Sciurus** and the reading out loud of models of this form - Shehan's **The Squirrel** and Propper's **The Squirrel**.
- o discussion of some of the differences between information narratives and expository text to make children's developing understanding of the differences explicit.
- o the children were invited to write in this form and reminded of other texts of this kind and of the kind of information about squirrels that would be appropriate.
- o finally, those children who wished to, read their work out loud, and we discussed the differences between the informational narratives and the fairy tales. The focus was on the differences, not on which response was 'right'.

This chapter makes clear the degree to which their strategies were successful. For all

the reasons above only a few children showed some control over writing what is quite a demanding and sophisticated form.

One of the most satisfying contexts was the last one where young writers either read out their own writing or asked me to. It was made clear we were not being judgmental - just enjoying the work and saying what we thought about it.

Comments about Rakhee's story included 'it tells you what a squirrel really does'; 'it tells you about dreys and predators'; 'it makes it like a real squirrel'; 'it gives you questions and answers'. The latter comment comes close to recognizing that narrative can be a form which can embody thinking and educating.

The fairy tales read out by Greg, Stuart, Claire, and Wendy were enjoyed and comments included 'the squirrels talking is funny' (of Greg's); 'It is funny that the squirrels have people's names' and 'the drawings are good', 'it could not really happen' (of Stuart's); 'squirrels don't eat chocolate biscuits', 'squirrels don't talk', 'the squirrels are like people' (of Claire's) and 'it's like the squirrel was thinking', 'it's like **Scirius** at first then it changes' (of Wendy's). 'There's another story where there is a squirrel called Nutkin in a book for little ones' (of Charmaine's story)

Mr P and I said we enjoyed reading all the writing and would put it in a big book for the class collection. I pointed out that some of the writing like Rakhee's and Kerry's told us about squirrels as a species while some of the other stories amused us. We began to move in to the area of how the different writers had used choice of

language, context and drawing, to either inform us about squirrels or to make us laugh. Helping children become conscious of their choice of text structure and choice of content made, (I feel sure) a contribution to their developing knowledge of genres and how these forms are related to purpose and audience. It is my view that more direct teaching, involving the 'authorisation practices' [to which Barrs refers when discussing the work of the Australian genre theorists] would have been counter productive (Barrs, 1991, p. 12).

### **9.3 Evaluation of the classroom example**

Any example of classroom practice is imperfect. I believe, however, there is evidence in the children's spoken and written response that the overall context provided and strategies tried made it possible for most of the children to make some progress in reading and using non-fiction. The following account tries to assess how far the attempt to put into practice the strategies in the 'framework for reading non-fiction' (See Table 6, Chapter 6) was successful. It is, of course, important to make a distinction between the viability of a strategy and the degree to which a particular practitioner is able to make it work in a particular teaching and learning context. In what follows these limitations to do with my own contribution as teacher, are mentioned where appropriate.

#### **1. Provision of a rich supporting context.**

The reading tasks were set within a broad context of learning about Squirrels and went alongside watching video film, discussion, writing and drawing and painting. The argument in the whole study has been that narrow tasks, particularly those involving questions about comprehension passages fail to motivate most young learners.

There were signs in this work that the children were interested in the work consistently over the ten weeks. Encouraging signs suggesting their thinking and interest sustained beyond the actual lessons include:

- o constant reference to both video films and requests to see them again.
- o one child's successful effort to persuade her parent to make a videofilm on Squirrels from a television wildlife programme and to bring it in to share.
- o the spontaneous bringing into school on Thursdays of all kinds of books on squirrels from home collections and libraries, newspaper cuttings on squirrels and pictures.
- o requesting squirrel related presents for birthdays, including books and squirrel making kits. One boy brought in a clay model of a squirrel he had made, and a girl arrived with a cardboard model of a woodland scene with squirrels in dreys.
- o interest in browsing through and reading the books on display as a voluntary

activity. This contrasts with the observation from Arnold quoted in Chapter 1, that reading comprehension passages and answering questions seems not to encourage further interest. (Arnold, 1992.)

### **Limitation**

There was no opportunity for the children to observe squirrels directly in the woodlands or in a zoo. This would have been a context for both discussion and another kind of writing which might have been helpful. The first video film was shown as an *alternative* way of observing the creatures.

Another limitation was the only marginal including of parents in the work. There were signs of interest, for example help with formulating questions and making the video. The reading interests of the parent of the same gender seems a promising research area. (Mallett, 1992).

### **2. Making explicit prior knowledge of both the topic and of the range of texts used.**

#### **Prior knowledge of the topic.**

The first discussion about the project, and the discussion following the showing of the video film **Squirrel on My Shoulder**, allowed the children to share existing knowledge about squirrels. (See transcript 1, Appendix 2) This helped the children

ease into the work and to feel they had some part in negotiating the pattern of work. It was also helpful as a way of guiding me as teacher in making planning and resource provision appropriate.

### **Prior knowledge about texts.**

Both using the books and understanding their features inter-penetrated the work from about the third session. (See section on metatextual awareness 9.1.2.)

### **3. Children's formulation of their own questions.**

The class teacher considered this to be one of the most successful strategies employed, putting the children 'in the driving seat of the own learning'. (See class teacher's evaluation of the work, Appendix 4). The collaborative beginning to formulating questions was helpful particularly to less forward learners who benefited from hearing what their peers thought were interesting questions. The first foray into the books was structured by the children's personal lists and was a strong context for showing how information could be retrieved from books.

### **Limitations**

I believe I should have encouraged the children to write their individual question lists in categories of food, breeding etc. in line with the approach of the collaborative list. This would have been consistent with the aim to help the children classify phenomena



as a conventional non narrative text *does*.

Helping children formulate their own questions is time consuming. This is a factor to consider in the light of a very full primary National Curriculum requirement. My own observations in many classrooms and the work of Wray and Lewis, suggests children are still more likely to be trying to answer the questions of others (Wray and Lewis, 1992). Mallett suggests that a questioning approach at the beginning of a series of lessons orientates pupils towards serving their own purposes in book research (Mallett, 1994.)

#### **4 Nurturing a strong sense of purpose.**

Teachers have the challenging task of delivering what is considered to be appropriate school knowledge, now in the context of a National Curriculum, while at the same time motivating and interesting children so that tasks are perceived as worthwhile and meaningful. One strategy in this work was for the teacher to reformulate children's contributions, for example anecdotes brought to discussion, so that what Edwards and Mercer term the 'ground rules' of classroom knowledge are made clear while preserving interest. For example when Ben and Stuart share their findings on flying squirrels the teacher tries to make them formulate their observations more fully and precisely through questioning, while aiming to safeguard the genuine enjoyment of communicating their contribution. (This example is one of the vignettes in Section 9.1.)

Encouraging a sense of purpose was central in this work. The emphasis on children's questions was a helpful strategy as was the provision of several audiences for their developing knowledge and reflection.

### **Limitations.**

There was some tension between children's and school purposes. Many of the children needed encouragement to produce extended written accounts in their own information books. In many cases illustrating was the preferred activity.

### **5. Making possible a strong sense of audience.**

Sense of audience links strongly with encouraging a sense of purpose and with the collaborative approach valued in the work.

The variety of audiences for both talk and writing gave the children the opportunity to reformulate their developing knowledge in the light of who needed to understand. This was true in relation to the whole class discussions when teacher researcher, class teacher and children were audience to individual and paired contributions.

The effect of sense of audience on the two main writing tasks has been thoroughly explained in the section on writing, 9.2 in this chapter. The level of satisfaction and enjoyment of the book making was high and the class teacher remarked on the greater motivational level than usual of children who for the most part found sustained writing

tasks difficult.

## **Limitations**

The sense of audience, their peers in the class, for the narrative pieces was both a strength and a limitation. The primary purpose of the writing for some children became the need to entertain rather than to inform.

To a lesser extent this was true of the writing for the information books for the 7 years olds. Imaginative use of informing by illustration dominated, sustained written explanation was less in evidence. I think this is not surprising. Creating strong contexts, for writing sustained non narrative text in the primary school without closely paraphrasing is problematic as Chapter 6 of this study argues. Much of this kind of writing is still structured by teachers' questions sometimes on a worksheet or on the board (Wray and Lewis, 1992; Arnold, 1992). The present study confirms that children find sustained non narrative writing difficult, but describes how context and sense of audience can help.

## **6. Placing a value on collaboration and sharing.**

The class teacher's general approach included much class discussion and sharing of written work, particularly stories, by reading out loud. Thus the emphasis on sharing the planning of tasks and the resulting writing in this project was in line with what

children had already come to see as normal. The school as a whole was committed to talking as a way of organizing and sharing learning, partly because of the head teacher's knowledge and interest in the role of language in learning. What was innovative in the main study here was the focussing of class and group discussion on actual text in children's non-fiction books. My impression is that this collaborative approach to reading and learning from information books is comparatively rare. Evidence that this is the case is drawn from Wray and Lewis, 1992 and from recent HMI investigations in 1989 and 1990 on children's reading.

One main insight from all the work carried out for this study and in my work over many years with both pupils and student teachers stands out. This is that the activity most likely to promote **reflection** on ideas and on language itself is talk about texts. This talk tends, as the examples in Appendix 2 reveal, to move easily from talk about information in the texts to how particular texts convey it. But children tend not to manage this themselves unless provided with models of how it is done over a period of time. The teacher's sensitive direction is needed, and it is to this I now turn.

## **7. Providing teacher support and direction.**

The argument in Chapter 2 showed how certain interpretations of the work of Piaget could lead to an underemphasis on the teacher's role as director and supporter of learning experiences. The work of others, following Vygotsky's contribution in **Thought and Language**, has encouraged new recognition of the scope and nature of the teacher's role. (Vygotsky, 1962; Bruner, 1986; Bruner and Haste, 1987; Wood,

1988; Applebee, 1989; Mercer, 1992; Pollard and Tann, 1993.) Associated with these writers and researchers is a view of the teacher's role as a 'scaffolding' one. This powerful metaphor suggests a reflective and highly active practitioner who provides for and supports children's learning. A main element in this provision is the teacher's varied uses of language: language to question and encourage children's questions; to explain and make it possible for children to learn how to do their own explaining; to encourage, provide new input and to respond to children's developing ideas in talk and writing.

It is this kind of support which seems still to be lacking in the area of supporting children's reading to learn. In a recent small scale study Wray and Lewis found junior age children answering work sheet questions, and not genuinely engaging with the books provided (Wray and Lewis, 1992). Two recent HMI surveys into primary school reading beyond the initial stages pinpoint two main areas of concern. First older juniors seem not to receive help in responding more deeply to fiction and pertinently to this study, thoughtful practice in which careful support is given to reading non fiction is uncommon (DES, 1989, 1990).

My study of what might be helpful in supporting reading to learn, in Chapter 6, led to a suggested framework, presented in Table 6. Seven aspects of the teacher's role are set out and named a-g.

- a) Selecting and choosing books.

Chapters 3 to 5 of this study examine the different kinds of text which fall under the wing of non-fiction genre. A broad distinction was made between books whose primary purpose was to inform but which had a time sequence or narrative organization, and those which were arranged non-narratively on a subject basis. The latter category were divided further into reference books - dictionaries, encyclopedias and thesauruses and information books. All of these forms of non-fiction writing have a place in the non-fiction school collection. There are two things of concern here. First we need to understand the demands made by the different forms on young readers, and second there are some generally agreed qualities which are present in good quality examples of each kind. In my analysis in Chapters 3-5 I observe that writers and publishers of children's non narrative non-fiction employ strategies to make the information more accessible. While global structure into headings and sub headings is present the actual text may, unlike mature non-narrative, echo some of the syntactic patterns of speech. Questions, direct linkage to pupils' likely experience and use of pronouns are typical features. I suggest we term such texts 'transitional genres'. Baker and Freebody use this term to apply to children's early school books which feature speech-like syntax. (Baker and Freebody, 1989). How satisfactory was the provision of books and resources in this classroom example under discussion? The texts, chart and videofilms used are set out in Table 17 in annotated form. Examples of both reference texts and narrative and non narrative information books are included. It was not possible to use only books of high quality in every respect. The narrative texts by Sheehan and Propper were only fair in terms of clear inviting text and illustration. Some of the non narrative 'transitional' texts like Coldrey's **Squirrel in the Trees** lacked the retrieval devices useful for the sort of study children were

involved in. There were some strong texts, for example the clearly set out and well written *Discovering Squirrels* by Davies. However much things improve it is unlikely that there will ever be large numbers of excellent texts on every topic of interest in the primary school. A strategy adopted in this work was to make any shortcomings in the text a topic for discussion. The section in this chapter on developing metatextual awareness evaluates this aspect of the work. Part of becoming a critical reader is to become aware that some texts do the same job better than others. It is also a matter of helping children 'dig nuggets from the dross'. Arnold comments:

'They '(children) will need help in the use of flexible strategies from the earliest stages, training in the context of real books, with all their faults.'  
(Arnold, 1992, p. 132).

**b) Acting as model reader.**

Several writers on reading to learn have stressed the importance of the teacher's role as model reader (Meek, 1977, 1986; Mallett, 1992; Wray and Lewis, 1992). Wray and Lewis point out that the teachers they observed in a small scale study had explained some study and library skills. However little transfer of these approaches to texts seemed to occur in real contexts, leading the researchers to recommend demonstration in context. (Wray and Lewis, 1992). In the present study using retrieval devices was a focus of the work, and children were given support as they engaged in their study as individuals and groups and in class discussions.

But acting as a model reader is not just about using retrieval strategies. It is also

about demonstrating how a mature reader reflects on the information in the books and on the quality of features of particular books. In this study a main set of strategies was to do with how you use information and ideas once you have encountered them.

**c) Directing attention to features of text.**

Most children will not spontaneously refer to features of the text they read. They read for content and meaning on the topic they are finding out about. By careful discussion the teacher can help children make explicit tacit knowledge. Once made conscious, understanding about how particular texts are constructed and for what purposes becomes an area of interest. It must, of course, be nourished regularly and appropriately. A detailed account of supporting this kind of language development is covered in the section on metatextual awareness in this chapter.

**d) Mediating between children and books.**

The teacher's role in talking about the features of books is discussed above. Teachers also have an important role in helping children with the content of the books. Strategies in this study included paraphrasing when reading out loud from books and magazines like *Country Life*, explaining the meaning of diagrams, for example the food chain diagram in Coldrey's *Squirrel in the Trees* and talking about the new ideas and information in such a way that reflection is encouraged. An example here is when I invited Ben and Stuart to explain in more detail how a flying squirrel is adapted to move through the air using the specially adapted wing-like arms. Pausing to reflect is an acquired behaviour for most of us. This kind of thinking was difficult for the children in the class under study unless considerable support was offered. It



was this kind of support I aimed to provide throughout the work.

**e) Creating contexts for class discussion and sharing.**

It is not unusual to find teacher and pupils in the primary school becoming a community of readers of fiction, enjoying reading, listening and telling stories. Such fiction-sharing communities provide a warm audience for children's own writing as well as for their developing response to poems and stories. Examples of collaborative work round non-fiction seem to be less frequently encountered. In this study many of the children, including some of those who found reading the books very difficult, were extremely eager to contribute what they had been finding out to each other by reading out loud, or by oral summarizing. These discussions seemed to achieve the following: the children learnt from each other; they heard non-narrative text read out loud so that less forward readers were able to become more familiar with the conventional patterning of this kind of language; it was a context for the oral summarizing that Southgate et al, 1981, consider precedes written summaries; instead of research and study being relatively solitary it became more collaborative and community based.

**f) Creating tasks which encourage using and reinterpreting ideas.**

Chapter 6 identified copying or closely paraphrasing as a main problem when young learners do their own writing from secondary sources. This is not a new problem, but it is a continuing one. Strategies used to help in this study include encouraging children to formulate their own questions to take to the texts so that, as the class teacher notes, 'the children were in the driving seat of their own learning', (Appendix

4) and setting up writing tasks where a strong sense of purpose and audience required **using** rather than reiterating what was in books.

While the quality and scope of the children's written response was in some cases disappointing, there is evidence, for example in the syntactic structures chosen (see Rakhee's piece on Nut eating), that the children were reformulating the information and ideas.

**g. Making key issues and concepts the basis of reflection.**

Reading non-fiction to learn is not achieved by most children without a struggle. The children in the study were lively and interested in talking about squirrels, but not naturally inclined to reflect very deeply on information and ideas in books. Yet it is this quality of thinking, of actually being conscious of your own thinking that is necessary for success in school-based learning. (Donaldson, 1978; Bruner, 1966). Piaget believed few pupils under age 7 were likely to be capable of abstract thinking, thinking not related to practical activity in the immediate context. It seems likely that a strong motivation to find out might make it possible for children to achieve, with support, a quality of reflection not normally managed.

In the course of joining groups of children as they worked, what Langer (1981) refers to as 'Key Concepts' became evident. These are information foci which seem to be interesting the children. I believe these have a place beside the central ideas and concepts teachers identify in any series of lessons or project work undertaken. The National Curriculum Units in History, Science, Geography and so on now identify

such central content. The children's special areas of interest in this classroom example included : squirrel diseases; rivalry between reds and greys; predators.

The section in this chapter on talk to reflect on ideas deals with these issues. The essential point is that these notions were brought to class discussion to be shared together. The teacher's role is often to reformulate what children say to fit with school knowledge while at the same time placing a value on the contribution.

#### **9.4 Evaluation of the classroom example as action research.**

Three main questions about the viability of action research arose from the methodology chapter.

First is the area of study worthwhile?; second does the quality of description, collection of data and analysis of data make it possible for other practitioners to relate to the teaching and learning challenges faced?; third, did useful change in practice result?

##### **Is the area of study worthwhile?**

The whole study examines an area which is relatively under researched and not well understood. Chapter 1 argues that most studies of reading tend to examine the initial stages. The nurturing of children's developing abilities in the 'reading to learn' area has received comparatively little attention. Control over this kind of reading is

necessary for children's success at secondary school and beyond. Indeed it is important in the later primary school years. But another important reason for supporting children's progress in this kind of reading is the great delight and satisfaction finding out, and sharing the fruits of that finding out, can bring about. Indicators of the growing recognition of the importance of reading non-fiction texts include: : the place afforded to it in National Curriculum English documentation, both current and future; the increasing tendency of conferences for example those organised by UKRA and NATE to include this kind of reading more centrally in their programmes; the promotion of the Nuffield Extending Reading in the Junior School research project.

In view of all this I believe the area under study will be perceived as useful by other practitioners.

**Does the quality of description, collection of data and analysis of data make the research reliable?**

The example does not show perfect teaching as the previous section indicates. Main shortcomings included not providing the opportunity for children's first hand observation of phenomena and not encouraging children's classification of their preliminary question lists into categories. Data collection, too, was not always exemplary. Sheer weight of other duties meant that sometimes there was too great a gap between tape recordings being made and their transcription. Note book entries helped the contextualizing of transcripts but in class discussions pupils are not always

identifiable by name. Transcription had to become more selective as time went on. However, I believe enough sampling of talk and of writing was documented for a careful and honest analysis be made.

### **Did useful change in practice result?**

A strength of action research in an educational setting is its immediate impact as an agent for change and improvement. This example is unusual in that the main teaching contribution was made by myself, a college tutor associated with, but not a permanent member of the school staff. I was not therefore able to embody the fruits of the research immediately into planning and development of work for this class. However change was achieved in modification of the class teacher's approach (see Appendix 4, and in my own subsequent teaching of both primary children and of undergraduates preparing for teaching. In my own case the framework for reading non-fiction, set out in Table 6 and evaluated in this chapter, has informed my work.

### **Summary and Conclusion.**

This final chapter has examined the classroom example from the point of view of the Framework for Reading Non-fiction set out in Table 6, Chapter 6. It was important to distinguish between the viability of the strategies suggested and the limitations of the practitioner carrying them out in one particular context.

An examination of the children's talk, both about information and ideas in the books and about features of the texts, and their response to writing tasks provides evidence of children's progress as critical readers.

The last section of the chapter assessed the success of the classroom example and argued it was viable as an action enquiry.

## CONCLUSION

This study began with four questions, how far have they been illuminated in this work?

First, how does learning to read non-fiction relate to learning in general? Chapter 2 argues that what is known about learning, and particularly the role of language in learning, is a helpful framework for learning to read non-fiction. Embedding 'reading to learn' in the broader intentions and purposes of classroom work avoids the narrowness of the kind of practice which sees this kind of reading as a separate activity unrelated to learning in general. Narrower approaches, those which favour the decontextualized learning of study skills by answering the questions of others on worksheets, tend not to motivate young learners. Reading and **reflecting on that reading** is hard and must be perceived as worthwhile. Four broad principles underlying all learning were suggested : all learning takes place in a framing context; children are essentially active in their learning; much learning is best achieved collaboratively; the teacher's role in bringing about learning is of considerable importance. The suggested approach to reading non-fiction is grounded here.

The next two questions move to knowledge and understanding about the different books making up a primary school's non-fiction collection. What do practitioners need to know about non-fiction texts? Chapters 3-5 of this study identify the main kinds of non-fiction, and what is known about the challenge different kinds of written text present to young learners. It is argued that teachers need to know, not only about the different kinds of non-fiction, but also about criteria likely to lead to well founded choices between

apparently similar books. Perhaps the particular demands some 'non narrative' or 'non chronological' texts make on young readers is not well understood. The journey towards becoming a reader of mature non-narrative is likely to be assisted by providing texts which feature some of the syntax and vocabulary of speech. Such texts may helpfully be described as 'transitional' forms. The present study supports the many other writers and researchers who consider children's non-fiction should be written by those who have much interest in their topic and in communicating the information and ideas to young readers. Only when teachers insist on the very highest quality in format, text and illustration will publishers, writers and reviewers take non-fiction as seriously as fiction for the young. The impact of the National Curriculum on publishers of children's non-fiction could lead to series and programmes of 'recipe written' books lacking the quality of illustration and text to encourage children's interest and reflection. Initial teacher education has, on the whole, provided a rich and informed introduction to children's fiction. The same courtesy ought to be paid to the non-fiction programme. With some honourable exceptions it is not my impression that this is the case at the time of writing.

The next question, what do **children** need to know about the different forms within the non-fiction genre, is of course linked with teachers' knowledge. The children in the classroom example in Chapter 9 were able, with teacher support, to make explicit their tacit knowledge and understanding about features of non-fiction books. It is argued that encouragement of 'metatextual awareness' is likely to lead to increasing control over particular genres or forms as both readers and writers. Talk about texts brings all four language processes into dynamic relationship. The reading, then talk about the reading, feeds into the writing which can then be read out loud and shared with others. There is



some evidence, set out in Chapter 9, that the children were making a start in applying their developing knowledge of non-fiction text to specific writing tasks, like writing information books for younger children. Interestingly, writing informational narratives, often thought to be a sympathetic form for young readers, presented some problems. My analysis in Chapter 9 does not rule out the possibility that my own support was lacking in some way. However some of the children's conversation suggests that they did not appreciate that the same information can be organized in different ways. Thus it is important not to claim too much. Knowledge and understanding about different kinds of text is built up over long periods of time. The important thing is to make a beginning - to make a space in children's thinking for accumulating insights about texts. To help children make this beginning, teachers need to have thought deeply about the features of the books so that they can give support to this aspect of the 'knowledge about language' element in the children's learning.

The final question is: what are the most significant intervening factors in helping children become reflective readers of non-fiction?

It is argued that seven principles, derived from the general model of learning which is set out at the end of Part 1, usefully inform the development of reading non-fiction to learn : reading non-fiction takes place best in a strong supporting context; it is helpful to make prior experience about the topic and about the kinds of texts to be used explicit; formulation of children's own questions helps link existing and new knowledge; a sense of purpose makes the struggle to read and understand worthwhile; a strong sense of audience for talk and for writing is motivating; a value placed on sharing encourages a

mutually supportive community of young readers and writers; the teacher's direction and mediation greatly facilitates the learning. The last factor, about the teacher's role, is divided into seven elements: teacher as selector of books, model reader, supporter of developing knowledge about language, mediator between children and books, provider of contexts, provider of tasks and encourager of reflection on key issues. The young learners in the classroom example were mostly at quite an early stage in using non-fiction to learn. I believe the transcribed talk, and to a lesser extent the writing, shows an increasing ability to **reflect** on both information and ideas and on the features of particular forms and genres, and that this provides support for the viability of the strategies employed.

In the talk, particularly, the children showed increasing ability to use the vocabulary of science, 'habitat', 'environment', 'rodent' and so on and to use a metatextual vocabulary 'glossary', 'hard writing', 'giving information' and so on. Perhaps the most important finding is that talk, teacher's and pupils', is a powerful tool not only for learning **from** but also **about** texts.

This framework offers a starting point for teachers who wish to strengthen and rationalize the **reading to learn** element in the primary programme. It is not intended to be a blueprint: indeed in the spirit of the action research philosophy I will myself constantly refine and develop it in my future work with pupils, students and teachers.

## End Notes

### Chapter 1. Reading non-fiction in the Primary Years: the present state of affairs.

<sup>1</sup> Anderson views a central topic or theme as one promising device for organizing learning. She considers that reforms should not be achieved through slogans. The report from the 'three wise men' (Alexander et al, 1992) said 'much topic work has led to fragmentary and superficial teaching and learning'. **The Guardian** leader on 23rd January, 1992, changed this to 'the fragmentary and superficial teaching which topic work produces'. Anderson, TES, p. 45. (1992).

<sup>2</sup> It seems odd to delay the ability to 'read accurately and understand straight forward signs, labels and notices' until Level 2. Helen Arnold argues that '... we have hitherto rarely exploited the wealth of reading which all children bring with them when they enter school. They have all encountered text in the world around them. I remember the size, texture, colour of the name of my road, **SEYMOUR ROAD**, in its embossed metallic rustiness. I watched a 3-year-old recently in the grounds of a hotel tracing the letters of a notice over and over again with his finger'. (Helen Arnold, p. 128 'Do the Blackbirds Sing All Day?' in Styles, M., Bearne, Z. and Watson, V., 1992).

## Chapter 2. The Broader Context.

<sup>1</sup> Vygotsky explains the role of egocentrism in Piaget's theory of child development as follows:

'According to Piaget, the bond uniting all the specific characteristics to child logic is the egocentrism of the child's thinking. To this core trait he relates all the other traits he found, such as intellectual realism, syncretism, and difficulty in understanding relations. He describes egocentrism as occupying an intermediate position, genetically, structurally and functionally, between autistic and directed thought'. (Vygotsky, 1962, p. 11).

<sup>2</sup> Piaget, when discussing adult influences, explains that these are not:

'imprinted on them (the children) as a photographic plate. They are 'assimilated', that is to say, deformed by the living being subjected to them and become implanted in his own substance'. (Piaget, 1924, p. 338).

<sup>3</sup> See p. 20 Donaldson, M (1978), **Children's Minds**, Fontana. The experiment described here was designed by Martin Hughes (1975) 'Egocentrism in pre-school children', Edinburgh unpublished doctoral dissertation.

- <sup>4</sup> Brian Foss in **Jean Piaget's Psychology and Epistemology**, Penguin, 1972, points out that Piaget did discuss the effects of cultural and educational background as determinants of a child's cognitive development. On page 36 of this collection of papers, after stating his well known position - that the stages of development follow the same sequence, he adds '...we must ofcourse, consider the factor that is age dependent, and formed by cultural traditions and the communications of education which vary from one society to another.' However, while he may mention this factor, it is by no means an emphasis in his work.
- <sup>5</sup> See Chapter 2 Mallett, M and Newsome, B (1977) **Talking, writing and learning** 8-13, Schools Council Working Paper 59, Evans/Methuen for a detailed analysis of a classroom example using Vygotsky's theory of the two kinds of concept.
- <sup>6</sup> p.78, Wood, D (1988), **How Children Think and Learn**. His experimental results are more fully reported in Wood, D, Wood H.A. and Middleton, P.J. (1978) 'An experimental evaluation of face to face strategies', **International Journal of Behaviourist Development**, 1 (2), 131-147.
- <sup>7</sup> p.80 Wood, D (1988) gives a helpful account of how the term 'scaffolding' is used in the research in Wood, Bruner and Ross (1976) on the role of tutoring in teachers. 'we have used the metaphor of scaffolding to describe this aspect of the teaching process. Built well, such scaffolds help children to achieve heights that they cannot scale alone'.

<sup>8</sup> The extent to which children are encouraged to **negotiate** their learning in current practice may, according to some writers, be less than Bruner and Haste (1987) suggest. Edwards and Mercer for example concluded from their study of 8-10 year olds in British primary classrooms that some teachers are still bearers of 'ready-made knowledge' but avoid 'the crudities of brute transmission'. (Edwards and Mercer, 1987, p. 163).

<sup>9</sup> Bruner assesses the impact of a particular culture on children's intellectual development, pointing out that in hunter-gatherer societies much learning takes place in context: learning to fish or make herbal medicines is learnt by doing, alongside a more mature member of that society. Researchers of Kung society never observed an instance of 'teaching' taking place outside the situation where the behaviour to be learned is relevant. This contrasts with the situation in literate societies where much of the learning school children undertake is for less context bound. (Bruner, Olver and Greenfield, 1966, Ch. 2. page 59).

### **Introduction to Part Two. Children's Non-Fiction.**

<sup>1</sup> Procedural writing is not usually thought of as narrative. It is included here since it is organized on a chronological basis.

### **Chapter 3. Towards a taxonomy of children's Non-fiction.**

<sup>1</sup> A recent study in Britain adopts an approach to supporting children's reading and

writing that is in some respects similar to Cambourne and Brown's. C. Houghton's classroom study (1992) describes and evaluates the work of four children between the ages of 7-11 years. The children's reading and writing tasks all arose from ordinary classroom work on Gerbils. They were encouraged to ask questions about the animals and to seek the answers in books. Before taking up the teacher's invitation to write reports on the creatures, they were shown an entry on Elephants in **The Encyclopedia Britannica**. They were asked directly to model their own accounts on Gerbils on the encyclopedia entry. (Houghton, C., (1992) Non-Chronological Writing', **Reading**. UKRA. Vol. 25. 30-37).

The danger here is that the writing task is an exercise, however exciting the finding out that preceded it was.

#### **Chapter 4. A Consideration of Children's Narrative Non-Fiction.**

<sup>1</sup> Wendy, one of the children in the classroom example referred to texts in this way and the other children and myself took over the term.

<sup>2</sup> It would be misleading to place procedural writing beside narrative writing, but it is usually organized in a time sequence and belongs, very generally, to the left hand part of the taxonomy of children's non-fiction texts at the end of Chapter 3.

<sup>3</sup> Rakhee manages to use the narrative form to reflect on information and findings. (See Appendix 3, example d.) Many of the other children showed competence

over fictional narrative, but seemed unable to sustain informational writing in this form.

<sup>4</sup> This book has both an English and Bengali text.

### Chapter 5. Non-narrative text.

<sup>1</sup> We need to keep this evidence in mind when asking children to summarize materials. It is not easy to make a summary of a summary.

<sup>2</sup> Newton's study of 111 8-11 year olds' response to illustrations in primary science books suggests that good diagrams and photographs are both motivating and an aid to comprehension (Newton, L. (1983), 'The Effect of Illustrations' Reading, 17 pp. 43-55).

<sup>3</sup> Pappas developed her criteria for deciding whether a text was or was not in the information book genre by asking the five identifying questions set out by R. Hasan in "The Nursery Tale as Genre" **The Nottingham Circular**, 13, 71-102 1984b:

- o What elements must occur in every text belonging to the genre?
- o What are the optional elements, those that may or may not occur?
- o Which elements can repeat?
- o Is there a fixed order of occurrence?
- o Is there an optional or variable sequence for some elements?



- <sup>4</sup> A clear account of registers is set out in Doughty, P et al (1972) **Exploring Language** p.185-6. See also Alison Littlefair 1991 for an interesting account of how 'genre' and 'register' can be applied to children's reading development.
- <sup>5</sup> The retrieval devices in David Macauley's book **The Way Things Work** include a detailed main contents page and further contents pages introducing each of the four sections.
- <sup>6</sup> This classroom example is described in 'How Long Does a Pig Live? M. Mallett. **English in Education** NATE Spring 1992, Vol 26, No.1. See also R. Jones' book '**Fantasy and Feeling in Education**' for a fascinating account of children becoming motivated to find out about how a nomadic tribe organise their social lives through witnessing disturbing practices on a video-film.

### Chapter 6. Becoming a reader of non-fiction.

- <sup>1</sup> When we read, each segment of text is held in short term memory while we process it and relate it to other segments. Once this processing is completed we do not need to remember the precise words, only the gist of the meaning. The inclusion of too many clauses in sentences hinders the comprehension of young readers by putting a strain on their short term memory.
- <sup>2</sup> The Edinburgh Reading Tests used in Maxwell's survey, 1972, are a series with different tests according to the age of the pupils. There are four stages, Stage 2

for pupils aged 8:6 to 10:6, Stage 3 for ages 10:0 to 12:6 and Stage 4 for ages 12:0 to 16:0 years of age. There are subtests for each stage, for example, Vocabulary, Comprehension of Essential Ideas, Use of Context and so on. Interestingly from the point of view of Lunzer and Gardner's (1979) conclusions about the unitary nature of comprehension ability the researcher comments:

'These subjects, however, do not appear to distinguish clearly between the different components in reading skills; the total score on each of the tests was taken as a broad indication of reading attainment'. (Maxwell, 1972, p.16.)

<sup>3</sup> There is quite a long tradition of university teachers and school teachers researching together. Education tutors and their students are increasingly researching together as in this example and in the Doyle and Mallett (1994) example in this section. The potential of this welcome trend for student teachers' development as future teacher researchers is considerable. Interesting new initiatives include the work of Wray at Exeter University School of Education, students and tutor are developing ways of supporting children's reading on Teaching Practice, and Goldsmiths' College, University of London, where Gregory is working with a student researcher on Language development in the Bangladeshi community in Tower Hamlets.

<sup>4</sup> The work of Southgate et al, 1981 is treated as a survey in the previous section. However there were some detailed case studies of teachers and children at work

in the classroom. Thus classroom studies can be useful elements within a large scale research study.

### **Chapter 7. Methodology in Educational Research: the choice of design in this study.**

<sup>1</sup> In larger projects, where teachers work with outside researchers and advisors, there may be a lack of communication resulting in a mismatch of assumptions and perceptions between different parties. This is not applicable in the present small scale study.

<sup>2</sup> The question of the place of theory in action research is raised by Walsh in an article entitled 'Philosophy, Education and Action Research' in the first issue of Educational Action Research, Volume 1, Number 1, 1993.

'we need to restore philosophy... to our thinking about education. Theory does not need to be external to practice'. (Walsh; 1993).

<sup>3</sup> If a number of action research studies are carried out it is possible that some patterns will emerge which could inform practice. A number of researchers have suggested that it would be helpful to establish both regional and national databases so that access to other teachers' research on topics of mutual interest would be possible, and would aid corroboration and comparison (Hitchcock and Hughes, 1989; Bell, G.H., 1985). This kind of networking is coordinated by CARN at the University of East Anglia.

4 A short video film of the children making their books was made to serve as an aide-mémoire for me during the writing up of the research.

5 To provide some of the relevant non-linguistic context the right hand column of the transcripts is left free for notes and comments. (See Appendix 2).

6 Was there a 'Hawthorn effect' in this study?

In medical experiments placebos and double-blind designs are used to help counteract the biasing effects of participation (Cohen and Manion, 1989, p. 202).

In educational research wherever conditions are modified and children are observed more closely Hawthorne effects must be considered a possibility. This phenomenon gains its name from the industrial plant where it was first observed.

New working conditions, new organization, and in the school context, new teaching methods and new curricula tend to produce positive results. Changes and the special attention a researcher brings to workers, patients or children tend to provoke an enthusiastic response which can make the evaluation of a new approach difficult. Reber points out that an unpopular innovation might produce a negative Hawthorne effect. (Reber, 1985, p. 137). Even though my own study was not experimental in approach it did introduce changes in approaches to children's use of books and it cannot be ruled out that this affected the level of enthusiasm in the work.

## Chapter 8. The Practitioner Case Study.

<sup>1</sup> Further details about learning special needs in the class following the case study are set out in Appendix 1.

<sup>2</sup> The Hunter-Grundin Literacy Profiles include a range of tasks in important areas of language and literacy abilities, including spoken language and reading attitudes as well as a multi-choice Cloze Procedure.

The Manuals for the Reading Test taken by the children provide norms for converting the raw scores to age-related standard scores or to reading ages.

<sup>3</sup> The **Kinds of Squirrel** category was spread between the **General, Behaviour and Appearance** categories.

<sup>4</sup> Andrew does not include a Contents Page but structures his writing and drawings round his three questions.

1. What is a squirrel's best food best nuts?
2. What is a squirrel's enemy?
3. How many kinds are there?

<sup>5</sup> If we want children to become able to summarize information, texts that are already dense may impede the process. Wright maintains that in a short space of time people can only remember a certain number of ideas.

'Probably the available time for storing information is to some extent a function of how long it takes to read the words expressing the idea. Therefore when more words are used to express an idea, the ratio of ideas to time becomes more favourable. Consequently more is remembered'. Wright (1972) p. 271.

This is not likely to be true that because people remember a condensed view of what they have read, they would have remembered as much if they had read the condensed version in the first place. (Bartlett, 1932; Wason, 1962; Wright, 1972).

<sup>6</sup> In the early secondary school the 'project approach' continued in the form of integrated studies, see for example Mallett, M. and Newsome, B. **Talking, writing and learning 8-13**, Evans/Methuen.

<sup>7</sup> At the time of writing in late 1993, Sir Ron Dearing has been asked to recommend a reduction of content in the National Curriculum areas.

<sup>8</sup> Appendix 11 summarises Judith Langer's American research into children's ability to write different kinds of text.

Langer found children's competence in narrative writing was more secure than writing reports. Not all studies confirm this. For example Taylor (1986) found 4th and 5th graders experienced the same sort of difficulty with summarizing both expository and narrative prose. This difficulty was to do with their 'inability to express main ideas in both rhetorical modes'. (Taylor, 1986, p. 193).

Taylor concludes that we may read passages with understanding but lack the writing skills to convey comprehension in written form. This fits with the oral superiority of the children whose work on Squirrels is evaluated in Chapters 8 and 9 of the present study.

- <sup>9</sup> Newton(1983) found that illustrations, whether photographs or diagrams, helped 8-11 year old children to understand primary science texts. Illustrations were motivating and an aid to comprehension.

**Chapter 9. Becoming reflective readers: an evaluation of factors associated with success.**

- <sup>1</sup> It is in Chapter 9.1.2 that metatextual awareness is examined in most detail.

- <sup>2</sup> This 'bottom up' approach makes more possible the top down model of the National Curriculum. Wells argues this point in Norman, K. (Ed) **Thinking Voices**, 1992, p. 285.

- <sup>3</sup> Latham comments that '... reflection is increasingly recognized as a way of supporting sustained critical thinking, of helping pupils to make explicit to themselves, as well as to others, what they know, understand and can do'. Latham, P. in **Thinking Voices**, 1992, p. 261.

- <sup>4</sup> I found it interesting that Mr P, the class teacher, used this term 'social

constructivist', in evaluating the project, see Appendix 1.

<sup>5</sup> In this part of the study focusing on my teaching I refer to myself as 'the teacher'.

<sup>6</sup> Hayes and Flower comment on the tendency in the process approach for children to be encouraged to get 'peer responses to their work so as to develop a better sense of audience'. (Hayes and Flower, 1989, p. 81).

<sup>7</sup> Applebee directed an American project on writing, **The National Study of Writing in the Secondary School**. He noted in the classrooms he and his team visited some difficulty in 'translating our knowledge of what writers do into instructional approaches in the classroom'. (Applebee, 1989, p. 93).

<sup>8</sup> Richard Andrews in the introduction to **Narrative and Argument**, Open University press, 1989, p.5 explains how the term 'register' is used in Cambourne and Brown's chapter in the same work.

'Register' as used here is almost like 'mode' or 'genre'. It is a term which allows greater commerce between the levels of function and mode in that it is taken to refer to 'types of...discourse... which some specific functions have specific organizational characteristics'. The social determinants of choice of mode are thus made more accessible, while the taxonomy of types, a taxonomy that sees 'exposition' as a register synonymous with argument, delimits the field.



## APPENDIX 1.a.

### Mr P's class of twenty four 3rd year juniors: some background information

For reasons of confidentiality only the pupils' first names are used.

Stephen  
Benjamin  
Michael  
Rakhee  
Mark  
Peter  
Maria  
Wendy  
Lee  
Kerry  
Charmaine  
Andrew  
Kim  
Gregory  
Marie  
Sarah  
Paul  
Pauline  
Grahame  
Carrie  
Tara  
Claire  
Jack  
Stuart

### Standardized reading test results.

The children were tested at age 10 on the Borough standardization of the Hunter - Grundin 4 reading test. The school categorized the results as follows in the table below.

Table 19. Results on the Hunter - Grundin Reading Test, 4.

Ability Bands of the children.			
	High	Average	Below Average
Number of children	1	12	8

N.B. Three children out of the 24 in the class were not tested.

In my analysis in Chapter 8 I added two to the average category on the strength of my

observations and one to the below average category.

### **Number of children statemented for learning difficulties.**

At the time the project was carried out two of the children were statemented for learning difficulties. (One of these was transferred at 11+ to a Borough MLD school).

Another child was excluded some time after the project was completed for social and behavioural difficulties. He went through EBD provision in the Borough and eventually was boarded elsewhere in England.

### **Parental occupations.**

Most of the children in the class had both a male and female care giver, not in all cases the natural parents. The majority of mothers were employed either full or part-time mainly in the nearby factories or as cleaners and dinner ladies. There was considerable male unemployment, however; those in employment worked in mainly semi skilled or unskilled jobs.

Most parents' occupational status was Class IV or Class V of the Registrar General's Employment Categories. (see **Standard Occupational Classification**, a three volume work published by HMSO for the Office of Population; Census and Surveys, 1990-1991).

### **Free meals index.**

In the whole school population it was 30% at the time of the study.

## **APPENDIX 1.b.**

### **Table 20.**

#### **Plan of "Squirrel" Project with 3rd year Juniors.**

Thursdays, p.m. Summer Term 1989.

#### **Session 1. Organization of Prior Knowledge. (Factor 2)**

Children's 'spontaneous' knowledge came through in discussion: the grey squirrel predominates in Kent; squirrels are often perceived as pests in urban areas; squirrels are small, furry, climb trees, use their tails to climb and eat nuts and fruit. They can be studied by observation and by reading about them in books. (See Transcript 1 in Appendix 2). Children wrote in jotters some of the things they wanted to find out about and some of the ways they would learn about squirrels. Audience of 7 year olds suggested for their writing.

**Session 2. Planning Non-Fiction Reading in a Strong Supporting Context. (Factor 1)**

John Paling's *Squirrel on my Shoulder*, a video film from BBC Wildlife narrated by David Attenborough, was shown. Children were asked to note differences between feline and squirrel behaviour. Children's response noted in T-R's research notebook.

Using a flip-chart T-R wrote down children's questions, putting them in categories like 'kinds of squirrel', 'appearance', 'food' and so on. Children were asked to prepare their personal question lists for next time.

**Session 3. Sharing and Researching the Questions. (Factors 3 and 4)**

Children read out questions from their lists. First foray into the books to answer questions. Sharing answers. Class discussion about squirrels' food, habitat, breeding and classifying squirrels. (See Transcript 2, Appendix 2.)

**Session 4. Making Contents Pages for the Books. (Factor 7)**

The children planned the global structure of their information books for the 7 year olds. They also designed their covers.

T-R read out loud from information books in class discussion (Transcript 3). T-R and Mr P supported children's work by talking about the books and inviting the children to read out loud. (Transcript 4) Key concepts and themes emerge e.g. relationship of red and gray squirrels, hibernation and squirrel as prey and predator.

**Session 5. Talking about Squirrels' Food/Talking About Writing an Information Book. (Factors 6 and 7)**

T-R again read out loud from information books to the whole class and there was discussion about retrieval devices and how these help the reader. (Transcript 5)

Work on individual books proceeded. Children drew, wrote and made collages for their books.

**Session 6. Moving Ahead with the Books. (Factor 7)**

T-R and Mr P circulated to help children use the books to support their writing. Each teacher posed questions to help children reflect on the ideas and information in the books. (see Transcript 6 Appendix 2) T-R engaged in a sustained conversation with three children about their reading and their developing abilities to discriminate between the different texts. (see Transcript 7)

**Session 7. Sharing the Books with Each Other. (Factor 6)**

The children gathered on the carpet to enjoy showing their books to each other and to the T-R and Mr P. Some children read out their writing and showed their pictures. (see Transcript 8)

T-R reads *Sciurus* by Jan Taylor. Children work hard to try to complete the books.

**H A L F T E R M**

**Session 8. More Research and a Writing Task. (Factor 5)**

The children tried to finish the books to show the children in Session 9. T-R read more of *Sciurus* by Jan Taylor.

A writing task on *A Day in the life of a squirrel* is begun. It was decided that this writing would be finished for the next week.

**Session 9. Sharing The Books with the 7 year olds. (Factors 6 and 7)**

T-R read more from *Sciurus*. Then the children joined the 7 year old class and read their books to one or two children, then moved on to read their work to someone else. (see Transcript 9, Appendix 2)

Squirrel narratives handed in to T-R.

**Session 10. Overview of the Work.**

Children chose to paint, make clay models of squirrels, create woodland environments in cardboard boxes or to look at the books and squirrel chart. More of *Sciurus* was read, but the book was not finished.

Discussion and reading out loud children's writing.

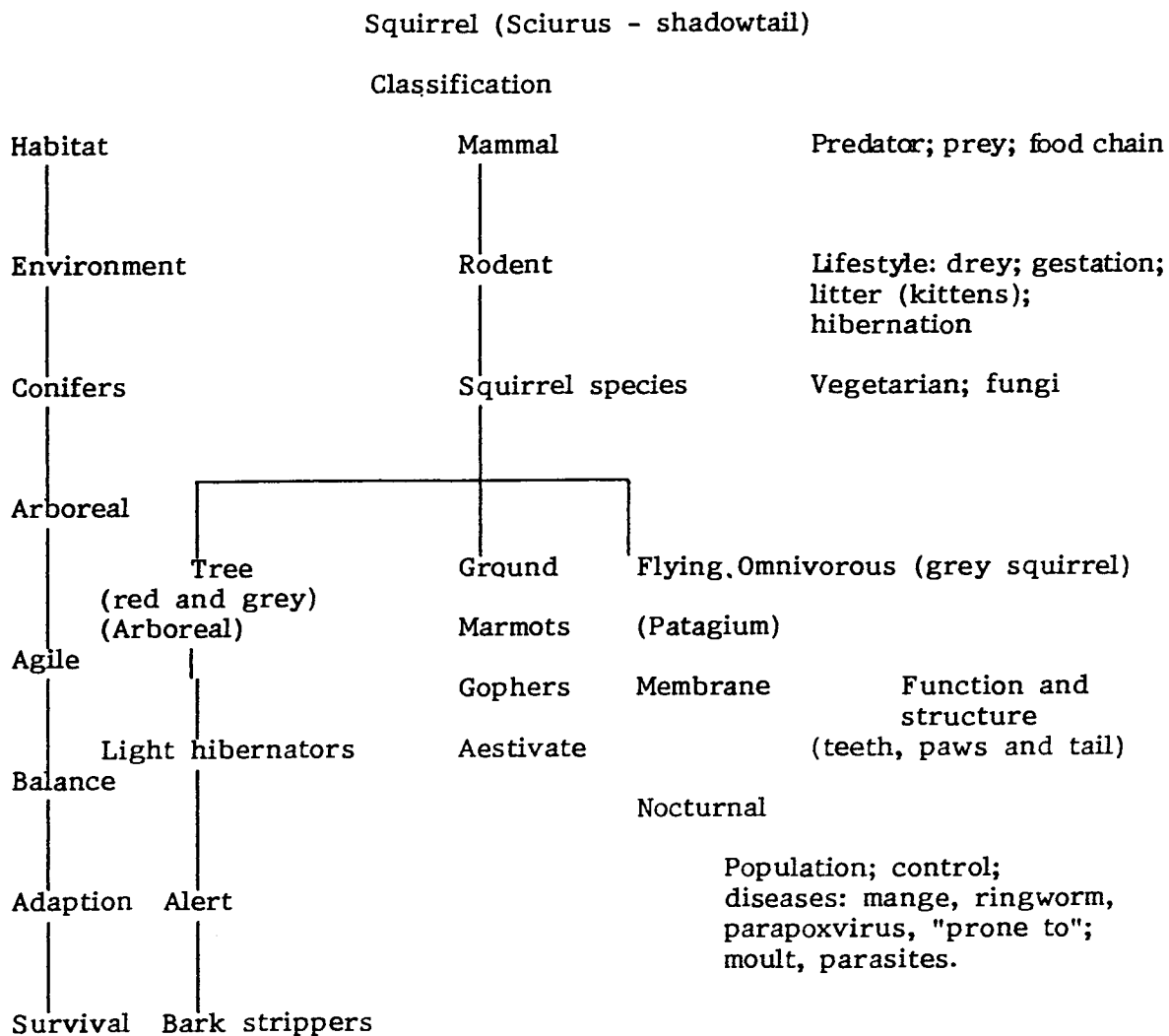
Excerpts from both video films *Squirrel on My Shoulder* and *The Case of the Vanishing Squirrel* were shown on request.

N.B. The Factors mentioned here relate to Table 6. **A Framework for Non-Fiction Reading.** (See end of Chapter 6.)

APPENDIX 1c.

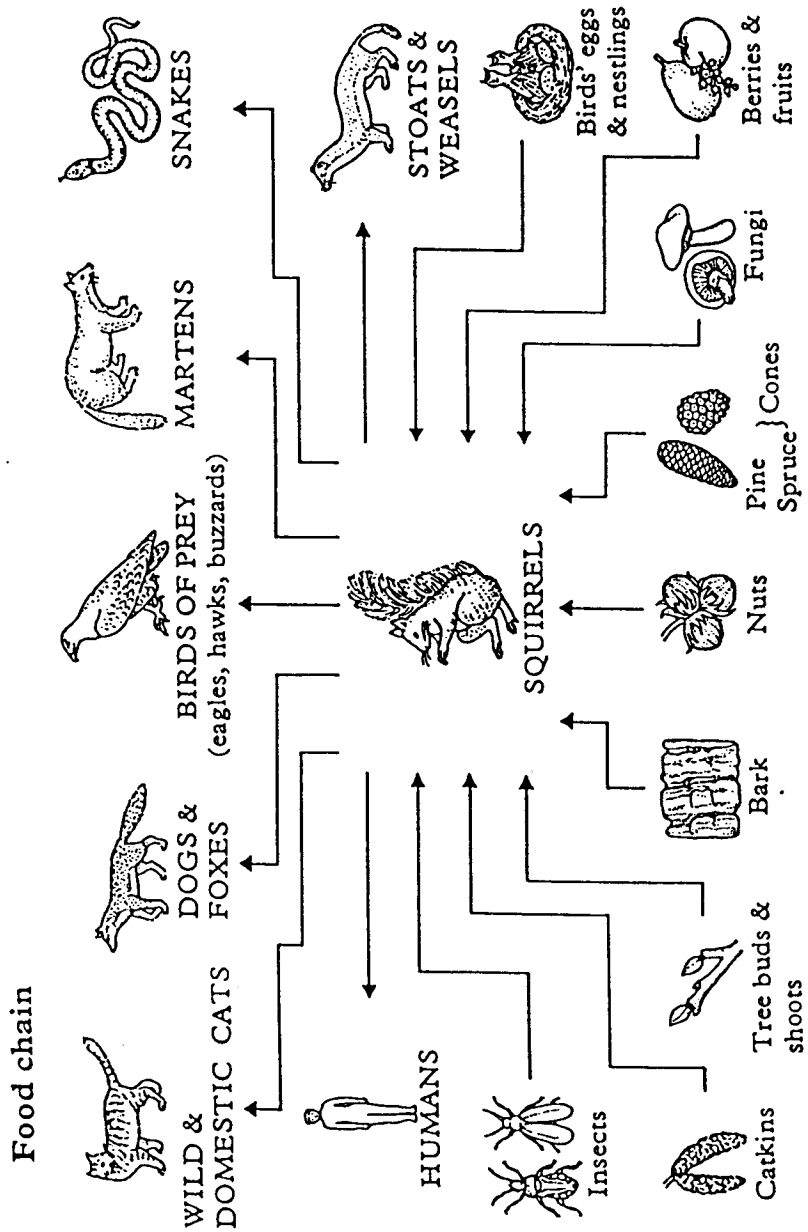
Table 21.

'Scientific' Concepts encountered during book research in the Squirrel Project.



APPENDIX 1.d.

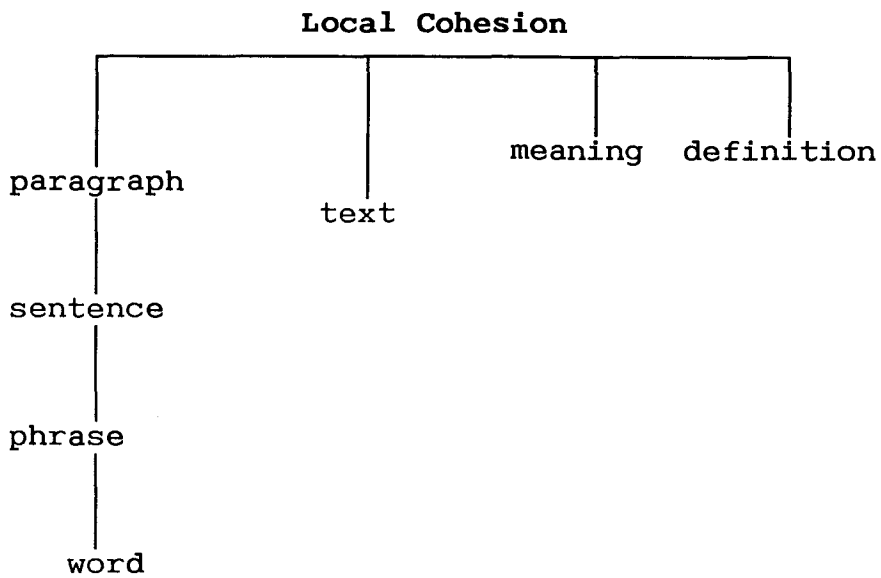
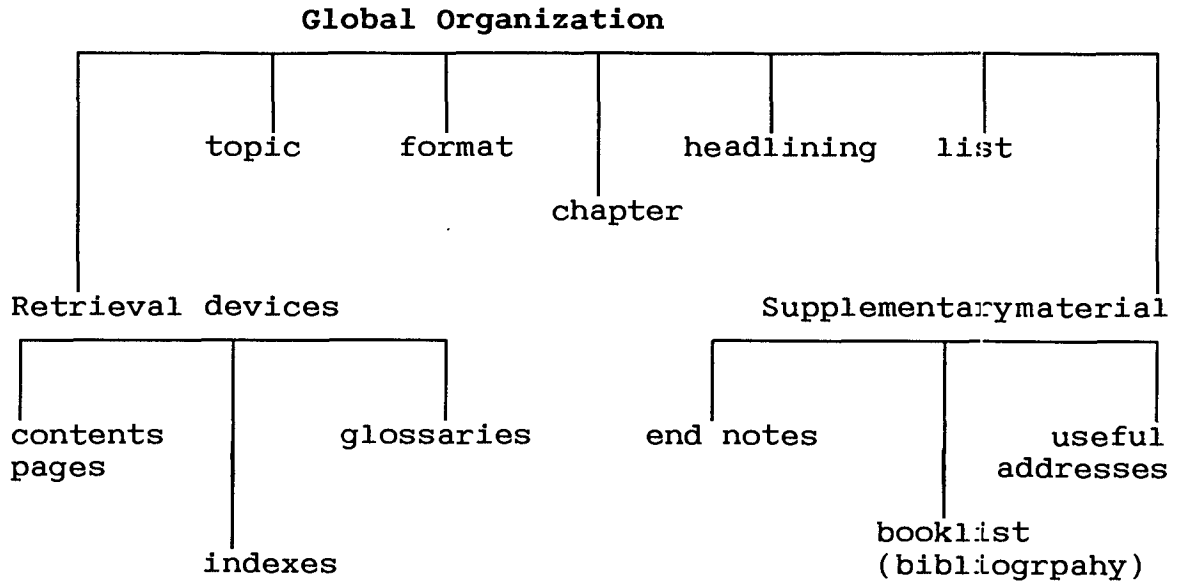
Table 22. The Foodchain Diagram from Squirrel in the Trees.



APPENDIX 1e.

Table 23A.

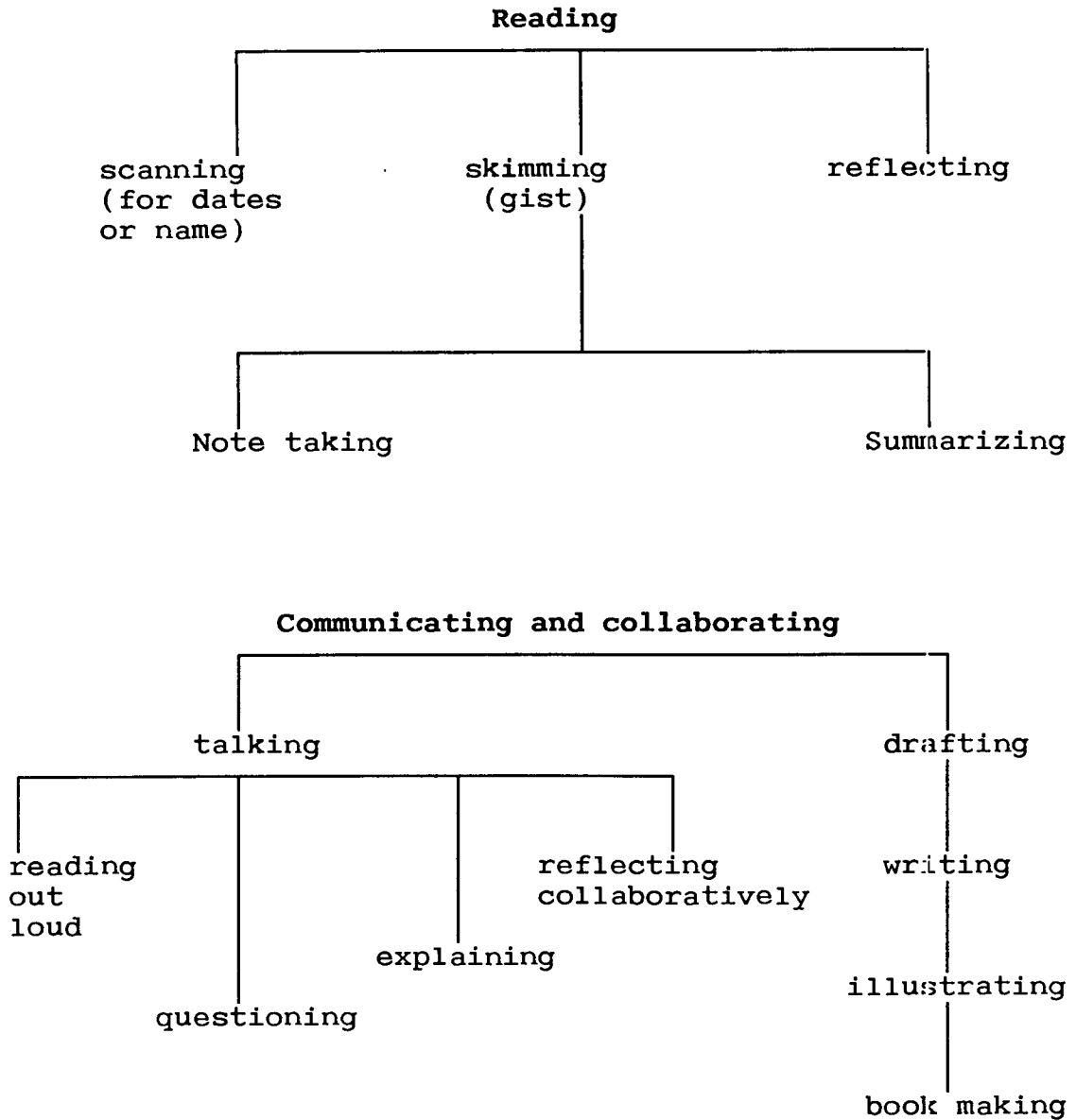
Language About Reading - Features of Books.



APPENDIX 1e.

Table 23B.

Language About Reading Activities.





## APPENDIX 2.

### Transcripts 1-9 of Children's Talk,

1. Organizing Prior Experience.
2. Whole class discussion: food, habitat and classifying squirrels.
3. Teacher reads out loud.
4. Using the information books: talking and reading.
5. Talking about Squirrels/Talking about Books.
6. Vignettes of conversation with individuals and groups.
7. Ben, Wendy and Stuart talk about books.
8. Talking about making their own books.
9. Vignettes of children sharing their own books with a younger audience.

These transcripts provide an indication of the contexts in which children used spoken language to learn about squirrels and about books.

APPENDIX 2

Transcript 1

Organizing Prior Experience  
Whole Class

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
1. P.	My mum doesn't like squirrels... destroy things.	
2. P.	We see loads of squirrels because we live right by woods...	
3. T-R	Which woods are these? I cannot hear... Do they come out of the woods into your garden?	
4. P.	They play on the compost heap... like our back garden's like a jungle and they play and jump about... mess up the dustbins.	
5. T-R	Of course there are different kinds of squirrel as I expect you know. Two main UK kinds anyway.	
6. Several pupils together	Grey squirrels and red squirrels.	
7. T-R	Around here in Kent it's the grey squirrels we see. Anyone ever seen a red squirrel?	
8. Pupil	Yes me!	
9. T-R	Where did you see it?	
10. Pupil	In the woods...	
11. T-R	Are you sure it was a red squirrel? Because in certain lights, with sunshine on their fur, they can be mistaken for red ones.	
12. Wendy	I saw a grey one at the garden centre.	
13. T-R	At the garden centre? Was it Coolings Garden Centre?	
14. Wendy	Can't remember the name.	
15. T-R	What were you going to say Andrew?	

<u>Speaker</u>	<u>Utterance</u>	<u>Comments</u>
16. Andrew	Me and my cousin were leaning on a fence nearby and we were eating peanuts and the squirrels came to get the ones we dropped.	
17. T-R	That's interesting. In the video film we will see squirrels eating peanuts put out for birds and you've experienced that as well.	
18. Andrew	I was watching a squirrel one day and it ran right up a tree, then round, then down again.	Uses gestures to indicate squirrel movement.
19. P.	I saw them when I was at my aunty's house.	
20. T-R	So you know things about squirrels already. If we want to find out more about squirrels how would you go about finding out more about them?	
21. Wendy	Go to the local bookshop and get out a book about squirrels.	
22. T-R	Yes - a good way is to get books to find out about squirrels. Any other ways of finding out about them?	
23. P.	Go to some zoo where they have them and observe them.	
24. T-R	Yes - observe their behaviour in a zoo if they keep squirrels.  So if you wanted to do a study about squirrels apart from getting books which is one good way and watching video films - nature programmes and observing them in zoos what other approaches could we have?	
25. P.	You could just look at them.	
T-R	Yes. You would have to be very quiet and observe them over along time wouldn't you?	

<u>Speaker</u>	<u>Utterance</u>	<u>Comments</u>
26. Andrew	My nan likes watching squirrels. On telly they had this sort of thing for pigeons right? There was special apparatus... they had to peck it with their beak... then they had to pick out a little match stick.	Andrew seems to have seen on a television programme some kind of learning exercise for pigeons. Talk about observing squirrels has reminded him of observing pigeons.
27. T-R	What made you think about that? Was it thinking about observing squirrels that made you remember observing pigeons?	
28. P.	There was another programme where squirrels used apparatus.	
29. T-R	What was the reason for putting the squirrels on the apparatus?	Teacher/Researcher invites child to explain more fully and to give reasons.
30. Andrew	Well what they done they had this kind of washing line thing and this led to a box and there was nuts in there.	
31. T-R	If someone from a distant land who had never seen a squirrel before asked you - what is a squirrel? What would you say?	
32. Pupils call out	It is a mammal small and furry eats nuts and fruit bushy tail climbs using tail	

Transcript 2

Whole class discussion  
about food, habitat, breeding and classifying squirrels.

Speaker	Utterance	Comments
1. T-R.	We know squirrels like nuts but let us see if we can get a bit more detail. When you start writing your book for the younger ones they are sure to want to know what squirrels eat...	
2. Michael	Red squirrels like eating fungi. Red and greys eat different things.	
3. T-R.	You've worked at reds and greys already? Did anyone have a chance to talk to Mrs L's class to ask them what sort of book they would find interesting?	
4. Pupils	{dreys, food, enemies... {reds and greys.	
5. T-R.	I'll read you the section on food from this book.	
(reading)	'During the winter grey squirrels would eat mushrooms' - did you know they ate mushrooms and other fungi? But there isn't much goodness in fungi. Peter?	
6. Peter	How do they know if they are toadstools or mushrooms?	
7. T-R.	That's an interesting question. You've probably heard of people who've eaten toadstools and been poisoned. Anyone know about how squirrels would know?	
8. Peter	smell them...	
9. Tara	They might smell different.	

Speaker	Utterance	Comment
10. T-R.	Yes - and animals have often got a better sense of smell and they would know what was poisonous.	
11. Andrew	But what if they did eat them and got poisoned with toadstools? They might die.	
12. T-R.	<p>Yes, but Peter and Tara have just been saying that animals have a very sensitive sense of smell and that helps them to sniff the fungus and decide whether it is safe to eat or not. They might occasionally make a mistake but on the whole their sense of smell does not let them down.</p> <p>Going on to the drey we know it is a special word for a squirrel's nest.</p> <p>'You won't find many squirrels out and about when it's raining.' When you are writing your books for the younger children you might remember this writer. Do you think a question makes it interesting?</p>	
13. Andrew	It tells them squirrels don't like water.	
14. Wendy	Did you know squirrels sleep with their tails wrapped round their bodies? There's a picture of it.	

Speaker	Utterance	Comments
15. T-R.	<p>Well last we all saw a video and it was about a man who found a squirrel wasn't it?</p> <p>Anyone remember what happened in that video?</p> <p>Yes Peter?</p>	<p>John Paling's wildlife video-film 'Squirrel on my shoulder'. Peter...</p>
16. Peter	<p>(not clear on tape)</p> <p>... baby squirrel ...</p>	
17. T-R.	<p>Yes. Did anyone miss that video? Some of you had music didn't you? Perhaps we could tell you a little more about it so that you will know what happened in that video.</p> <p>What happened was these people were out and they found a tiny squirrel and obviously its parents had been killed. This little squirrel was all on its own and it was so small that if they had left it ... what do you think would have happened?</p>	
18. Children (several)	<p>It would have died.</p>	
19. T-R.	<p>By a happy coincidence the man who found the squirrel happened to have a cat at home and this cat had just had</p>	
20. Children together	<p>kittens!</p>	
21. T-R.	<p>So an idea formed in that man's mind. He wasn't sure if it was going to work. Could anyone take over the story from there? ... tell us what happened then?</p> <p>Yes</p>	

Speaker	Utterance	Comments
22. Stephen	He thought the cat might mind ... look after the little squirrel as well as the little kittens.	
23. T-R.	Was he right?	
24. Stephen	Yes.	
25. T-R.	And is Ben here? Because you said you knew why this experiment had worked.	
26. Ben	Yes - squirrels' milk and cats' milk are much the same. So the squirrel joined in with the kittens.	
27. T-R.	As the squirrel and kittens got older what did we notice about the two different kinds of creature ... some differences?	
28. Stuart	When the squirrel got older ... The squirrel had a tail and the kittens used to attack it.	'Capture kill' instinct referred to in the video film.
29. T-R.	Yes because the squirrel has a large strong tail that makes its behaviour, its activity distinctive ... peculiar to that species, and the kittens did not have such big tails. They weren't able to use their tails in the way that the squirrel did.  Yes Andrew?	
30. Andrew	Like the cat had babies my cousin's rabbit had little babies ... and when they were born they didn't have hair and you could see all their muscles.	
31. T-R.	Yes... baby creatures are often hairless at first. Those who've seen that video ... it had a happy ending didn't it? Because it was released into the wild and then it seemed it was lost and do you remember how when a squirrel came to the house he knew it was Sammy?	
32. Pupils	{He had a little mark, a scar. {Two little marks on his fur.	
33. T-R.	How did he get that little mark. Can you remember?	



Speaker	Utterance	Comments
34. Pupils	{By the cat. {Cat attacked him.	
35. T-R.	By the cat.  The cat had left that little scar so when the squirrel came back to the window - they saw that little scar on his head where the kitten had scratched it. Probably it was done, not on purpose, but when they were playing.	
36. Andrew	It might have been another squirrel that had marks made by another animal.	Andrew offers another hypothesis.
37. T-R.	<p>That's a good point Andrew, but if you think of what's most likely - the fact that the squirrel had come back to the house, and seemed to know the man and the environment <u>and</u> had the little scar - all those things suggest that it probably was Sammy - Do you agree that it probably was? It had come back to a familiar place and had the little scar. Andrew's right it <u>could</u> have been another squirrel - could have got the mark another way - but I think it was Sammy.</p> <p>After we had seen that video you told me all sorts of things about squirrels because in Kent we have a lot of grey squirrels and you know all about where they live.</p> <p>Do you know what people who study nature call the place where a particular animal lives? Have you come across the term?</p> <p>It's quite a useful term - we heard it last time. Anyone remember...?</p> <p>It's called the habitat. You remember it Stephen? Would you like to tell us what you understand by that? The habitat of a creature?</p>	Teacher tries to show on what grounds one theory might be preferred to another.
38. Stephen	It means a special house.	

Speaker	Utterance	Comments
39. T-R.	Well - you are getting close, it's the area where that creature can find the right sort of food and the right sort of conditions to live its life. So if ask you what the habitat of a squirrel is what would you say?	
40. Stephen and other pupils.	{ In the wood. { Woods and trees.	
41. T-R.	<p>Yes - trees and woodland. Yes that is where we are most likely to find squirrels, and some of your gardens were not too far away from woodlands and you sometimes get the squirrels coming into your gardens.</p> <p>So you already know quite a lot about squirrels. If we want to know more you can either do a study of squirrels by going to watch them and making notes about their behaviour, or you could go to books - like these ones I've brought in to find out more about squirrels. When I asked some of you what you wanted to find out about squirrels some of you asked about their teeth. Why do they have such sharp teeth. And you remember in the video the squirrel kept biting the chap quite badly not to be unkind to him but because it is their nature to have their special teeth. I wonder if any of you have thought any more about why squirrels have these sharp teeth ... Yes?</p>	Referring to what children said the week before. Teacher tries to organize prior knowledge.
42. Pupil	To bite into their nuts.	
43. T-R.	Yes it is to do with their food isn't it? They need to have very sharp teeth to cope with the nuts and the plants that they eat.	
44. Ben	So their teeth can move the shell away to get to the nut.	

Speaker	Utterance	Comments
45. T-R.	Yes, as they can break the hard shell and get the nut. We found something else very interesting to do with sharp teeth. We found that we put animals in groups. And which group would you put squirrels into ...? (pause) Which big group of creatures ... (long pause) We talked about the characteristics of them ... Kim?	
46. Kim	Cats?	
47. Wendy	Mammals?	
48. T-R.	Yes mammals. Because they feed their young, suckle their young ... and they've got warm blood - so they belong in that big group we call mammals. But as well as being in that big group of mammals they are in a smaller group of creatures and those creatures are called	
49. Ben	Rodents. They're called rodents.	
50. T-R.	Yes rodents. And we know a creature is a rodent partly by looking at its teeth. Can you think of any other rodents apart from squirrels? Yes?	
51. Tara	A mouse.	
52. T-R.	A mouse, yes.	
53. Stuart	Guinea-pigs.	
54. T-R.	Certainly guinea-pigs. Yes. The food that they eat is very hard. If some of you have pet guinea-pigs you'll know that. Who has a guinea-pig?	
	hands go up.	
55. Pupils	Me! Me!	
56. T-R.	Andrew? You want to say something?	

Speaker	Utterances	Comments
57. Andrew	Dogs?	
58. T-R.	No I don't think dogs are rodents because they don't need their teeth adapted to eating hard things. I have got somewhere ... a picture of a squirrel's teeth. Can you see them?  [Picture of large squirrel teeth shown. Children say 'look - ugh!']	Teacher shows picture.
59. T-R.	They do look rather terrifying close up!	
60. Pupils	[General hubbub]  [That looks sharp! [They're big!	
61. T-R.	I'll give you a chance to look in detail at some of these pictures. I thought I would just take one of the books and read you a little bit about it.  Now if you were in the library and you were looking for a book of this sort...	
62. Tara	If you were going to find a book about squirrels ... picture on front.	
63. T-R.	What were you going to say Peter?	
64. Peter	You would look for a book with a squirrel on the front.	
65. T-R.	Yes, the author of the book will have thought - how can I make this cover interesting to children who might want to use it. Here a lovely photograph of a squirrel eating a nut is chosen for the front cover ... and there's a nice clear title and then the name under there (pointing). Why?	
66. Gregory	So you know who wrote it.	

Speaker	Utterance	Comments
67. T-R.	Yes and sometimes we are shown other names like who has taken the photographs or drawn the pictures. If we open it up what do we find? We find?	
68. Wendy	The contents page.	
69. T-R.	Yes the contents page. The person who has written this book has listed all the things, that they are going to tell us about. Why is it helpful to have a contents page? Not all books have them, do they? What would you say, Ben?	
70. Ben	So you can find what information you're looking for quick.	
71. T-R.	You might want to look up a certain sort of behaviour, a particular aspect of a squirrel ... instead of having to read through the whole book, if you look at the contents page, that directs you to a particular part of the book and here the contents are ... 'grey squirrels', 'in close up', 'what squirrels eat', 'the drey'. Anyone like to say what the drey is?	Teacher expands on Ben's succinct answer demonstrating with the book.
72. Ben 73. T-R.	<p>The nest where they sleep.</p> <p>Yes it is their nest.</p> <p>... 'about squirrels mating', 'the litter', 'enemies' and at the very back it says 'Index'.</p> <p>It is a sort of dictionary isn't it? Does everyone know how to use an index?</p> <p>So if you wanted to look up rodents for example ... look up rodent ... on page 7.</p> <p>So this book, as well as having a contents page, has an index at the back to help you with finding what you need.</p>	demonstrating.

Transcript 3.

Teacher-researcher talks and reads out of an information book to the whole class. Main topic 'food'.

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
1. T-R.	Well everybody, everybody ready? Mr Pratt has shown the squirrel book covers we have been making. This is a nice one. Jack's? And Peter's?	
2. Peter	That's mine.	
3. T-R.	And Peter's squirrel is a red squirrel. There are two UK squirrels you remember. Reds.	
4 Pupils (several)	and greys.	
5. T-R.	Some of your covers show reds, some grays. Now here is someone's cover and they have called their book <b>The Squirrel Book</b> .  There is a cover showing a red and a grey squirrel, and it shows a title written down the middle which is rather nice.* Well done Wendy. And this is a clear title - <b>Information about Squirrels</b> . Some of you have printed the title in large bold letters which makes it beautifully clear. Well done Rakhee. Another grey squirrel. Pauline? Yes.	
6. T-R.	Make sure you put your names on these books when I give them back to you.  I thought this would be Ben's - because of the flying squirrel! Where is Ben? Yes, one of your questions was about how flying squirrels are able to fly.  And Mark's cover is good, and here's Clare's and another nice one - <b>The Squirrel book of Information</b> . Stuart? - well done on your cover. And here is one - a nice one - but no name.  Now we will tell Mrs...?	
7. Mrs G.	Gooding.	Mrs Gooding is a parent helper who was with the class for a short period.

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
8. T-R.	<p>Mrs Gooding what we have been learning about. We have been finding information from books and we are taking the books made to a younger class, the 7 year olds, and we asked them what they would like to know about squirrels. That way the children knew who they were writing the books for.</p> <p>Some of you have younger brothers and sisters in that class. Has anyone asked them what sort of things, they would like to know?</p>	
9. Pupils	<p>hibernation... all about them, food and all that.</p>	
10. Lee	What they eat and all that.	
11. T-R.	When you are writing for younger children what sort of things do you need to bear in mind? ... when you are writing for children who are a bit younger than you?	
12. Charmaine	Don't write too hard words.	
13. T-R.	<p>Yes - not too many complicated words. Might not understand. What else apart from the writing might help them enjoy it?</p>	
14. Stephen	Pictures.	
15. T-R.	<p>Yes. And we now have quite a lot of books on the table to help with your ideas for illustrations.</p> <p>It is helpful to show squirrels in their habitat.</p> <p>Do you remember we talked about <b>habitat</b> last time?</p>	
16. Andrew	Mrs M, I've got a book my Dad brought back for me and it has got a squirrel picture in it.	
17. T-R.	Good. That's good. I thought you were going to say what you thought Habitat meant.	
18. Stephen	It is an area where they live.	

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
19. T-R.	<p>Yes an area where they live.  ... Where the right food is and where that creature's living space is. Habitat is a word you would need to explain carefully if you are going to use it in your book.  What about the name for the squirrel's nest?  Remember?</p>	
20. Graham (and others)	Drey.	
21. T-R.	<p>It may be some of the 7 year olds have not heard that word. So you need to say what that means as well.</p> <p>Last time most of you did your contents page ... and decided how you were going to structure your information book.</p> <p>Some people included food, some people are going to have a section on kinds of squirrels. Some people .. included breeding and the young squirrels, and so on.</p> <p>But there is quite a lot more writing to do to get these books under way.</p> <p>Who has included food in their contents page?  (most hands go up)  ... and who has managed to write something about that?  (a few hands go up).</p> <p>Let us just think again what a squirrel eats. When we first talked about it everyone said nuts, but when we looked in the books we found out they ate many other things as well.</p>	<p>Teacher tries to indicate that a writer's options are usefully seen in terms of the intended audience.</p> <p>Thinking through what has been said before and bringing it together collaboratively will help children organize their thoughts ready for the written accounts.</p>



<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
22. Grahame	leaves ...	
23. T-R.	Yes certain sorts of leaves.	
24. Jack	Blackberries.	
25. T-R.	Yes blackberries and other soft fruits.	
26. Ben	Birds' eggs.	
27. T-R.	Yes Ben - occasionally, we read, they eat birds' eggs.	
28. Andrew	mushrooms.	
29. T-R.	Good. Yes.	
30. Gregory	and fungi.	
31. T-R.	<p>Yes good. In fact mushrooms are a certain sort of fungus.</p> <p>Did you know the mushroom is a fungus and that there are other kinds as well. And we were saying that squirrels like other wild creatures probably know when something is poisonous.</p>	<p>This is an attempt by the teacher to suggest that human beings organize the world hierarchically. Mushrooms are a category in a larger class of phenomenon called 'fungi'.</p>
32. Paul	Their smell helps.	

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
33. T-R.	<p>Yes a very keen sense of smell helps here. They know by smell if something is good to eat. Good. Right. Well let me find the book that I was reading to you.</p> <p>Let me read something about food and feeding because, Andrew, this is something you nearly all have down in the contents page of your book. It would be odd to have a book about squirrels without something on their food.</p> <p>'Squirrels are mainly plant eaters and most of their food comes from the trees. They eat all kinds of nuts, including acorns, hazelnuts, walnuts, beechnuts and chestnuts. They also eat many other woodland foods'</p>	Teacher explains why the reading is relevant.
34. T-R.	<p>and someone mentioned blackberry which was very good. 'blackberries, rose hips, and hawthorn berries.'</p> <p>'Red squirrels and others which live in coniferous woodlands feed mainly on the seeds from pine, spruce or larch cones.'</p> <p>Now, have you thought about how a squirrel eats its food?</p> <p>Some of you were saying you lived near woods and that the squirrels came into your gardens and sometimes ate the nuts and plants in your garden. What does a squirrel look like when it is eating?</p> <p>Yes Peter?</p>	Encouraged to pause and reflect.
35. Peter	<p>It sits down and brings its claws with the nut in front of itself. It makes its claws like a hand. And it gnaws its food.</p>	

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
36. T-R.	<p>Yes it brings its head down to gnaw the nut. And as Peter says, holds the nut in its claws, or hands almost.</p> <p>'When feeding on the ground they often have a favourite perch, maybe a tree stump or a log, for eating. Squirrels have a clever way of opening hard shelled nuts, such as hazel nuts, to get at the kernel.'</p> <p>And do you remember how they crack these nuts that have a very hard shell?</p>	Reading is linked to conversation.
37. Stuart	Well they get the nut and they gnaw it a little bit.	
38. Ben	They gnaw it a little bit first. Before they can get it open.	
39. T-R.	<p>So what they are really doing is weakening the top.</p> <p>Andrew, would you put that down please?*</p> <p>So they are weakening the top of the nut and then they open the nut and get the good things inside.</p> <p>Good.</p>	* One of the very few times a controlling comment was necessary.

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
40. T-R.	<p>When you are writing this, and you are using the books, how can you make sure you are writing your own ideas in your own way ... not just copying?</p> <p>Andrew? Ben? Rakhee?</p> <p>Do you think as we have talked a lot about food and thought about it and I've read from books - you already know quite a lot and you don't need to copy. You may go to the books to find another detail. You can check information too in the books.</p> <p>Something interesting here ...</p> <p>'It only takes a squirrel only a few minutes to strip and eat thirty or forty seeds.' So they eat terribly quickly.</p> <p>And 'one red squirrel can eat over a hundred pine cones within a day.'</p> <p>Look - here is a grey squirrel eating a piece of apple.</p> <p>In your own books for the younger children you might have a picture of a squirrel eating. Because they can learn from your pictures how the squirrel holds the nut or the fruit.</p> <p>'Food is generally harder to find in the summer and this is when the squirrels gnaw at the barks of young trees. They often tear off long pieces of bark to feed on the sweet sappy wood beneath. Unfortunately this often damages and may even kill the trees.</p> <p>Squirrels are basically vegetarian.'</p> <p>What does that mean?</p>	<p>Teacher suggests children know enough to <b>use</b> the books not be controlled by them.</p> <p>pause to invite reflection.</p>
41. Pauline	Vegetarian means they eat vegetables and plants.	
42. T-R.	Yes. Good. It says here they are <b>mainly</b> vegetarian. So they are basically vegetarian. And we know they are not completely vegetarian...	
43. Grahame	They sometimes eat meat ...	
44.T-R.	What kind?	

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
45. Greg	Birds' eggs and birds.	Children bring their common sense knowledge to bear appropriately on topic.
46. T-R.	And they might even eat a baby bird.	
47. Ben	A vegetarian can have eggs or milk.	
48. Pupil	.. not meat.	
49. T-R.	<p>Yes. you're right most vegetarians can have dairy products, unless they are very strict. These strict ones are people called vegans. But most vegetarians have some dairy products - but don't eat actual animal.</p> <p>So basically squirrels are vegetarians but they do ... we might say <b>supplement</b> their diet. They do sometimes have meat.</p> <p>Now this is very interesting. It says here 'squirrels rarely drink except in very hot weather. They get most of the water they need, Andrew, can you just turn round please, from - what would you think?</p>	
50. Ben	From their other food, juicy leaves and that.	
51. T-R.	<p>Yes some of the leaves and berries provide them with liquid.</p> <p>It says here they sometimes lick up the dew on the grass.</p>	
52. Stephen	I've seen the squirrels on the lawn when there is dew in the morning.	
53. Andrew	My cousin left some chips out in the garden and he saw a squirrel eating them.	

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
54. T-R.	<p>They will eat most things given a chance. 'Squirrels are well known for their habit of hiding and storing food. They do this especially in the Autumn when food is plentiful. Nuts and pine cones are buried in the ground or hidden away in dreys, tree trunks and hollows. These stores help squirrels survive at times when food is hard to find. But squirrels do not plan ahead deliberately. They seem to discover hidden food more by chance than memory. They rely on their sense of smell to find it. Some pine cones are forgotten and become young seedlings. In this way squirrels can be useful in helping to plant trees.'</p> <p>When I was about your age I thought squirrels hibernated and slept through the winter, but they don't. They are what we call <b>light hibernators</b>. They keep waking up to find nuts and then sleep again.</p>	Shows how book information modifies our existing beliefs.
55. Peter	I thought they did store a lot of nuts so they could eat them.	
56. T-R.	Well they do - but according to this book they don't always remember where they put them.	
57. Peter	I was looking at a book and it said they do make a pile of nuts and they do that so if they wake up hungry they know where some food is.	
58. T-R.	<p>Yes they don't sleep the whole winter - they do, as Peter says, wake up for food. So they don't hibernate in the way that a tortoise does.</p> <p style="text-align: center;">* * *</p> <p>Teacher invites writing, distributes books, tells class teacher who has been away from the classroom about what has been done this session. Reminder about glossary.</p>	

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
59. Mr P.	<p>That's good, and you people need to match your writing to the audience - to Mrs L's class.</p> <p>So you need to write as they can understand.</p> <p style="text-align: center;">* * *</p> <p>Children return to desks and begin work with books.</p>	

**Transcript 4.**

**Using the information books: talking about them and reading them.**

Teacher-researcher moves around the class talking with individuals and groups as they use the books.

<u>Speaker</u>	<u>Utterance</u>	<u>Comments</u>
1. Stephen	I went to a park and fed a squirrel nuts. They came up to us to get the nuts and 'cos they were scared... instead of coming straight to us - they go like that... because they are shy. Then they would take the nut in their mouth and go away.	Jack and Stephen are working together at a table.
2. T-R	Were they grey squirrels?	Makes zig-zag movement with fingers.
3. Stephen	Yes. I saw one come down a tree.	
4.T-R	When was this?	
5. Stephen	I was out with my mum and dad, my uncle and my auntie and my brother.	
6. T-R	Did you tell them we were learning about squirrels at school?	Focusing the topic on school learning.
7. Stephen	Yes. I knew they were shy - in the books - and I had to come up quietly.	Pupil responds to teacher's focusing comment by referring to knowledge from books.
8. T-R	So you worked out a way of observing them.  Now let's have a look at your books. Jack where did you get the idea for this little scene with the squirrels at the front?	Looking at front cover.
9. Jack	.. thought of it.	
10. T-R	You're going to do food, and then kinds of squirrel, their habits ... and what's that?	reading from Jack's contents page.
11. Jack	The drey.	



<u>Speaker</u>	<u>Utterance</u>	<u>Comments</u>
12. T-R	The drey and the young. The books tell us about this. Your contents page is nearly done. Mr. P. is going to help us bind the books.	
	Gap in tape.	
13. Mark	In this book it says the grey ones weigh more than the red ones. In this film there was a lady tagging them.	Moving on to Mark.
14. T-R	You are talking about the video that Tara brought in...a film from TV about Jessica Holm's work.	<u>Squirrels</u> Jessica Holm. Video film - 1988 wildlife BBC <u>The Case of the Vanishing Squirrel.</u>
15. Mark	They had got diseases and she put a band on them if they ain't got anything.	Tara asked her father to make a video film from the television of Jessica Holms, the zoologist's programme named above.
16. M-R	She tagged them if they were clear of any disease? was she working with the grey's and red's.	
17. Several Children	Reds.	
18. T-R	Why was she doing the work?	Other children on Mark's table are listening to our conversation.
19. Jack	She was trying to catch them and tag them.	
20. T-R	But was there a special reason she had tried to do this work with the grey squirrels?	T-R's questions are both genuine requests for information and an attempt to get the children to reflect on what they had watched.
21. Jack	To study their diseases. They are much more active in the dark.	
22. T-R	So the reds are more nocturnal than the greys?	
23. Stephen	Yes, and Mrs M, when there's not a lot of food the grey ones might get it all.	
24. Mark	Her dog didn't do nothing. Just sat there.	

<u>Speaker</u>	<u>Utterance</u>	<u>Comments</u>
25. T-R	<p>So Jack, if you look at your contents page you will see what you need to write. You could write it on a piece of paper and when you are ready we could stick it in the book.</p> <p>Now Stephen - your book - your contents..... any more writing to show me?</p> <p>You've got 'food', 'where they live', 'kinds of squirrel' and 'predators'.</p> <p>Jack, would you like to find a book with something about habitat of squirrels?</p>	T-R takes up a directive role to try to keep up the momentum of the work.
26. T-R	So this is <u>My World of Squirrels</u> by Christine Butterworth. "Is there a park or wood near you? Are there some trees near?"	
27. Stephen	I'll read. "Grey squirrels live in oak trees and beech. They make their homes in the trunks of the tree."	
28. T-R	So this helps with writing about 'habitat' and 'dreys'.	Reading can inform written accounts.
	Gap in tape as T-R moves to another group.	
29. T-R	<p>Mark. Oh yes! You have a very full contents page. You are going to look at 'food', 'habitat (where they live)', you've added 'where they live' so the younger children will know what 'habitat' means? 'Breeding', 'predators'(enemies), 'kinds of squirrels'.....</p> <p>'The things that squirrels eat' - can you read this to me ?</p>	T-R responds to Mark's attempts to take audience for his writing into account.
30. Mark	'The things that squirrels eat - eggs, apples, nuts, fruit, bark, pine cones, fungi.'	'Fungi' is probably taken from a book. This is fine - one way of increasing vocabulary but you need to know what the new words mean.
31. T-R	<p>Do you know what fungi are? What is the fungus they might eat?</p> <p>Mushrooms, perhaps, toadstools, if not poisonous to squirrels.</p>	

<u>Speaker</u>	<u>Utterance</u>	<u>Comments</u>
32. T-R	You have <u>Squirrels</u> by Andrew Davies, lovely pictures of different kinds of squirrel - flying squirrel..... Can you read a little bit of this from 'Squirrels around the World'? (Mark struggles with the word 'habitat')	
33. T-R	That's the word we said meant where plants or creatures live.....habitat.	
34. Mark	"They live in forests all over the world in tropical rain forests and the much colder forests in.....Russia."	Mark reads with some difficulty.
35. T-R	So really most squirrels, including the grey squirrels that we've been looking at, live in trees, don't they?  So your next task is to write something about where they live and their dreys.	Looking at Mark's contents page.
	Gap in tape.	
36. Ben	This is what I've done.	(bringing folder of work)
37. T-R	Did you see the video that Tara brought in ? Can you tell me a little about it - I was out when that programme was on.	
38. Ben	Well, there was this lady and she was finding out about the squirrels, and she looked to see if the red squirrels had a special collar on. If it had a collar she put it on a special machine. It has to be set to a squirrel frequency and that tells her if it is ill or alright. She finds the squirrel - puts this trap down and there is a cage - he runs in the cage and she puts a collar on.	
39. T-R	And this was to check their health?	
40. Ben	Yes, to see if they had any diseases.	
41. T-R	And these were red squirrels? Why do you think she was studying them like this?	

<u>Speaker</u>	<u>Utterances</u>	<u>Comments</u>
42. Ben	So she can find out why they're disappearing. And there was two men who were studying grey squirrels and they were weighing them as well.	
43. T-R	Did they come to some conclusions about why the red squirrel is less common now ?	T-R tries to take Ben from description to analysis.
44. Ben	Well the grey squirrel was bigger and he got all the food and the red squirrels didn't get much.	
45. T-R	So is that because the grey squirrels are eating up the food supplies?	
46. Ben	'food', 'habitat', 'breeding', 'predators' and 'kinds of squirrels'.....	Ben does not answer but draws attention to his contents page.
47. T-R	(reading out loud from Ben's work) "A squirrel eats all sorts of things -berries, fruits, mushrooms, plants and sometimes apples."  I like the illustrations.  Now you need something about the squirrel's habitat?  This <b>Squirrel in the Tree</b> book is about that. "The grey squirrel is a tree living squirrel". So this tells about the squirrel's habitat. What would you say the squirrel's habitat is?	<b>Squirrel in the Tree</b> by Susan Coldrey.
48. Ben	Woods.	
49. T-R	Could you read me some of this from <b>Squirrel in the Tree</b> ?	
50. Ben	(reading) Their main habitat is up in the trees. Here they are safe from most enemies and it is here that they build their nests to sleep and shelter in. Squirrels sometimes nest in holes in trees. They also build hollow ball-shaped nests made out of twigs and bark and lined with moss. These are called dreys. They are usually wedged between the branches, and are quite easy to spot up in the trees, specially in winter when most of the trees lose their leaves.	Ben reads fluently with appropriate 'expression' and a feel for cohesion in the longer sentences.

<u>Speaker</u>	<u>Utterance</u>	<u>Comments</u>
51. T-R	Is there anything here that you did not know about squirrels that this has told you?	T-R's attempt to get Ben to reflect on his reading.
52. Ben	Yes - that the drey was easy to see in winter. And the lining of the nest with moss.	
53. T-R	Yes. Anything else? We knew the dreys were ball shaped before. I like the way it says they are 'wedged' - nice way of putting it, isn't it?  Read a little more?	T-R draws attention to the metalingual aspect - choice of vocabulary.
54. Ben	"When you walk through some trees look up into the branches. If you are lucky you may see a squirrel, climbing and leaping about in the tree. If you move quickly, standing still to listen, now and again, you might hear the squirrels chattering and calling as well as moving through the leaves and occasionally dropping nuts or pine cones on the ground.  The trees provide a lot of food for squirrels including nuts, seeds, fruit and shoots. You may find the scattered remains of the feeding on the ground under the trees. Look for the split shells or husks of nuts and also notice nibbled toadstools, bulbs, shoots or a bare patch on the tree-tops where squirrels have stripped all bark to feed on the sap beneath"... beneath. You may see scratch marks on the bark of trees and foot prints in the mud.	Ben reads with great enjoyment.  Ben's intonation remains high as he expected 'beneath' to be followed by a noun. So he repeated it with correct intonation.
55. T-R	Good. You read well, Ben. Do you like writing too?	
56. Ben	Yes.	
57. T-R	Do you think that using information from books, videos and what you already know you could write a piece for your book? Then you would be moving forward and soon you can read it to the younger children.	This comment reflects the T-R's anxiety that the writing tasks are being accomplished rather slowly.
	Gap in tape.	

<u>Speaker</u>	<u>Utterances</u>	<u>Comments</u>
58. T-R	Tara? Is your book here? Do you want to get it?  Peter, how are you getting on?	
59. Peter	My squirrel book's coming along good. I'm writing about their food.	
60. T-R	And you Tara - Mr P says you and your dad made a copy of a TV film on squirrels. What is it about?	
61. Tara	It was about a lady called Jessica and she was looking at red squirrels and she had a dog. It knows where the squirrels are, but it don't hurt them.	
62. T-R	So the dog is trained to be gentle with them?	
63. Tara	It just watched them?	
64. Tara	She weighed them and she left traps so that they could study them. She put a case thing down and when they ran through they got trapped. She didn't hurt them. She was just looking for diseases and that.	
65. T-R	May I borrow that video tape ? It was good to tape record that programme and to let Mr P and the other children see it. Why was she looking at <u>red</u> squirrels?	
66. Tara	She wanted to know if grey squirrels were really a threat to the reds. She found out they were cousins.	
67. T-R	Greys and reds are cousins?	
68. Tara	Sometimes the birds took the nuts she put down for the squirrels. The film shows you how they crack the nuts.	
69. T-R	How is the book coming along?  So you are doing sections on 'the drey', 'food', 'where they come from', 'starting a family'.	Reading the contents page.

<u>Speaker</u>	<u>Utterance</u>	<u>Comments</u>
70. Tara	(pointing) That's going to be the tree.	
71. T-R	So when the flap in the tree is moved the squirrels spring up. Would you read me your account about 'The Drey'?	This visual effect is evidence of appreciation of what the young audience will like.
72. Tara	"They build their nests out of twigs and leaves. They build their nests in trees".	Tara reads from her own book.
73. T-R	Are you using the books or did you already know this?	
74. Tara	I knew a bit but I found out a bit more from the books. I wanted to know what they made their nests with.	
75. T-R	You are making this for Mrs L's class - so what do you think might make it interesting for them?	
76. Tara	Pictures. You could have a squirrel saying "where's my nut?", and you could have a flap in the page - lift it up - and there you could have their nuts and food.	Tara shows a strong sense of the needs of the audience for her writing.
77. T-R	Then when you've finished we can bind the book. Next you are doing 'where they come from.' We've got these books from the library until 30th May - so its all right. There is something here about where they come from, but it is quite difficult. Do you think you could read a little bit if I help?	
78. Tara	"The grey squirrel..."	
79. T-R	"called Sciurus Carolina"	
80. Tara	"is one of the most widespread and..."	
81. T-R	"familiar"	
82. Tara	"to be found in the woodlands of Britain."	<b>The Grey Squirrel</b> by Jennifer Coldrey.
83. T-R	Do you know what widespread means? What do you think it <u>might</u> mean? One of the most widespread animals found in Britain?	Tara pauses.

<u>Speaker</u>	<u>Utterance</u>	<u>Comments</u>
84. Tara	er.....	
85. T-R	It means spread over the land. There are a lot of them in the different woods.	
86. Tara	"The grey squirrel is less prone to disease."	
87. T-R	What does 'less prone to disease' mean do you think?	
88. Tara	The grey ones might get the disease but it don't harm them too much but the red ones die of the disease.	Tara has been invited to make her assumptions about word meaning explicit.
89. T-R	Yes. Good. The grey ones are hardier. Those photographs are by John Paling - who was in the <b>Squirrel on my Shoulder</b> video film.  So that tells us something about where squirrels come from - the grey squirrel comes from North America originally. The one that was already here was the red squirrel. So you could include some of this information. You can also look at this book by Christine Butterworth.	
90. Tara	This tells you where they live and what they eat.	Looking at <b>The Squirrel</b> by Butterworth.
91. T-R	Yes 'what they eat' and 'making the drey' - it's the Coldrey book that tells us where they come from.  Would you say this book by Butterworth is easier than the Coldrey one?	
92. Tara	Yes.	
93. T-R	When you put 'where they come from' in your contents page, did you mean which country did they originally come from or their habitat - woodlands?	
94. Tara	Where they originally come from. The grey from North America - you know that lady, Jessica, in the video.....	
95. T-R	Who got this book?	points to Jessica Holm's book <b>Squirrels</b>



<u>Speaker</u>	<u>Utterance</u>	<u>Comments</u>
96. Tara	I think it was Michael.	
97. T-R	This is very up-to-date isn't it? I'll buy a copy. Whittet Books Ltd., 1987 - I might be able to send for one.  Can you read the sorts of things she includes.	
98. Tara	'The Squirrel's body', 'From the inside', 'How long do squirrels live and what kills them?', 'Squirrel parasites', 'building a nest', 'mating and raising a family'.	Reading from Holm's contents page.
99. T-R	You've got something about that in your contents page.	
100. Tara	Yes. 'How do squirrels find their food?', 'how do you attract squirrels to your garden.....'	Continues reading from Holm's contents page. Turning to back of Holm's <b>Squirrels</b> at publisher's invitation.
101. T-R	Can you read a little bit?	
102. Tara	(reading from back book cover) 'Everybody loves a red squirrel, but many see the grey squirrel as the baddie who drove out the reds by chasing and killing them...'	
103. T-R	'thereby...reducing their numbers.'	
104. Tara	'However as the author explains things were not that simple, numbers of reds declined...'	
105. T-R	'drastically in Britain between 1900 and 1925 which is well before the grey squirrel became established' so...it can't just have been that the grey squirrels were killing them if the numbers had been going down before there even were many greys here.  Well done, Tara.	T-R points to relevant parts of the text.  T-R demonstrates how a mature reader assess how convincing an argument is.

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
	Children are writing and drawing for their information books T-R has brought if fur material etc. to enhance squirrel pictures.	
	General hubbub -	
1. p.	Mrs M. Can I have grey fur. red fur etc.	
2. p.	May I have some white?	
3. T-R.	Do they have white chests?  Yes they do. You're right.	
4. Greg	I've got a picture of a grey squirrel and a red one. I thought the grey one was supposed to be bigger but they look the same size in this picture.	
5. T-R.	Yes I thought the grey squirrel was bigger. The fur was really for the squirrels' tails. There is not enough for everyone to have more than a little piece.	
6. Wendy	Some squirrels from other countries are all different colours.	
7. T-R.	Yes, but here they are grey or red.	
8. Greg	Mrs M. - you were right. It says here grey squirrels are bigger.	

**Transcript 5. Talking about Squirrels/Talking about Books.**  
**Talking about Squirrels/Talking about Books.**

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
1. T-R.	The children you are making the books for will want to know what squirrels eat - as well as nuts.	
2. Stuart	I think they eat pine cones. The red squirrels eat different things to the grey squirrels.	This something for the teacher to note and exploit as a theme.
3. T-R.	You have already started to look at differences between reds and greys. Good.  Anyone asked Mrs L's class what they would like to know ... what sort of book they would find interesting?	It has already been established that the 'audience' for the book is the 7 year old class.
4. Ben	We talked to them after assembly. They was asking ... Do they hibernate? I think they do.	
5. T-R.	Yes, yes.	
6. Stephen	They wondered what we was thinking about.	
7. T-R.	We need to take the books to them when they are made, and read them to them and talk to them.  It helps to know who you are writing the books for. What does it mean if you are writing book for children about age 7? What sort of things would you bear in mind when you are doing the writing and <b>organizing</b> the book which is important ...	Teacher moves discussion to metatextual matters.

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
8. Ben	Don't use too many hard words or they won't understand ...	
9. T-R.	Yes - but if you <b>did</b> need to use a word like 'habitat' or 'rodent' and you might well want to use those words, is there a way of getting round the fact that they might find them hard? Anything you could do to help them with hard but important words in the subject?	
10. Stuart	If you were reading them a book you could pause and say do you know what that means, what rodent means.	
11. T-R.	Yes - good you could pause and check they know what it means. If they said no, you could explain - it's a creature with teeth specially adapted for gnawing hard things.  And some writers of information books have an index and what is called a <b>glossary</b> . This is a collection of the more difficult words in the book with explanations.	
12. Ben	Here's a glossary in this book!	Ben shows class the glossary in Coldrey's <b>Squirrel in the Trees</b> .
13. T-R.	Well done you've found a glossary in the book.  Not the same as an index that just lists words - rodent, dray and so on but a glossary <b>explains</b> the meaning of the words.  So if we had dray - the seven year olds might not know what that word means so the glossary would say something like 'dray: a squirrel's nest in the trees made out of twigs and leaves.'  Now we were talking about <b>habitat</b> earlier. What might we put if 'Habitat' was in the glossary?  Could anyone suggest what they might put?	Children invited to apply what they have had explained.
14. Carrie	Habitat - where an animal lives.	
15. T-R.	Good - and you could add - in the case of a squirrel it would be in ...?	

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
16. Pupils (several)	The trees.	
17. T-R.	<p>So a glossary can help to explain words to younger readers.</p> <p>So, to go on with the food 'Squirrels eat lots of different kinds of food. In Autumn there are plenty of nuts about. If you look under a hazel bush you might find some empty shells on the ground where the grey squirrels have been feeding. Adult squirrels have been feeding. Adult squirrels usually split the hazel nut shell in half to gain the hazel nut inside. They often have to gnaw the nut shell before they can split it open.' So they need to gnaw the nut to make it easier to break.</p>	
18. Peter	They gnaw it, grind it so it is easier to split.	
19. Andrew	Some squirrels live near churches, they do.	
20. T-R.	<p>Yes, maybe there are trees near churches sometimes.</p> <p>'During the winter grey squirrels sometimes eat mushrooms.</p>	

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
21. T-R.	'As soon as the Spring arrives the squirrel can go back to the trees and feed on the new buds and leaves of the chestnut. At this time of year birds are nesting and laying eggs. Squirrels raid the nests, taking the eggs and sometimes the young birds.'	Teacher reads to familiarize children with book language.
	Pause	pause for reflection on what has just been read.
22.	So they are not completely vegetarian. They eat vegetarian food - nuts, plants, fruits and tubers but they are quite prepared to eat eggs and even the baby birds. So although the squirrel looks nice it is a wild animal and can do things that might seem cruel to us.	Demonstration of how a mature reader assesses content of text.
23. Andrew	Some squirrels might go into a nest to get eggs and then fall asleep there.	
24. T-R.	Yes, that could happen. Peter?	
25. Peter	Mrs M. If a squirrel is not a veg ...	
26. T-R.	vegetarian.	
27. Peter	vegetarian that would be why on the video it bit the man's finger.	
28. T-R.	I don't think it was biting his finger for food though. It's part of its nature to use its teeth in that way to get its own way.	Teacher tries to respond positively to all responses, even if there is a relevance problem.
29. Peter	But it does bite things that are not plants.	
30. T-R.	Yes, I see what you mean. It does bite into meaty sorts of things like fingers!  Stephen? Sorry Michael?	

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
31. Michael	Does any kind of squirrel lay eggs?	
32. Pupils (several)	{ No { Course not	
33. T-R.	No - you remember the baby squirrels are born and look like little versions of the adults. Warm blooded animals - don't usually lay eggs.  I'll show you a marvellous picture of some baby squirrels later on.  They don't look very pretty when they are first born. They are like kittens - hairless.	
34. Pupil	Guinea pig babies have fur.	
35. T-R.	Yes they are just like tiny adult guinea pigs.  (Children talk about baby creatures. Tape difficult to transcribe.)	
36. Wendy	Babies have to stay with mother until they have fur.	
37. Carrie	... have to be able to eat other food than milk.	
38. Rakhee	You must not disturb mothers or they might hurt the babies.	
39. Andrew	My cousin's rabbits had babies and the father <b>killed</b> them!	
40. T-R.	Yes, I'm afraid that sometimes happens.	
41. Andrew	They've got some more now.	
42. T-R.	Yes, it seems cruel - but as you were saying, when they are disturbed they may panic. If young wild creatures are touched by human hand they are sometimes rejected.  Anyway we now know something about what a squirrel eats. Shall we have a recap on that?	Hearing someone recap orally and taking part may help summarizing abilities to develop. (Southgate et al 1981.)

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
43. Tara	Nuts, fruit.	
44. Andrew	Mushrooms.	
45. T-R.	Yes.	
46. Tara	Pine cones.	
47. T-R.	Yes good, tubers and roots.	
48. Carrie	Fungus.	
49. T-R.	Yes good - all kinds of fungus and mushrooms are one kind.	
50. Rakhee	Leaves.	
51. T-R.	Do they? Yes I think you're right - some kinds of shoots and leaves.	Teacher is honest about not knowing, helping to create an atmosphere of learning together.
52. Tara	eggs and baby birds.	
53. T-R.	Yes eggs and even the baby birds sometimes. Michael?	
54. Michael	possibly some flowers.	
55. T-R.	Yes.  Now going on to the dray which, as we were saying is the special term for a squirrel's nest.  Reading.  'You won't find many squirrels out and about when it is raining.' You know when you are writing your accounts for the younger children - take notice of the way this writer has written this book.	Teacher moves from content to metalingual/metatextual consideration.



**Transcript 6** T-R is joining different groups as the children work on their books.

<u>Speaker</u>	<u>Utterance</u>	<u>Comments</u>
1. Andrew	Mrs M ... look at this squirrel. It's got a disease. What does it say?	Andrew is reading Coldrey's <b>Grey Squirrels</b> .  Kim and Lee look over Andrew's shoulder at the photograph in the book.
2. T-R.	'This squirrel has mange' (reading from the line at foot of the picture). Mange makes the hair of furry creatures fall out.	
3. Andrew	Will it die?	
4. T-R.	I don't know. I think a parasite gets under the skin and this makes the hair fall out. Poor creature it is probably feeling itchy.	
5. Andrew	Can another squirrel catch it?	
6. T-R.	If it got close it might. The parasite might move from one squirrel to another I suppose.	
7. Kim	Can people get it?	
8. Lee	People have not got fur!	
9. T-R.	People can get ring worm on their heads I think. Where is my big dictionary? (Wendy brings the <b>Shorter Oxford Dictionary</b> ).	

<u>Speaker</u>	<u>Utterance</u>	<u>Comments</u>
10. T-R.	(Placing book in front of Andrew, Lee and Kim).  'Mange - skin disease in hairy and woolly animals, caused by an arachnid parasite and occasionally communicated to man'.  So parasites, little creatures like ticks and mites get under the creature's skin and irritate it. And yes, Kim, people can get it, but not all that often.	This is a good opportunity to demonstrate how a dictionary is used. T-R paraphrases the dictionary item.
11. Andrew	Can I show Ben and Greg?	The motivational impact of collaboration and sharing is evident here.
12. T-R	When we get together later would you like to show the whole class. (Andrew nods)	Andrew has shown sustained interest in this topic and deserves the reinforcement showing the others will bring.
13. Michael	(a little group have gathered round Andrew) Jessica Holm has got a section in her book on Squirrel diseases. Can I read some of that to them? It says they can get ringworm and it is round their ears.	
14. Andrew	Can they get better?	
15. T-R.	If it was not too advanced a vet might have treatment, a chemical to kill the mites. But it is difficult to treat wild creatures.	

<u>Speaker</u>	<u>Utterance</u>	<u>Comments</u>
<b>Conversation 2.</b>		
1. T-R	I see Peter from your contents page you are going to write about all different kinds of squirrel. So are you going to do the ones in the UK?	
2. Peter	Yes - the red and grey tree squirrels.	
3. T-R	(Reading from Peter's contents page) then you've got food, enemies, making the drey... so what are you going to work on next?	
4. Peter	I've done what they eat so now I'm going to do all the different kinds of squirrels.	
5. T-R	So shall we find a book to help you? This one (Tittensor) is about <b>The Red Squirrel</b> so let's find another one.  Turning to the contents page in Holm's <b>Squirrels</b> 'Some members of the squirrel class'. Do you think that might be about the different kinds?	
6. Peter	Yes, I think so. 'There are at least 267 species of squirrel. They are...'	Peter reads from Holm page 12.
7. T-R	'spread out'	
8. Peter	'over the whole planet except for'	Peter finds the text difficult so Teacher/Researcher takes over.
9. T-R	'except for Australia, Polynesia, Madagascar, South America and totally undesirable places like deserts and ice caps where no self respecting squirrel would want to go anyway.'  Look Peter those are pictures of the different kinds of squirrel. You could draw some.	

<u>Speaker</u>	<u>Utterance</u>	<u>Comments</u>
10. Ben	Look flying squirrels! And mountain beavers. And pygmy squirrels.	
11. Peter	'The biggest, the smallest and the cutest squirrel.'	Reading from page 13 in Holm's <b>Squirrels</b> .
12. T-R	Do you like the design of the book - the pictures, jokes, diagrams and page numbers encased in squirrel shapes?	
13. Ben	There was this lady, in the video film Tara's Dad taped for her, and she was finding out about squirrels. She had a special machine set to a squirrel's frequency. When it rings she goes to find the squirrel and tags it and weighs it. She has a special little cage* to observe it in.	*I think Ben is referring to the wire mesh handling cone used by naturalists.
14. T-R	Was she studying grey or red squirrels?	All my questions were genuine as it was only later on I managed to see the video film Tara had persuaded her father to make from a TV <b>Wildlife on One</b> programme in 1989.
15. Ben	Red. To see if they have any diseases.	
16. T-R	I wonder why she was studying them in that way?	
17. Ben	So she can find out why they are disappearing. There were two men studying the grey squirrels in a different wood. And they was weighing the squirrels as well.	
18. T-R	So did the researchers come to any conclusions about why the red squirrels are disappearing?	
19. Ben	The grey squirrel is bigger and healthier and he gets a lot of the food and the red squirrels don't get much.  Ben now reads about Squirrels' habitat and homes from <b>Squirrel in the Trees</b> (Coldrey).	This issue was taken up as a 'key concept' in one of the class discussions.

<u>Speaker</u>	<u>Utterance</u>	<u>Comments</u>
20. T-R	What have you learnt from reading that section on habitat and dreys?	
21. Ben	That the drey is easy to see. And they line the nests with moss.	
22. T-R	Yes. We already know the nests were ball shaped. I like the way it says they are 'wedged' in the tree. Nice way of putting it isn't it?	

Transcript 7.

Transcript of three nine year olds, Ben, Wendy and Stuart discussing with teacher/researcher some of the information books they have been using while engaged in the 'squirrel' project.

<u>Speaker</u>	<u>Utterance</u>	<u>Comments</u>
1. T-R	<p>What I want to do... is ask you about using these information books. Sometimes I work with children like you - as Mr P. does - but I also work with students who want to teach children. We all want to know what you think about the different information books... which ones are useful. So let's look at some of these that you have actually been using... and see what you think.</p> <p>Shall we look at this one first <b>My World of Squirrels</b> by Christine Butterworth.</p>	
2. Wendy	I've got a friend called Andrea Butterworth.	
3. T-R	Have you? So... Stuart is this a book you've used during your squirrel research? Was it helpful?	
4. Stuart	<p>I found it helpful to find out what a squirrel eats... about pine cones... nuts and everything. It says grey squirrels can look like red squirrels because in daylight they have bits of red on them.</p> <p>And... grey squirrels bury their nuts in minutes.</p>	
5. T-R	So the book's strong points?	

<u>Speaker</u>	<u>Utterance</u>	<u>Comments</u>
6. Stuart	Good on predators, enemies. You can find out about a squirrel's activities, how they jump and... what their predators are. The pictures are photographs and they are colourful.	It is interesting to note that this book does not use the word 'predator'. The word has come up in class discussions and Stuart is able to use it appropriately.
7. T-R	What about the writing? Any difficult words or ideas? Would please read a little bit of the book to us Stuart?	Stuart shakes his head.
8. Stuart	'Is there a park or a wood near you? Are there some tall trees there? Maybe some grey squirrels live near your house.  Grey squirrels like to live in oak and beech trees. They make their homes in the branches of these trees.'	This introduction echoes spoken language in the questions and then proceeds to book language generalisations.
9. T-R	Would all three of you find that easy to read?	Children agree they would.
10.	You were saying, Stuart, that the book is strong on predators. Does the book tell you what a predator is? I know you all know but younger children reading the book might not.	
11. Stuart	Predators are things that hunt and hurt you.	
12. T-R	Suppose a child read the word 'predator' for the first time, would they have any way of knowing what it probably meant?	

<u>Speaker</u>	<u>Utterance</u>	<u>Comments</u>
13. Stuart	The picture would help. 'The squirrel keeps a sharp look out for danger. This hawk is hungry... the squirrel sees the hawk and quickly makes her way up the tree.'	Looking at a picture of a hawk in the book and then reading the nearby writing.
14. T-R	But this book does not seem to actually use the word 'predator'.  Are there some children in the class who might find this book hard?	
15. Ben	I think Stephen and Jack would.	
16. T-R	Let's choose another one. Which of these would you like to discuss Ben?	
17. Ben	<b>Discovering Squirrels.</b>	
18. T-R	Now having looked at the Butterworth book how would you say this one is different?	
19. Ben	The print is smaller and there is an index and a glossary.	
20. T.R	What sort of words are in the glossary?	
21. Ben	'Drey: a squirrel's nest in the trees made out of twigs.' 'Habitat: the natural home of any plant or animal.'	
22. T-R	Suppose someone from a younger class asked you what a glossary is - what would you say?	
23. Ben	It is a list of hard words together with sentences to say what they mean. 'Predator: an animal that kills...'  Gap in tape	
24. Ben	'Flying squirrels are found in parts of Asia, Europe and America. These animals have two flaps of furry skin stretching between their front and back legs. These flaps open like a parachute when the squirrel jumps, allowing it to glide through the air from tree to tree. Unlike other squirrels flying squirrels are active only at night...'	Ben, who has shown a particular interest in flying squirrels, reads this from <b>Squirrel in the Trees</b> (Coldrey, 1986)



<u>Speaker</u>	<u>Utterance</u>	<u>Comments</u>
25. T-R	Stuart - I know you came across a word that means 'active at night'?	
26. Stuart	- nocturnal. It won't be in the glossary because it's not in the writing in that book.	
27. T-R	Yes. Ben one of your questions was 'how do flying squirrels fly?' Does that explanation tell you clearly? Can you tell us then, what it is about a flying squirrel that makes it possible for it to fly?	The researcher tries to relate children's questions to book study.
28. Ben	... the special skin under their arms and legs.	
29. T-R	Yes and how does that help them would you say Stuart?	
30. T-R	So the special flaps of skin open?	
31. Stuart	Only when it is flying... if it is heading for a branch - then with its tail it swivels round the branch and lands.	
32. T-R	But how exactly do these flaps help?	Researcher tried to encourage the kind of explicitness necessary in writing.

<u>Speaker</u>	<u>Utterance</u>	<u>Comments</u>
33. T-R	<p>So we have a creature perfectly adapted to doing this.</p> <p>We have not asked you about the illustrations in this book. Are they drawings or photographs?</p>	
34. Ben	Photographs.	Ben turns to page 10 to show a photograph of a flying squirrel in action.
35. T-R	<p>Those parachute things are quite large aren't they? They must look quite a sight flying through the air!</p> <p>Ben and Stuart - did you use this book to help you write your own information book?</p>	
36. Ben	I used the bit about grey squirrels nibbling shoots and branches... I put in my words.	Page 11 <b>The Squirrel in the Trees.</b>
37. T-R	Anything you particularly liked or otherwise about this book?	Researcher aims to encourage the idea that we can be critical readers.
38. Ben	It has a glossary but no index.	In an earlier session we had talked about retrieval devices as one aspect of information books.
39. T-R	A glossary is a sort of index except that an index tells you which page a fact or topic is on.	
40. Ben	Look - that's how they curl up!	Looking now at page 15 in <b>Discovering Squirrels</b> Davies, 1986 where there is a photograph of a hibernating squirrel.

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
41. T-R	We should let Wendy tell us about this one. Wendy is there a contents page and index in this book?	
42. Wendy	Yes 'What are squirrels?' then 'Different kinds of squirrels' and something on food... it's good - the main things are in bold print and less important things not..	Reading from contents page in <b>Discovering Squirrels</b> .
43. T-R	Yes, bold print for important main headings, less bold for other ideas.	On another occasion the children praise this highlighting of main headings and key vocabulary.
44. Wendy	Index and glossary. In the glossary the main word is in bold print.	
45. T-R	What would you say is the difference between an index and a glossary?	
46. Ben	In the index or the contents page you would just find something like 'baby squirrels' but in the glossary it gives meanings.	
47. T-R	... and the index is in alphabetical order isn't it? Whereas the contents page is according to...	
48. Wendy	- the topic.	
49. T-R	What about the illustrations and photographs in this one Wendy?	

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
50. Wendy	Drawing and photographs.	Wendy turns to page 17 in <b>Discovering Squirrels</b> to a drawing of flying squirrels in action.
51. T-R	I wonder why that is a drawing while all the other illustrations are photographs?	
52. Stuart	It can show you more clearly in a drawing... like those special bits of skin for flying.	
53. T-R	So the purpose of that illustration was to show the parachute flaps and how they open in flight, and you're saying it is made clearer in this drawing?	
54. T-R	Anybody like to tell us what they think about Animal World series <b>The Squirrel</b> ?  Would you choose a little bit to read us Wendy to give us a flavour of the writing?	<b>The Squirrel</b> Propper, 1977.
55. Wendy	'Squirrels live deep in the wood where it is cool and dark. If you see half eaten pine cones lying on the ground between... fir trees, you can be sure squirrels are not far away.'	Wendy pauses before 'fir'. I found this surprising in view of the pictures and the mention of pine cones.
56. T-R	What do you think about the language in this book? Stuart? Fairly straightforward, Wendy?	
57. Wendy	Yes - suited to our age I think and it is interesting.	
58. T-R	Illustrations?	
59. Wendy	Look they are all drawings.	
	Gap	
60. T-R	What do you think children might find difficult about information books like these?	
61. Ben	If they have no glossary...	
62. Wendy	Some of the words can be hard.	

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
63. T-R	If you have some difficult ideas to put across and you were writing in information books how could you help the reader a little bit?	
64. Stuart	Have a glossary.	
65. Ben	Help by having good pictures.	
66. T-R	Yes and diagrams? You were saying, earlier on, that the Butterworth book looks as if it is for younger children than you. What about <b>Squirrel in the Trees</b> the Oxford Scientific Films book?	
67. Stuart	The cover makes it seem a harder book.	
68. Ben	Well yes 'Oxford' and 'Scientific' suggest that it is hard.	<b>Oxford Scientific Films</b> is written below the title.
69. Wendy	On this one the sky is an unlikely blue - and there's a big squirrel - it looks for younger ones.	She points to <b>The Squirrel</b> , Macdonald.
70. Ben	Look it says the baby squirrels are born with their eyes closed.	Ben is looking at page 19 in <b>Squirrel in the Trees</b> .
71. T-R	A lot of baby creatures are. Kittens are. Actually baby squirrels are called kittens.  Shall we look at how each book covers the topic 'baby squirrels'? I'll tell you about mine. This is one of the ones you think looks like a book for younger children as soon as you see the cover. On page 25 there are some photographs of baby squirrels and it says 'when the babies are born they cannot see, they have no fur or teeth. After a week they have some fur but still no teeth. They still can't see, their eyes are shut tight'. It shows how they change as they get older. 'At four weeks they are prettier, their eyes are open and they still take milk from their mother'. Does the McDonald book tell us more or not Wendy?	Looking at <b>Squirrels</b> by Christine Butterworth.

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
72. Wendy	'Their eyes will stay closed for about 30 days... it will soon be summer. The three young squirrels are now two months old, and they look quite different'	
	Gap in tape.	
73. T-R	What does it mean if an arrow points towards the squirrel?	
74. Stuart	It means it is eaten by the squirrel and if it is pointing away from the squirrel to another creature, that creature eats the squirrel - so it is the other way around.	Teacher/Researcher and children examine The Food Chain diagram in <b>Squirrel in the Trees.</b> (Appendix 1d.)
75. T-R	So we can see what squirrels eat.	
76. Stuart	Tree branches, catkins, shoots, bark, nuts, cones, fungi... birds eggs.	Stuart has spent some time working out the diagram in a previous session.
77. T-R	What about what eats the squirrel?	
78. Stuart	Predators are fox, birds of prey, martens and snakes.	He checks through the diagram as the others watch.
79. T-R	Do you prefer to have this kind of information in the form of a diagram or in writing?	
80. Ben & Stuart	Diagrams.	
81. T-R	Wendy?	

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
82. Wendy	I still think you need writing to tell us about it.	Actually the trouble here is that the writing does not really tell us very much to help us interpret the diagram or to understand the food chain.
83. T-R	Does this writing actually tell us much about the diagram?	
84. Stuart	It says 'Most of the food that squirrels eat comes from the trees in their woodland habitat. Squirrels in their turn are eaten by predators that live and hunt among the trees. If we drew a diagram we see how squirrels form a link in the food chains between various plants and animals.'	
85. T-R	But we have to work out ourselves what the arrows mean.	Many children found the meaning of the arrows difficult to understand.
	Gap.	
86. Stuart	It says something about greys and reds - I'll read it. 'In England, red and grey asquirrels sometimes live together in the same patch of mixed woodland. They may compete with each other for food and when this happens the greys are usually more successful than the reds. Grey squirrels are larger, stronger and apparently healthier than red squirrels. They seem to settle down more easily when they move into new areas of woodland, but it is not true that they attack and drive red squirrels out deliberately.'	<b>Squirrel in the Trees</b>
87. Wendy	There is something about grey and red squirrels in the McDonald book. 'In many areas the grey squirrel moved into the red squirrel's territory'.	Reads page 39.
	Gap.	

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
88. Wendy	It says 'because squirrels are usually alert and agile they have relatively few predators...'	The topic has now moved back to predators.
89. T-R	Yes they are 'alert'.	
90. Wendy	'Ready' that means.	
91. Ben	'Squirrels are eaten by weasels, foxes, coyotes, bobcats and badgers. Eagles, hawks and owls will also catch squirrels for food.'	Continuing where Wendy left off.
	Gap in tape.	
92. T-R	I might read some of this book to the class. Anyone like to read a little bit to us? Stuart?	<b>Scurius: the story of a grey squirrel</b> by Jan Taylor.
93. Stuart	'Scurius woke with a start; something strange had given him a fright. He knew very little of the world because he was only thirty two days old, but he was using his senses and learning fast. He could feel the cold air coming in through the entrance hole of the nest in the tree trunk, and the warm bodies of his brother and sister.'	
94. T-R	Just pause Stuart, do any of you see any difference between what Stuart is reading and the other books we have looked at?	T-R tries to encourage reflection about different kinds of text.
95. All	This one's story.	
96. Wendy & Ben	An <b>information</b> story.	
97. T-R	Can you say anything else about how they are different? Is one any easier than the other?	
98. Ben	You could use these (pointing to information books) if you were doing a topic - and the story if you wanted a break and you were interested in squirrels.	
99. Wendy	Those ones give more information.	
100. T-R	You think the information books tell more?	



<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
101. Ben	Well, like professionals have looked at squirrels for the information books, but not for the stories.	
102. Stuart	Yes. You don't need to be an expert on squirrels to write a story about them.	It helps though! Beatrix Potter uses her naturalist's knowledge in <b>Squirrel Nutkin</b> .
103. T-R	Well let's just see about the author. Wendy?	
104. Wendy	'Jan Taylor has always been interested in natural history...' [Reads from cover of <b>Scuirus</b> ]	
105. T-R	So the author is an expert. Do you think you can learn from stories?	
106. Wendy	Yes.	
107. T-R	Would you ever have a contents page for a 'Scuirus' type book?	
108. Wendy	No.	
109. Ben	You <b>could</b> have one - there is chapters written near the front.	

## Transcript 8.

Children are sitting in the carpeted discussion area with their own information books. The purpose was to provide a context for sharing what they had written, and what they had learnt from information books used. Teacher researcher and class teacher join the discussion.

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
1. T-R.	<p>You have been making information books about Squirrels for Mrs L's class.</p> <p>If we work hard to finish them we may be able to take the books and show them to the children you have been writing them for. You will then feel your hard work has been appreciated. Later I would then like to take them home to read them and show them to my students. But I will bring them back.</p> <p>What I want to know is how helpful you have found the information books. So you may want to go the display table where Mr P and I put the books to show us which ones you used.</p> <p>So these books are nearly completed?</p>	
2. Peter	They aint quite completed yet some are and some aint.	
3. T-R.	<p>Right. You will have time after this discussion to finish them.</p> <p>Did you all stick to your contents page?</p>	
4. Pupils	I did, I didn't etc. General hubbub.	
5. Peter	Mine doesn't match my contents page.	
6. T-R.	<p>So you will need to bring your contents page in line with what you actually did. The other thing we talked about was having a glossary.</p> <p>What is a glossary?</p>	
7. Michael	If the children don't know a hard word you can show them a list at the end of your book saying what it means.	

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
8. T-R.	Good. So what sort of words have we come across that you have put in your glossary?	
9. Ben	Habitat - means - like homes in the forests and trees. Squirrels' homes.	
10. Peter	You could write about how a squirrel gnaws. You could write - squirrels are gnawing creatures.	
11. T-R.	Yes. So the glossary in your books will be words to do with squirrels.	
12. Rathee and Maria (together)	Dray.	
13. T-R.	What would you put in your glossary?	
14. Maria	The dray is the home of the squirrel.	
15. T-R.	Good. Is there a word that means the same sort of thing as a dray?	
16. Ben	The dray is where the squirrel lives.	
17. Stuart	A nest.	
18. T-R.	Yes - a sort of nest for a squirrel isn't it?	
19. Michael	(puts hand up. T-R nods and he reads from back of his book).  Prey. An animal that is hunted and killed by another creature.	
20. T-R.	Which creatures is a squirrel prey for?	
21. Greg	Fox?	
22. Ben	Cats and eagles.	
23. Greg	Snakes ... and human beings.	
24. T-R	That is a good point. Human beings are the main predator to squirrels. Is the squirrel a predator to any other creature?	

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
25. Ben	Eats birds eggs.	
26. Michael	Nests, nestings, insects maybe.	
27. T-R.	Yes eggs and perhaps even the baby birds.	
28. Andrew	(reads from book) The squirrel eats leaves, and apples and snails and cat food, eggs and ...	Greg leans over to help Andrew read his list.
29. Greg	Mushrooms.	
30. Andrew	and mushrooms.	
31. Ben	Cat food?	
32. Andrew	Yes. They eat cat food.	
33. Peter	Cat food? They eat cat food?	
34. Andrew	Yes, they do. They eat cat food.	
35. Ben	I never saw a squirrel eat cat food.	
36. Peter	It doesn't mean it's its BEST food though.	
37. T-R.	Shall we look at some of the books? Jack? That is a good cover. Nice clear squirrel, Jack. Do you want to tell us about your contents page?	
38. Jack	I didn't do one.	Stuart tries to help Andrew.
39. Stuart	(looking at Jack's book) you HAVE got a contents page, look - there!	
40. Jack	Food...	
41. T-R.	Perhaps the writing is a bit small.	

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
42. Stuart	(reading Jack's book) food, enemies Can't read his writing.	
43. T-R.	Never mind, Jack, you have included something about what the squirrel eats, and its enemies.	
44. Jack	Yes - leaves, eggs, acorns, berries, mushrooms, catkins.	
45. T-R.	Good.  Stuart's cover is clear too 'The Squirrel Book' by Stuart. Contents?	
46. Stuart	Food, predators, breeding, kinds of squirrel. I've done other writing to add to that.	
47. T-R.	Yes I suppose you need to leave finishing the contents page to the end of the work.	
48. Stuart	Can I read out from my book about food?	
49. T-R.	Yes certainly.	
50. Stuart	Leaves, acorns, blackberries, fungi, mushrooms, insects - that's the things a squirrel eats.	
51. T-R.	Stuart - when you were writing your book how did you use the information books?	
52. Stuart	I looked at what the books said the different kinds of squirrels were like and what ate squirrels.	
53. T-R.	Perhaps later on you'll show me which ones helped you most.  Sarah, you've made your book three dimensional.	
54. Sarah	I did my drawings and writing and then folded the pages over to make it look like a real book.	
55. T-R.	(looking at Sarah's open book). You have a very full contents page - the dray, enemies, families, size, colour, mating, where squirrels come from, how long their teeth grow.	

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
56. T-R.	Remember to put your name on it. And you have a picture of a squirrel running up the trunk of a tree. Good. That's a lovely picture of a squirrel in its environment.  That's a very inviting sort of contents page - those are the things the children might want to know.	
57. Sarah	(reading) The squirrel's dray or nest is made out of leafy twigs and it is often built in the fork of an oak tree. (Sarah shows how picture flaps open to reveal the squirrel in the dray).	
58. T-R.	Peter?	
59. Peter	My cover shows a squirrel on a tree branch. My bit on squirrels' food ... bark, fruit, catkins, berries, pine cones, chestnuts, leaves, insects.	Peter shows book with pictures of food and a squirrel saying 'This is all mine'.
60. T-R.	Why do you think, Peter, it is a good thing to do interesting pictures on the cover and the inside?	
61. Peter	Because the children will be interested and they might want to read the writing.	
62. T-R	Where did you get your information from?	
63. Peter	Mainly from the video and from the books I used that book you've got there.	
64. T-R.	(looking at Jessica Holm's <b>Squirrels</b> ) Oh yes, this book was written by the person that made the video Tara's father kindly videoed for us.  This is a charming book. Look at the squirrel patter on the back of the cover. The contents page is interesting too. 'Some other members of the squirrel clan'. 'Bodies from the inside'. It tells you about all the things children would probably want to ask about.	

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
65. Peter	I looked at 'Kinds of Squirrels' in that book. (reading from his book) 'There are two kinds of squirrels in Britain, red squirrels and the grey squirrel. The red squirrels are dying out because they are not getting enough food', and there is a picture of the red squirrel and the grey squirrel in Britain.	
66. T-R.	A very good idea to compare the two kinds of squirrel.  Peter shows books - flaps lift up to show two kinds of drey.  Are the dreys made of different things?	
67. Peter	The red one uses bits of bird nest and bits of grass - and the other one uses bits of leaves and grass, and you know when the grass is cut - well that one gets the loose bits of grass and brings them up the tree to its drey.	
68. T-R.	You saw the videofilm by Jessica Holm about red and grey squirrels. What was the theory about them, about why the red squirrels were declining?	
69. Mr P.	We should hear from some of the girls.	Mr P. Has noted boys are dominating the talk.
70. T-R.	Yes. What about Rakhee?	
71. Mr P.	Her book is very interesting .. because she has a lot of her questions in there.	
72. T-R.	Could you tell us about it? (Rakhee reads out contents page).	
73. Michael	Could Rakhee read out her questions?	
74. Rakhee	Why do squirrels move so fast (Rakhee reads out 15 questions).	
75. T-R.	Will the children find out the answers to those questions in your book?	

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
76. Rakhee	Yes.	
77. Peter	I've got a new question I've thought of - do squirrels eat pussy willow?  We used to sing a song about pussy willow. And I was just wondering if they ate pussy willow.	
78. T-R.	Does the song mention squirrels?	
79. Peter	No it doesn't actually mention them.	
80. T-R.	What made you connect squirrels and pussy willow?	
81. Peter	Well, if squirrels eat other plants, perhaps they eat pussy willows as well.	
82. T-R.	Jessica Holm is an expert on squirrels, but she says in this book that there are some things even she doesn't know.  Claire? You have a delightful cover. The children will love the acorns.	Claire has used gold thread to attach the acorns to the branches on her cover.
83. Claire	(reading) 'The drey is a nest where squirrels live. They build their nests with different materials and they build their nests in a tree.'	
84. T-R.	Clare has actually put that information in the branches of a tree.  What pops up when you open the picture doors in your book?	
85. Clare	Baby squirrels and squirrels' dreys.	
86. T-R.	Maria?	



<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
87. Maria	(reading from her contents page) What is a habitat? how do they climb trees, eating, drey, predators, squirrels teeth, squirrels feet ...	
88. T-R.	Did you cover all those topics, Maria?	
89. Maria	Not quite..	
90. T-R.	But you've done quite a bit.	
91. Maria	(reading from her book) Enemies. When the hawk has gone away the squirrel comes out of her dray. She finds some berries as she likes berries as well as nuts. Squirrels also find dangers in the wood.  (shows her pictures)	Part of this is very close to part of the text in Butterworth's <b>Squirrels</b> .
92. Mr P.	Have we seen nearly all. Who has not shown their book Lee?  (Children hold up their books)	
93. Andrew	My squirrel on my cover is running up a tree. My food is one, leaves, two, eggs, three, apples, four, milk, five, plants, six, mushrooms, seven, catkins.	
94. T-R.	Mark? You've done a fine fierce squirrel on your cover a grey squirrel. (Mark turns his first page). Are they acorns falling that you have drawn? Yes?  Have you done some writing Mark? About food? could you read inside your little picture flaps?	
95. Mark	Things squirrels eat - nuts, fungi, insects, berries, acorns.	
96. Peter	Look at Pauline's squirrels on the back of her book.	
97. T-R.	Yes, Pauline, the squirrels on the back of your book are fairy story squirrels.  General hubbub.  Children talk about cartoons.	

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
98. Maria. G.	Can I show my contents page?	
99. T-R.	Your contents page is set out using little picture flaps - most original. Stuart?	
100. Stuart	One of the books helped me. It had a diagram showing arrows pointing to all the things squirrels eat. The ones pointing away showed what ate the squirrels.	Stuart points to Children's Squirrel in the Trees.
101. T-R.	Yes. We looked at that food chain diagram and at first we thought the arrows were going the wrong way, didn't we?	
102. Ben	I liked the Wildlife Chart and the book made by Oxford Scientific films and I think they were made by the same people.	
103. T-R.	Did you find the answers to most of your questions in the books? Some things we find out from books, some things from observing squirrels. At home I have a cheeky squirrel that comes to my garden to find food in my dustbins. It opens rubbish bags and runs off with its finds.	
104. Michael	I've got a picture of a red squirrel and I got help about their hands and feet from this book called <b>Animal Tracks and Signs</b> (Michael shows book).  General hubbub. Children say which books helped with their writing and pictures.	
105. T-R.	Good. You have thought about diagrams and pictures.	
106. Gregory	Can I read out about predators? 'Predators are foxes, weasels, martins and snakes.'	

Transcript 9.

Vignettes of conversation during the session when the 9 year olds read their books to the 7 year olds. Gregory talks and reads to Wayne and Michael.

<u>Speaker</u>	<u>Utterance</u>	<u>Comments</u>
1. Gregory (9)	<p>That's a drey (pointing to his drawing). Do you know what a drey is? (pause). It is a kind of nest squirrels have.</p> <p>Now there's two kinds of drey, a winter one and a summer one. The summer drey is out in the branches, cooler, the winter drey is closer to the tree trunk... so they don't get cold.</p> <p>Now (turning page) there are two kinds of squirrel here, the red squirrel and the grey squirrel. The red squirrels are disappearing because they cannot get enough food.</p> <p>(Pointing to his pictures) That is a red squirrel and that is a grey one. Now can you tell me the difference?</p>	It is interesting to note that Gregory has taken up a teaching role.
2. Michael (7)	(Looking at Gregory's drawings) Well that one has pointed ears (indicating the drawing of the red squirrel).	
3. Gregory	Yes, that one has pointed ears and that one there has rounded ears (pointing to the grey squirrel). 'The grey squirrel is more vicious than the red squirrel. And red squirrels have more predators!'	Reading from his book.
	Gap.	
	Gregory now explains to Michael and Wayne what a predator is.	
4. Gregory	Well if I was a squirrel and a lot of animals are after me, right - they are predators. Like an owl or a snake is to a mouse. What do you think the squirrel's predators are?	
5. Wayne	A fox?	
6. Gregory	Yes and hawks.	
7. Michael	How high do they climb?	
8. Gregory	Well - the top of an oak tree.	

Vignette 2.

Maria (9) with Kerry and Gemma (7).

<u>Speaker</u>	<u>Utterance</u>	<u>Comments</u>
1. T-R	Did they enjoy listening to the reading from your book Maria?	
2. Maria	Yes I read it all the way through and they wanted to see all my pop-up pictures.	
3. T-R	Did you learn some things about squirrels?	
4. Maria	They learnt a 'drey' is the name for a squirrel's nest.	
5. Kerry	A 'predator' is an animal that kills another animal.	
6. Gemma	But some squirrels get killed by lorries and all. And in winter grey squirrels come into gardens to find food in dustbins and that.	

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
<b>Vignette 3</b>	Maria G. is reading her book to two seven year olds.	
1. Maria	<p>My cover - my title is The Squirrel Book. Inside ... is my contents page what I wanted to learn - the dray -where squirrels live, enemies, colours, food, size, shape, where they come from, how they mate, how long their teeth grow.</p> <p>Shall I read you about the dray?</p> <p>'The dray is made in the fork of an oak tree. When it is cold squirrels go to their drays.'</p>	
2. 7 year old	Can I see under the flap?	
3. Maria	<p>Under the door is a dray. Look. (lifts up flap to show dray).</p> <p>The food they have nuts, berries - horse chestnuts and sometimes caterpillars.</p> <p>They like berries and fungus as well as nuts.</p>	

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
<b>Vignette 4.</b>		
1. T-R.	Did your 7 year olds ask you some questions, Peter?	
2. Peter	Yes and they said they never knew what a red squirrel looked like - never ever seen one before.	
3. T-R.	Did Peter tell you they are dying out, red squirrels?  Did Peter show you his pictures of the red squirrel?	
5. 7 year olds	Yes.	
5. T-R.	What have you learnt?	
6. 7 year old 1.	I learnt grey squirrels are bigger than red ones and the grey ones get most of the food. They might try to kill red ones.	
7. 7 year old 2.	And I learnt red and grey squirrels are cousins.	
8. T-R.	Good. But, Peter, do you remember we saw a video about Jessica Holm's work? She is an expert on squirrels and she said it was not so much that the greys were aggressive - but they were bigger and their food sources were available.	The pine forests where the reds feed, live and breed have been in some cases cut down.

<u>Speaker</u>	<u>Utterance</u>	<u>Comment</u>
<b>Vignette 5.</b>		
1. T-R.	Now Michael, who have you been reading to?	
2. Michael	Gary and Darren.	
3. T-R.	What have you learnt about squirrels?	
4. Gary	A pred ... pred. I can't say it!	
5. Michael	PREDATOR.	
6. T-R.	Yes - tell me about predators.	
7. Gary	It's an animal that kills another animal.	
8. Darren	And I know a dray is a squirrel's home.  Did they make these books today?	
9. T-R.	No - I have been coming on Thursdays for a few weeks and we have been making them for you.  Did you like Michael's pictures?  Which ones?	
10. Michael	They liked the picture with the grey fur best.	
11. Gary	Did they kill a squirrel for that fur?	
12. T-R.	No. I brought it. We would not do anything cruel to a squirrel to make a picture.	

<u>Speaker</u>	<u>Utterance</u>	<u>Comments</u>
<b>Vignette 6.</b>		
1. Tara	Look when you open that bit you see the squirrel underneath.	
2. T-R.	You like Tara's pop up pictures? What else did you like?	
3. 1st 7 Year old	I liked enemies.	
4. T-R.	What interested you?	
5. 1st 7 Year old	Don't know.	
6. 2nd 7 Year old	It said squirrels often get run over on the road. I like her pictures and her writing. And I like to see the inside of the dray and ... their babies when they go out to get their nuts and fruit.	
7. 1st 7 Year old	So would I.	



### **APPENDIX 3.**

#### **A. Writing Examples a-j. and Tables summarizing Children's Writing Response.**

##### **Writing examples.**

- a. The glossary from Ben's book.
- b. Rakhee's book cover.
- c. Extract from Rakhee's book.
- d. Last page of Rakhee's narrative.
- d.i.) Typed version of Rakhee's narrative.
- e. Gregory's book cover.
- f. Extract from Gregory's book.
- g. The beginning of a long narrative by Gregory.
- g.i.) Typed version of Gregory's narrative.
- h. Andrew's book cover.
- i. A list from Andrew's book.
- j. Andrew's narrative.

##### **B. Tables.**

- i.) Table 24 Summary of Children's work on their own Information Books.
- ii.) Table 25 The Squirrel Narratives.

##### **C. Comments on the Narrative Writing.**

Appendix 3. Examples of writing.

Example a.



Glossary

Prey \ an animal that is  
hurt and killed by  
another animal

Predators \ an animal that  
hunts and kills  
other animals

drey \ a squirrel's nest

habitat \ an area where any  
plant or animal  
lives.

INFORMATION

ABOUT  
SQUIRRELS



BY RAKHEL

# TEETH

The Squirrel's TEETH always grow because when they eat the NUTS -BITS of their teeth break off and if their teeth did not grow all the time, they would not be able to eat their NUTS and berries.

Their front teeth are most important because they have to gnaw the nut and split it open. They have two big teeth at the front and two little teeth at the bottom.

Writing Example d.

End of a 450 word story

p. 6

But how ~~was~~ you going to recognise  
the squirrel? I will be able to  
recognise the squirrel because one of  
our kittens made a mark on his hand.  
So I went into the trees  
I found the squirrel and  
played with him all day and  
I had a wonderful time playing with  
the squirrel.



By RAKI.20

A day in the life of a squirrel.

One summer morning I saw a squirrel playing with another squirrel. It was a cute squirrel, I saw it run off. It went into the woods I followed him, he climbed up a tree he made a scratching noise. I saw him pick some nuts, they were beechnuts. I stayed looking at the squirrel for a while and then came back down again.

He ran up another tree, it was horse chestnut tree.

I saw him make a drey (a drey is a squirrel's nest). After eating a few nuts he came back down again, this time he ran out of the wood. I followed him he ran to some bushes. The bushes were covered in cherry galls and birch catkins. He ate a few berries and he ran back into the forest. All of a sudden he ran up a tree as fast as he could. I looked around I saw a fox and I knew that the fox is a squirrel's enemy. The fox was waiting for the squirrel under the tree, the squirrel leaped from tree to tree. The fox was still on the ground and walked over to where the squirrel was. The fox started to growl at the squirrel so the squirrel jumped down and ran for his life, the fox leaped on the squirrel and tore his leg off.

I went to call my father from my house. When I told him he brought his gun with him. When we got there, we saw the fox was about to jump on the squirrel. My dad fired the gun and the fox ran away.

We picked up the squirrel and we took him to the vets.

The vet said "well I will put a metal leg on the squirrel but he will have to live with you for a week", "of course" replied my father. So the vet did put a metal leg on the squirrel.

The next day we went to see the squirrel at the vets, the vet said "this squirrel will have to stay with you for a week and then you can let it go in the woodland." Me and the squirrel had a lovely week. I had a cat with some kittens and the squirrel kept on eating the cat's food and drinking cat's milk so the kittens kept on fighting with the squirrel. One day the squirrel was playing with the kittens when one of the kittens made a s mark on the squirrels head. The next day I let the squirrel out of the house and into the woodland the squirrel ran up a tree, I saw a drey but it was more thicker than I saw it last time. Well I saw the squirrel looking for food I looked at him and went home. When I got home I asked my father a question the question was "father last time I saw the squirrel nest it was much thinner but how comes it is much thicker now?" "because in summer they have a thin nest but in the winter they have a thicker drey OK". "Father I am going to look for the squirrel we looked after." "But how are you going to recognise the squirrel?" I will be able to recognise the squirrel because one of our kittens made a mark on his head. So I went into the woods. I found the squirrel and I played with him all day and I had a wonderful time playing with the squirrel.

N.B. Account is typed exactly as written by child.

Writing Example e.

The  
SQUIRREL  
Book



GREGORY M.

where squirrels live



QUIRRELS live in two

summer  
drey



kinds of Dreys. One the winter  
Drey is the Summer Drey. I have drawn  
a picture of them.



winter  
drey

The Summer Drey is more out in the  
tree. The winter Drey is closer to the  
trunk.



Page 1

## Greg Squirrel

One sunny morning Greg squirrel was fast asleep when his mum called him to go to school so Greg squirrel got out of bed and said, "I don't want to go to school." "Well it's tough your'e going. But mum, have got a sore throat." "I don't care your'e going."

So Greg squirrel climbed out of his window and went round Pete squirrel's house. Pete squirrel said, "What are you doing here?" "I aint going to school, im going to croydon, coming." "No, you got to go to school, we have got exams." "That's why, i aint going to go to school, come with me." "All right then but only for today's come on lets go and knock for Paul squirrel." "Ok but how are we going to get out, by the window come on then."

Hello Paul squirrel, coming to croydon,? I have exams exactly that's why were not going to school Come with us...

APPENDIX 3.  
Writing Example g.i.

Greg Squirrel

One sunny morning Greg squirrel was fast asleep when his mum called him to go to school so Greg squirrel got out of bed and said, "I don't want to go to school." "Well its tough you're going. "But mum I have got a sore throat." "I don't care you're going." So Greg squirrel climbed out of his window and went round Peter squirrel's house. Pete squirrel said, " what are you doing here?" "I aint going to school, I'm going to Croydon, coming". "no I got to go to school, we have got exams." "That's why I aint going to school, come with me." "All right then but only for today, come on lets go and knock for Paul squirrel. Ok but how are we going to get out, by the window. Come on then.

Hello Paul squirrel, coming to Croydon? I have exams thats why were not going to school come with us. Hello Lee, coming to Croydon, aint got no money, so what come on all right come on were going to miss the bus. Whats the matter Pete, my mums on that bus duck then oh no shes getting off hide in this garden, but thats my autes garden so thats where my mums going. How do you know she told me this morning. Lets go in the garden then Ok then, fue! that was a strock of luck. Yes but we've got to avoid my mum now. You mean your mums got off the bus as well. Yes fue! your mum must be blind Paul I know it wasn't my mum Paul, your heading for a smack in the mouth.

Come on lets go and catch that bus we've missed 7 busses all now. Come on. Oh I aint going, come on Lee dont be a chicken. Yes all right then, but weve got to hurry up because its twelve o'clock. Im going in Martins first. No I have changed my mind Im going in Allders first so I can get some tapes for my computer. Oh no whats the matter I have spent all my money so. If I aint got no money how am I going to get home.

Can you pay for me Pete. I have only got enough for myself. Please Pete. No I aint got no money. Oh yes well how am I going to get home then. I dont know has Greg, Greg yes can you lend me 20p pleases I have only got 20p Paul and thats my bus fare. You're a skank Greg, well I cant help it, go and do some singing you might earn it. Ok then, how much did you earn 2p. You'll have to do some more singing, your faster Greg. Well I have earnt 19p and its nearly three o'clock. You need 1p I have got 20p now lets go then. Oh no what I just remembered the buses went on strick at 2 o'clock, we'll have to put our money together and phone a cab. Well here were home at last just in time. Oh no whats the matter Pete my mum is coming out of my aunties hide behind this car but thats my autes car. So what well my mum is going to get a lift off my aunte well were going to have to get in your autes car boot but we cant lets make a run Ok then. Fue! we got away. I am going home its 3 o'clock all right Lee see you later. You might as well as go home if its 3 o'clock.

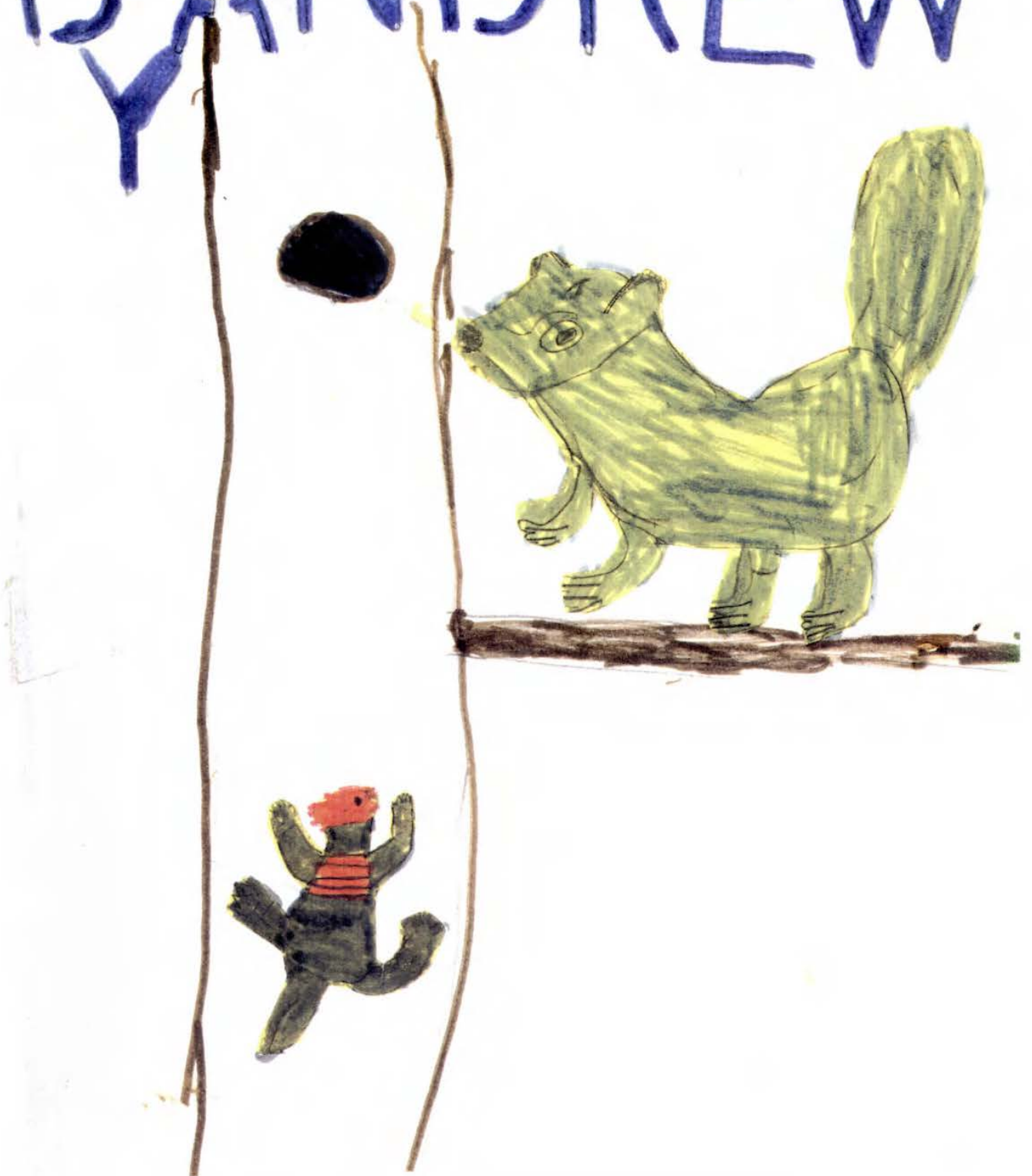
The End

By Greg M

N.B. Account is typed exactly as written by child.

Writing Example h.

BANDIREW



Writing Example i.

Predators

- ① Wild and domestic cats,
- ② dogs and foxes
- ③ birds of prey
- ④ martens
- ⑤ snakes
- ⑥ stoats and weasels
- ⑦ Humans

These are the predators which eat and hunt the squirrel.



## Andrew's Squirrel.

One day there was a squirrel named Ben and another squirrel named Peter. They were good friends. They played games together. That was the end of the day. The next day they went fishing and swimming.



**APPENDIX 3**

**Writing**

**Tables 24 & 25**

**Table 24. Summary of children's work on the information books.**

Name	Book Title and Reading Log.	Comments
1. Claire	Information book about squirrels <b>Reading log:</b> The Squirrel, A. Sheehan; Squirrel in the Trees, Coldrey; Squirrel, C. Butterworth.	Strong sense of 'audience'; particularly in illustrations; only beginning to control non narrative text.
2. Stuart	The Squirrels' Book. <b>Reading log:</b> Squirrel, J. Holm; Squirrel in the Trees, Coldrey; Discovering Squirrels, Davies; Squirrels, Bomford; Animals, track signs, A. Leutscher. My world of squirrels, C. Butterworth.	Good sense of 'audience', some features of informational writing present (e.g. information boxes).
3. Wendy	Information about Squirrels. <b>Reading log:</b> The Squirrel, A. Sheehan; The Squirrel, E. Propper; Squirrel in the Trees, S. Coldrey; Squirrels, C. Butterworth; Discovering Squirrels, A. Davies.	Not much writing, but the informational 'voice' is beginning with third person prose. Good 'audience' awareness shown in careful illustrations.
4. Andrew	No title. <b>Reading log:</b> The Squirrel, A. Sheehan, The Squirrel, E. Propper.	Manages mainly only lists of items like 'Squirrels' 'Food' and 'Predators'.
5. Ben	The Squirrels' Book. <b>Reading log:</b> Squirrels, J. Holm; Discovering Squirrels, A. Davies; Squirrel in the Trees, Coldrey.	Excellent illustration/text integration. Some use of the technical vocabulary and a glossary is included. Good sense of 'audience' shown in text and pictures.
6. Greg	The Squirrel Book. <b>Reading log:</b> Squirrel in the Trees, S. Coldrey; Discovering Squirrels, A. Davies; Squirrels, J. Holm.	Good sense of audience evident in the playful touches. Book does not reflect the quality of Grey's oral explanations of squirrel behaviour.

Name	Book Title	Comments
7. Maria	<p>The Squirrel Book.  <b>Reading log:</b>            Discovering Squirrels, A. Davies;            Squirrels in the Trees, S. Coldrey.</p>	<p>Long, but miscellaneous contents page. Use of information boxes. Made a start in controlling non-narrative prose. Good sense of audience.</p>
8. Mark	<p>The Squirrel Book.  <b>Reading log:</b>            The Squirrel, A. Shehan; Squirrel in the Trees, S. Coldrey.</p>	<p>Provides lists of foods and squirrel predators. Is still at a very early stage in controlling this kind of writing and thinking.</p>
9. Stephen	<p>The Squirrels.  <b>Reading log:</b>            The Squirrel, E. Propper; Squirrels, A. Butterworth.</p>	<p>A very slight book, but he did manage, in spite of great difficulty with reading and writing, to produce something.</p>
10. Marie	<p>The Squirrel Book.  <b>Reading log:</b>            Animal tracks and signs, A. Leutscher; Squirrels, A. Whitlock; The Red Squirrel, A. Tittensor; Squirrel in the Trees, S. Coldrey.</p>	<p>Beginning to show the kind of thinking and learning appropriate to the information book register. Tries to communicate with her young audience in mind.</p>
11. Sarah	<p>The Squirrel Book.  <b>Reading log:</b>            Squirrel in the Trees, S. Coldrey; Squirrels, A. Butterworth; Discovering Squirrels, A. Davies.</p>	<p>Tries to write something about each of the items in her contents list. First steps taken towards this way of organizing her facts and ideas.</p>
12. Tara	<p>Information about Squirrels.  <b>Reading log:</b>            Squirrels, J. Holm; Squirrel in the Trees, S. Coldrey; Squirrels, Bomford; Discovering Squirrels, A. Davies.</p>	<p>Tara brought in the BBC wildlife video film about Jessica Holm's Squirrel research and showed a strong commitment to the work. She shows good 'audience' sense and has made a start in controlling writing in this register.</p>



Name	Book Title	Comments
13. Carrie	Information about Squirrels. <b>Reading log:</b> Squirrel in the Trees, S. Coldrey.	Because of the absence of the task was barely begun apart from the cover and contents page.
14. Pauline	Information about Squirrels. <b>Reading log:</b> Squirrels in the Trees, S. Coldrey; Discovering Squirrels, A. Davies; Animals, Tracks and Signs, A. Leutscher; The Red Squirrel, Tittensor; Squirrels, J. Holm.	Quite a well sustained effort. Explains things well - teeth and claws adapted for eating and climbing - and has good sense of audience. Progress evident in controlling this register, but few attempts to use technical vocabulary.
15. Jack	Squirrels. <b>Reading log:</b> The Squirrel, E. Propper; Discovering Squirrels, A. Davies. (read to him by Ben.)	Tried hard with drawings - he hopes 'the little ones will like', but has considerable problems with reading and writing and manages only lists of Food.
16. Peter	Squirrels book. <b>Reading log:</b> Squirrels, E. Bomford; The Squirrel, E. Propper.	Needed help to produce a pleasing page of labelled drawings of squirrels' food items. Tried with illustrations to interest younger children, but no evidence of sentences. At a very early stage in controlling reading and writing.
17. Rakhee	All about Squirrels. <b>Reading log:</b> Squirrel in the Trees, S. Coldrey; Discovering Squirrels, A. Davies; Animals, Tracks and Signs, A. Leutscher; The Red Squirrel, Tittensor; Squirrels, J. Holm.	Rakhee shows some promising ability to write for her own purposes and thinks through for herself how for example a squirrel cracks nuts. Books are her tools not masters.

Table 25.

## The Squirrel Narratives

<u>WRITER</u>	<u>TITLE</u> <u>INFORMATIONAL</u> <u>NARRATIVES</u>	<u>DESCRIPTION</u>
Kerry	<b>A day in the life of a squirrel.</b>	Well sustained information narrative. Third person, past tense. Confrontation with a predator. Squirrel called Shadowtail.
Jack	<b>My Squirrel.</b>	Very short piece in continuous present about squirrels feeding their young.
Maria	<b>One Sunny Morning.</b>	Continuous present, third person, changing soon to first person past tense. Observing squirrel behaviour.
Charmaine	<b>Day in the life of a squirrel.</b>	First person, past tense. About finding and caring for a wounded squirrel called Nutkin.
Rakhee	<b>A day in the life of a squirrel.</b>	At 450 words the longest account; first person, past tense. Well sustained - draws on <u>Squirrel on my Shoulder</u> in describing care of the squirrel. Ends with a dialogue.
Sarah	<b>A Day in the Life of Bushy.</b>	First person, past tense; saving baby squirrels from a predator.
Pauline	<b>Sam Squirrel.</b>	Similar but not identical in theme to Charmaine's account. Begins with third person present continuous, moving to first person, past tense - difficult to read because of decoration on the actual writing.
Carrie	<b>The Day in the Life of a Squirrel.</b>	First person, past tense; beautifully illustrated; pattern of food items in the margins and drawings of squirrels Embryonically an information story but squirrels do talk.

<u>WRITER</u>	<u>TITLE INFORMATIONAL NARRATIVES</u>	<u>COMMENTS</u>
Wendy	<b>A day in the life of Bushy Squirrel.</b>	Continuous present, first person - almost stream of consciousness. A squirrel with human characteristics shares its thoughts.
Mark	<b>A day in the life of Mark Squirrel.</b>	Third person, past tense; a beautifully illustrated fantasy including a visit to a tree in the school grounds. Computer games influence.
Ben	<b>A day in the life of two squirrels called Ben and Mark.</b>	Third person, past tense; begins like an information story but becomes a fantasy influenced by the content of computer games.
Marie	<b>Bob Squirrel.</b>	'One sunny morning' beginning. Third person, past tense. Information narrative with some fantasy elements like the super mobile.
Greg	<b>Greg Squirrel.</b>	Another 'One sunny morning' beginning. Starts with past tense, third person, but soon the whole story is told through dialogue. A fantasy telling us a lot about children of his age, but little about squirrels.
Paul	<b>Penfold Squirrel.</b>	Present continuous, written as if the squirrel is thinking out loud.
Stuart	<b>The day and the Life of Stuart Squirrel.</b>	Third person, past tense. A fantasy from the beginning drawing on computer games. Considerable awareness of audience - the illustration at the end show his friends as the main characters.
Andrew	<b>Andrew Squirrel.</b>	This very short piece shows Andrew finds it difficult to write more than a few sentences of narrative. The illustrations of the squirrels fishing are delightful, however.

## APPENDIX 3C.

### The informational narratives.

Samples of the children's work are set out in Table 25 in Appendix 3. I now analyse each of the accounts in turn. The first two narratives are analysed in most detail as they came nearest to control over the genre.

#### 1. Kerry. A Day in the Life of a Squirrel.

Table 18 offers an analysis of how far Kerry's account qualifies as a narrative, and within the narrative genre, as an example of informational narrative. Unlike Rakhee's first person account, No. 2, Kerry chooses the more conventional third person. In this account there is good control over the narrative form. The beginning 'Once there was a squirrel...' and the coda '...and the fox never went near the squirrel again' are typical of a fiction rather than an information story, but there are signs that Kerry is beginning to control the latter genre. The account is organized round what she knows about squirrels and the only time we are required to 'suspend disbelief' is when the squirrel 'got her acorns out of the drey and started to throw them at the fox'.

Vocabulary shows some sense of appropriate diction for this kind of writing with 'drey', 'hazelnut', 'acorns' and 'bark'. The *Sciurus* story tells us the word 'squirrel' comes from the Greek word *Sciurus* and means 'Shadowtail' and Kerry has taken this name for her squirrel. How far does Kerry's account suggest she is able to use the type of writing to actually think and reflect? I believe she has made an attempt to

sympathetically imagine what it might be like to be a squirrel. We might suppose quite a lot of the account could have been managed without experiencing all the talking, reading and writing activities in the squirrel work. But she has remembered that the squirrel has long sharp front teeth to slice off the tops of hazelnuts. She is also insightful enough to share her understanding that the very smell of favourite fruits like blackberries is likely to be very attractive to the squirrel. Apart from the little quirk when she has the squirrel throwing acorns this is a coherent account which shows developing control over the narrower focus of this particular kind of narration and some capacity to use the form to reflect and share those reflections appropriately.

**Table18. Analysis of Kerry's account in terms of its meeting the criteria of narrative and informational narrative**

<u>Kerry's Story</u>	<u>Narrative Criteria</u>	<u>Information Narrative Criteria</u>
<p>Once there was a squirrel, her name was Shadowtail, she was a red squirrel. She lived in a drey.</p> <p>One morning she went out looking for food. She found a hazelnut so she bit off the top with her long teeth and ate the hazelnut and scampered up the oak tree. She looked around for a while. Shadowtail saw a fox coming so she flew across to the next tree, ran down and dashed back to her drey in the oak tree.</p> <p>She peeped out of her drey and looked to see if she could see the fox so she carefully climbed down the tree. She smelled something lovely. It smelled like berries. She followed the smell and she found a blackberry bush. The bush had lots of lovely berries. She started to pick the berries, then she saw the fox so she hid under the berries that had fallen down.</p> <p>The fox started eating the berries Shadowtail was under, Shadowtail was thinking of a plan. She got up and she ran, the fox saw her and ran after her. She ran up the nearest tree. The fox started to bark at Shadowtail. She got her acorns out of her drey and started to throw them at the fox. The fox got really angry and tried to climb the tree but he fell on his head and ran away.</p> <p>The squirrel looked in her drey and saw that she had no acorns left so she had climbed down the tree, and collected some acorns and berries and she went home to her drey and the fox never went after the squirrel again.</p>	<p>Orientation.</p> <p>Something happens, a complication.</p> <p>Resolution - the complication is resolved.</p> <p>*Coda - a comment on the story.</p>	<p>Some effort to focus the story by limiting content to what is known about squirrels - nut gathering, scampering, responding to predators.</p> <p>Vocabulary beginning to fit with this form. We have 'drey', 'hazel nuts', 'blackberries', 'acorns', 'bark' and an appropriate name for the squirrel: the meaning of the Greek word Sciurus i.e Shadowtail.</p> <p>Hold on the informational focus slips with a squirrel throwing nuts.</p> <p>Coda more typical of a fairy story or fable.</p>

## 2. Rakhee. A Day in the Life of a Squirrel.

This is a well sustained account of about 450 words which keeps to the conventions of a narrative as defined by Martin and Rothery, 1981. (See Appendix 3, writing example 1d.)

The first sentence sets the scene.

'One summer morning I saw a squirrel playing with another squirrel'. However the orientation of the piece is reinforced by further 'scene setting' - 'It went into the woods ... he climbed up a tree. He made a scratching noise'; 'I saw him pick up some nuts, they were beechnuts'.

The 'happening' is the appearance of a predator. 'The fox started to growl at the squirrel...'. This complication is partially solved by the arrival of the father who shoots the fox. Further complications arise, the squirrel has been wounded and needs a vet's attentions and careful nursing by the author of the piece. As in the **Squirrel on my Shoulder** video film this squirrel is obliged to be brought up with a cat and kittens. Rough play results when the two species come together and the squirrel is wounded on the head.

Finally the squirrel, restored to health is released into the wild. The identifying scar left from its fight with the cats makes it possible for the writer to seek it out in the woods and enjoy playing with it. Thus, according to the Martin and Rothery criteria,

Rakhee shows control over narrative writing in this piece.

I argue earlier in this chapter that an **informational** narrative will further show, in its global organization, content and vocabulary, a narrower focus. The appearance, characteristics and behaviour of the phenomenon described will not deviate from what is generally agreed to be likely and based on what is known.

Rakhee's global organization is compatible with these criteria: the setting, squirrel behaviour, events and resolutions are all believable (even if the father shooting the fox is unlikely and possibly illegal it contradicts no scientific law). The vocabulary in particular, identifies the piece with an **informational** narrative. She mentions not only that the squirrel ate nuts, but that they were beech nuts, and that the bushes are 'covered in cherry galls and birch catkins'.

Rakhee has clearly understood that informational narrative needs by definition to inform and she sustained this purpose extremely well. The organization of her piece and her word choice reflects this sense of function. Linked with her sense of function is the clear impression that she holds her intended audience in mind in a mature manner. The intended 'audience' was made explicit in the invitation to the task. The children were asked to bear in mind the pieces might be collected into a book to add to the classroom collection. Rakhee asked also if she could read her narrative to the 7 year olds who would also read, or have read to them, the expository writing in her information book. Thus we have evidence of efforts to inform this younger audience who might need reminding that a drey 'is a squirrel's nest' and that a fox is 'a



squirrel's enemy'.

Not only does Rakhee have a strong sense of both purpose and audience, she also controls the shaping of her information, the 'process knowledge' that Cambourne and Brown describe in their analysis of a young writer's work in their study. (Cambourne and Brown, 1989, p.41) and which enables her to realize her intentions in her text.

I now turn to the question of how far Rakhee has been able to engage in the kind of thinking and reflecting possible in the kind of writing form she is controlling. The work of a number of scholars supports the view that narrative is not just about unfolding events, but about evaluating and sometimes philosophizing about these events. (Fox 1989; Andrews, 1989; Meek et al 1977; Meek, 1988). The children had been exposed to the way in which mature writers of information narratives, John Paling's narrative for the video-film *Squirrel on My Shoulder* and Jan Taylor's *Sciurus*, select particular events to 'teach' certain things and how they pause to expand on what they consider to be important. For example Paling describes how squirrel and kittens played together and then points out how rodent and feline behaviour differs.

Apart from the 'sense of audience' evident in asides about dreys and enemies referred to above, there are two parts of the account which show developing ability to use the writing task to assimilate and reflect on what she knows.

First, using the technique of dialogue, she imagines how a vet might respond to the

squirrel's condition. 'Well I will put a metal leg on the squirrel but he will have to live with you for a week'. And later 'this squirrel will have to stay with you for a week and then you can let it out into the woodland'. We might think a vet's view of the best solution to the squirrel's problem might be less optimistic, and we might not think the idea of attaching a metal leg to be viable. Nevertheless this is some evidence of Rakhee trying to think through a solution to the dilemma and coming up with some sort of answer.

Towards the end of her account Rakhee does show herself to be able to control the form enough to use it as a vehicle of thinking and communicating. To make the point I need to quote the following passages from Rakhee's account.

'The next day I let the squirrel out of the house and into the woodland. The squirrel ran up a tree. I saw a drey but it was more thicker then I saw it last time. Well I saw the squirrel looking for food. I looked at him and went home.

When I got home I asked my father a question. The question was, "father last time I saw the squirrel's nest it was much thinner but how comes it is much thicker now?"

"Because in summer they have a thin nest but in winter they have a thicker drey O.K."

"Father I am going to look for the squirrel we looked after".

"But how are you going to recognise the squirrel?"

"I will be able to recognise the squirrel because one of our kittens made a mark on his head."

Rakhee has chosen to use a dialogue to share with the readers her understanding of the differing qualities of winter and summer dreys. Her book log shows she has read Coldrey's *Squirrel on My Shoulder* which is one of the books imparting the information about the seasonal element in drey construction. The linguistic device she uses to share the information, by having herself as first person narrator observe differences in drey thickness and then to pass on these observations for a parent's explanation, is effective. It is evidence that Rakhee is beginning to understand some of the options open to her in informational narrative writing. Her illustration at the end integrates sympathetically with her account: a child about her own age releases a squirrel into the wild by placing it on a tree trunk with a conveniently placed drey in a den. (See Appendix 3d).

### **3. Charmaine. Day in the life of a Squirrel.**

This account is a first person narrative about rescuing a squirrel from the cruelty of some boys, looking after it until its broken leg heals and then releasing it into the trees. The squirrel is seen subsequently with a mate and a family of young squirrels.

Charmaine's story shows control over narrative, and keeps within the bounds of possibility in describing what happens to the squirrel thus showing some control over the informational story form. There is not much evidence of the writing being used to reflect on matters to do with knowledge about squirrels. It is more to do with reflecting on responding to creature's need and resolving difficulties so that there is the kind of happy ending typical of a fictional narrative.

**4. Jack. Stephen Squirrel.**

This very short account in the present continuous begins in the first person but changes after the first sentence to third person. The class teacher considered that for Jack even this very brief, highly illustrated account which did mention squirrels' 'dreys' was an achievement, bearing in mind his learning difficulties.

**5. Sarah. A Day in the life of Bushey.**

Sarah begins by taking up the voice of a squirrel: 'In the morning very early I wake up and go searching in the wood for food. I had no luck.' Her account then continues in the third person telling about the activities of a young squirrel called Bubbles. The 'I' of the first two sentences never resurfaces.

Sarah shows some control over both narrative and informational narrative forms. The early part of her account is not unlike the beginning of Jan Taylor's *Squirrels* which also begins with young squirrels waking up in the drey. The vocabulary, with constant use of both 'drey' and 'predator', is some indication that Sarah is writing to inform as well as to entertain. There are two slips into a non informational narrative form: where the mother squirrel talks and the squirrel party at the very end.

The response to the predator (never specified) shows some thinking about how a squirrel might take avoiding action, but on the whole Sarah is not yet sufficiently in control of the form to use it as a way of thinking and reflecting.

**6. Pauline. A Day in the life of Sam Squirrel.**

This account, mainly in the first person, is a narrative just beginning to show some features of an 'informational' narrative. However while nothing occurs which would actually contradict scientific laws it is unlikely that a zoo keeper would hand over a squirrel in a cage. Nevertheless there is evidence that Pauline has integrated some of the information imparted by books, videofilm and teacher's contributions into her thinking. Thus the account includes the information that baby squirrels' eyes are closed for some time after birth, and that squirrels are found in back gardens and in some zoos as well as in woodland.

**7. Carrie. A Day in the life of Sam Squirrel.**

This narrative shows an embryonic capacity to control the informational narrative form. The squirrel is described in its woodland habitat and the drawings are appropriate to this form. However Carrie is not really able to think and reflect in this form in more than a superficial way.

**Narratives incorporating 'fairytale' elements.**

**8. Wendy. A day in the life of Bushey Squirrel.**

This account, well sustained in the continuous present, allows the writer to get inside

the skin of a squirrel by using the device of the squirrel 'talking' out loud. However after an opening close enough to the style of Jan Taylor's *Scirius* in style and vocabulary - young squirrels awaken in their 'drey' and look out for any 'predators' - the account becomes a fairy tale which tells us about how children think and behave rather than using the information from the Squirrel work. If we accept that Wendy's primary, perhaps sole aim was to entertain her story succeeds.

#### 9. Mark. A day in the life of Mark Squirrel.

Mark sets up the narrative in such a way that at first an 'information narrative' is promised. As is the case in other accounts, for example in Greg's and Ben's, the squirrel family awake 'one sunny morning', seek nuts, return to the drey after scampering about in search of nuts.

However, the narrow focus required by definition of an information story is not sustained, and Mark continues by writing a fast moving modern fairy tale in which Mark Squirrel searches for his missing parents. He continues after the early scene-setting with:

'He ran back up the tree, up to his drey. He looked for his Mum and Dad but they were just not there.

So Mark decided to send out a search party, so he quickly picked up the 'phone and rang Stuart Superbrain Squirrel who would make a supercar so they can find his

parents more easily’.

This quite long account describes how Mark Squirrel and friends acquire and test an ‘aerocar’, make a landing at the school in this study and then enter a soup eating contest to persuade Maggy <sup>and</sup> Michael J. Fox to return Mark’s parents. The illustrations are delightful and the teacher felt Mark and the other children writing these illustrated fantasies found them very satisfying. Indeed he commented that many of the children seemed inspired to concentrate on their work, producing some of the most sustained writing accounts they had been known to write during their time in his class.

**10. Ben. A day in the life of two squirrels called Ben and Mark.**

This account, in the third person, is a fairy tale about squirrels overcoming a threat from a snake by using a secret weapon. It is a fast moving third person narrative intended to entertain the audience - other members of the class. There is evidence of influence in both text and illustrations from television, film and computer programmes.

Next to the picture of the snake being attacked is a snippet of writing:

‘By the way they killed the snake with their secret weapon shown here’.

**11. Marie. Bob Squirrel.**

Marie's story is also a modern fairy tale in which the squirrel gets into his 'supermobile' (shown in an illustration) and finds a new home, in the area where the school the children in this study attend, to escape a predator. It ends with 'Bob found a tree with a hollow hole, it looked a good place to live. So he lived there and lived happily ever after'

The End.

## 12. Greg. Greg Squirrel.

This account uses the device of talking animals to entertain the audience with a fiction which tells much about the way many children of age about 9 years think and behave. We learn about how some children spend much time and energy avoiding the wrath of parents. This snippet of dialogue is typical:

'What's the matter Pete?

My Mum's on that bus, duck,

Oh no she's getting off. Hide in this garden.

But that's my aunty's garden

So that's where my Mum's going

How do you know?

She told me this morning. Let's go in that garden then OK.

Fue! That was a stroke of luck.'



**13. Paul. Penfold Squirrel.**

This short account is told in the present continuous in the role of a humanized squirrel. Its function is to entertain.

**14. Stuart. A Day in the Life of Stuart Squirrel.**

This is a computer game fantasy written in the third person. The whole account is peppered with colourful, competent illustrations perfectly matched to the text; the large illustration at the end shows the main characters in the fairy tale and is headed. 'These are my friends and the characters they played.' Stuart shows a sustained sense of audience and knowledge of the kind of story and illustrations which is likely to entertain them.

**15. Claire. Sam Squirrel gets lost.**

This is a fairy tale in which the squirrels behave like human beings wearing nightgowns, preparing supper trays with chocolate biscuits and chatting to each other.

**16. Andrew. Andrew's Squirrel.**

Andrew's account is a very short account, with only some of the features of narrative. The events described, going fishing and swimming are not in this case capable of 'resolution'. In other words not enough happens to suggest Andrew has a very firm

hold on the narrative form. Mr P. felt that even this short account, together with some delightful fairy tale illustrations, was a satisfying achievement for Andrew whose drawing abilities were appreciated by his peers.

## APPENDIX 4.

### Class teacher's evaluative comments on The Squirrel Project

Mr P. was asked to write a short evaluation structured round the seven main strategies used in the classroom example. He had provided oral feedback shortly after the work was completed in 1989. I knew he had made some notes and observations and I asked if he would write them up: what follows was received in November 1992. I asked Mr P. to make clear whether or not observing the project had led to modifications in his own practice (see under 'Other Comments').

#### Pre-reading Strategies

##### 1. Organization of prior knowledge

This helped children start at their own beginning. I would call this 'beginning with their own knowledge' a constructionist approach. It led well into formulating their own questions.

##### 2. Formulating their own questions before undertaking book research

This motivated the children. It put them in control of their work. In fact it placed them firmly in the driving seat of their learning. I remember Rakhee had a list of fifteen good questions!

##### 3. Starting with a specific example

The showing of *Squirrel on My Shoulder* narrated by David Attenborough (about the baby squirrel reared by a cat) was effective because:-

- 1.) It provided a powerful visual input.
- 2.) It provided an experience which proved to be a useful frame of reference that the children could anchor their learning in. (They often referred back to this showing: it had made a considerable impact).
- 3.) It was a common experience for the whole class which reinforced the collaborative texture of the whole project.

#### Strategies to help children handle the texts

##### 4. Encouraging a sense of 'audience'

The knowledge that they were writing booklets for seven year olds was very

motivating. It provided a purpose for looking further, for grappling with the information books. I also think it gave them a feeling of control over the project - made sense of the reading tasks. I noted that even the less forward readers were prepared to try, and to ask for help.

#### 5. Applying what is known about non-fiction texts

What I noticed here was how much teacher mediation is needed in helping children make sense of diagrams. I helped several children interpret the orientation of the arrows in the Food Chain diagram in Coldrey's book.

#### 6. The role of talk in making sense of books

In this work talk was the glue that kept the project going - talk to organize prior knowledge, to formulate questions, to discuss developing ideas and to make oral summaries of information in books. The session where the nine year olds read their work to the younger children showed their learning was not superficial. e.g. Gregory explained what a predator is very clearly to Wayne and Michael.

#### 7. Collaborating, sharing - helping each other become critical readers

The collaborative texture of the work was a great strength in this project. It was the many opportunities for discussion which gave a value to helping each other. Principles of co-operative learning were successfully applied to reading information books. I observed children explaining things to others e.g. Ben described a flying squirrel to Peter, using a book.

#### Other Comments

Since observing this project my own practice has changed in the following ways:-

- O I spend longer in discussion at the beginning of new work. Organized previous knowledge helps children see the relevance of new information.
- O I encourage them to formulate their own questions more often, rather than suggest my own as a framework for the learning.
- O I'm more aware of the motivational pay off in creating a strong sense of 'audience'.
- O I now realise how much a sense of audience can add to a child's sense of purpose in tackling reading and writing tasks which would normally be rather difficult.

- O In one written account 'A Day in the Life of a Squirrel' the children mingled fact and fantasy. This reinforced my feeling that children do not differentiate as adults do.

N.B.

Although Mr P. does not extend his interesting last observation here, I put down the following comment in one of my research notebooks.

June 8 1989

'Writing about 'A Day in the Life of a Squirrel'

I asked the children to write about a day or week in a squirrel's life to put in a large book for the enjoyment of the children in the class.

I explained it would be rather like the information stories included in the books we had been using e.g. Sheehan's **The Squirrel** (1976) and Jan Taylor's 'Sciurus' (1981). The events would follow a time sequence and some of the information we had covered about squirrels' dreys, feeding, habitat and so on could be brought in.

We talked quite a lot about how these accounts might be structured and the sort of thing that might be included. The accounts were not finished by the end of the afternoon and Mr P. said he would provide time for the children to complete the writing in time for my next visit.

At the beginning of the next visit Mr P. said 'They really enjoyed the writing, but I'm not sure all of them have done what you had in mind!' In all but a few of the pieces (see Appendix 3) fictional elements, for example squirrels talking and wearing clothes were included alongside elements based on information. As Mr P observed, many pieces resembled Potter's Squirrel Nutkin as much as Jan Taylor's Sciurus!

He went on to refer to his own work on 5-7 year olds' concepts of facts and fantasy. Mr P. felt that in spite of the way I set up the task the title suggested another kind of genre to the children. It might be the case, he thought, that an 'information story' with its narrower focus and stricter rules about what was appropriate was much harder for children to write than either fiction or a more conventional informational piece. I suggested to him that it was interesting in view of this that children seemed to find it quite an accessible genre to read or have read to them.

## APPENDIX 5.

**Table 29** Information retrieval strategies.

1. define subject and purpose (using teacher's and children's questions)
2. locate the library classification.
3. select a book or books.
4. locate the information.
5. select the information (teacher or child read it out loud)
6. interpret, reflect on and evaluate writing and diagrams (through collaborative talk.)
7. reconstruct/organize the information. (first orally and then in writing with an audience and purpose in mind.)
8. communicate results. (in form of writing or diagram)
9. evaluate book or books used. (How helpful were they for the purpose?)

The teacher can demonstrate all these processes in the course of everyday work. Classroom studies of teachers working with very young children provide some evidence of their ability to make a beginning in controlling this kind of reading. (Edwards, 1993; Doyle and Mallett, 1994; Mallett, 1994). The main study in this work concentrates on numbers 5- 9, and particularly the interpretation and evaluative processes in number 6 and number 9.

This table draws on the analyses of Wray (1985), Tann (1988) and Moon and Raban (1992).

## APPENDIX 6.

### Christine Pappas' obligatory and optional features (Pappas, 1986).

Christine Pappas, whose work on information books is evaluated in chapter 5, suggests a defining global structure for the content of books (Pappas 1986). Table 27 attempts a reorganisation of the children's questions under the appropriate headings of Pappas' scheme: Topic Presentation; Category Comparison; Description of Attributes; Characteristic Events; Afterward.

The first, third and fourth features are considered by Pappas to be obligatory features of an information book and define the genre, whilst the second and fifth are optional features.

Table 27 Children's questions for the Squirrel project, organized in line with Christine Pappas' obligatory and optional features in Children's Information Books (Pappas, 1986)

---

	No of children asking this or similar questions
<hr/>	
<b>1. Topic presentation</b> (Obligatory feature)	
<i>General</i>	
1. Where does the squirrel get its name?	14
2. What is a habitat? (& where do squirrels live)	2
3. What is a 'rodent'?	1
4. How can you study squirrels?	1
<b>(1a) Category Comparison</b> (Optional feature)	

*General*

5. Why is a squirrel's nest called a drey? 1

*Kinds of squirrel*

6. Do some squirrels live underground? 1  
7. How many kinds of squirrels are there in the world? 20  
8. How do flying squirrels fly? 2  
9. What is different about red & grey squirrels' looks? 1  
10. How big is the largest squirrel and how small is the tiniest? 1  
11. Do grey squirrels eat more than red squirrels? 1  
12. Why are red squirrels smaller than grey squirrels? 1

**2. Description of Attributes**  
(Obligatory feature)

*Appearance*

13. What are their teeth like? 2  
14. Are males and females the same size? 1  
15. How much does a squirrel weigh? 2

*Behaviour etc*

16. How do they use their tail? 2  
17. Have squirrels a good sense of smell and hearing? 1  
18. Do squirrels have any interesting habits? 1  
19. How do squirrels manage to climb trees so well? 1  
20. Can a squirrel make you laugh? 1  
21. How do they crack nuts? 2

**3. Characteristic Events**  
(Obligatory feature)

*General*

22. Do squirrels really hibernate? 10

*Feeding*

23. What do squirrels eat? 18  
24. What kinds of nuts do squirrels like best? 5



25. Is it true that squirrels kill baby birds and eat eggs from nests?	3
<i>Breeding</i>	
26. What do they build their nests with?	4
27. How many litters do they have each year?	2
28. How many babies do they have? (in each litter)	10
29. Are squirrels good parents?	1
30. When do squirrels mate?	1
<i>Predators, diseases, death etc.</i>	
31. Do grey squirrels kill red squirrels?	11
32. Do squirrels attack people and bite them?	1
33. How long do squirrels live?	1
34. How do squirrels survive in the woodland?	1
35. Which creatures kill squirrels?	8
36. What diseases do squirrels suffer from?	3
37. Which creatures are killed by squirrels?	4
<b>3a) Afterward</b>	
(Optional feature)	
38. How do we control squirrels? (When population gets too great)	1
Total number of different questions	38
Total number of questions	133

---

This scheme was not a structure I imposed on the children. However, in developing the work, it was a useful scheme for me to refer to, since it brought together children's explicit wonderings about the topic with the sort of scheme typical, if Pappas is correct, of the global organisation in the information books.

## **APPENDIX 7.**

### **a.) Approaches to the Analysis of Spoken Language.**

Interest in the observation and analysis of classroom talk became apparent from the early 1970s. Educational discourse has been examined from different disciplinary traditions, using different methodologies. These can be grouped into linguistic approaches (Sinclair and Coulthard, 1975; Stubbs, 1981, Willes, 1983); Sociological and anthropological approaches (Hammersley, 1981; French and French, 1986; Swan and Graddol, 1988); psychological approaches which tend to be quantitative rather than qualitative. The short account below concentrates on linguistic and pedagogical approaches as having most to offer the present study.

#### **Linguistic approaches.**

An influential approach was Sinclair and Coulthard's classification and analysis of talk in the secondary school classroom. (Sinclair and Coulthard, 1976). Talk was classified under headings like 'lesson', 'Transaction', 'Exchange', 'Move' and 'Act'. A main strength of the scheme was its capacity to take in all classroom discourses. (Edwards and Mercer, 1987). The simple, but powerful 'I-R-F' structure, initiation by a teacher, response by a pupil and feedback by the teacher, identified by Sinclair and Coulthard is a spoken language pattern familiar to teachers and researchers.

Sinclair and Coulthard were linguists who found the classroom context helpful for investigating larger units of language than the sentence.

Linguists committed to the study of talk in Educational settings, including Michael Stubbs, tend to prefer the systematic approach of Sinclair and Coulthard to the looser approach towards analyzing classroom talk pioneered by Douglas Barnes in **From Communication to Curriculum**. (Stubbs, 1981; Edwards and Mercer, 1987). Stubbs deplores what he sees as the tendency of some educational researchers to quote very selectively from transcripts from classroom talk to support their argument (Stubbs, 1981).

Mary Willes noted that the patterns detected by Sinclair and Coulthard in the Secondary School were also to some extent evident in the Infant School. (Willes, 1983).

However in commenting on the views of both Stubbs and Willes, Edwards and Mercer remind us that the emphasis of formal discourse is essentially to do with form rather than content.

'So those matters quite rightly identified by Stubbs as important - the spoken presentation of curriculum content as 'bits of knowledge', 'items of knowledge' or 'topics' - actually lie outside the domain of discourse analysis and its underlying theory'. (Edwards and Mercer, 1987, p. 10).

My focus in the main study in Chapters 8 and 9 is, like that of Edwards and Mercer, in their study in **Common Knowledge** on cognitive and educational processes in a developmental perspective. A discourse analysis system, interesting and useful as this

is for some purposes, does not answer the kind of questions which seek illumination here.

### **Pedagogical approaches.**

Douglas Barnes' work follows from his observation of the dominance of the Initiation, Response Feedback structure of interaction in the classroom. He sought pedagogic approaches which would make possible more genuinely interactive patterns of classroom talk to learn.

'Classroom learning can best be seen as an interaction between the teacher's meaning and those of his pupils, so that what they take away is partly shared and partly unique to each of them', (Barnes, 1976, p. 30).

Barnes maintains that the traditional teaching style with the emphasis on teacher questioning tends to prevent children's own questions to help make sense of and links between classroom and out of classroom knowledge. (Barnes, 1976).

Barnes does analyze examples of classroom talk in groups according to categories to do with cognitive and social development. (Barnes and Todd, 1977). It is not true to describe the work as merely anecdotal.

I draw also on the work of Edwards and Mercer in examining the transcripts on talk from the point of view of teacher and children reading 'common understandings'

about 'shared knowledge' rather than to produce an analysis of linguistic structures.

## APPENDIX 7b.

**Table 26**      **Transcription symbols**

T R            Teacher Researcher

Mr P            Class Teacher

P                Pupil

(or first name or first letter of first name.)

...              a pause, if long added dots signify extra seconds.

II                an interruption

( )              unidentified speaker or utterance

Y - E - S        a speaker spelling out a word

YES             capitals for emphasis

(These symbols are used frequently by researchers, I have drawn particularly on those used by Hitchcock and Hughes, 1989, p. 167).

## APPENDIX 7

### c) **Advantages and Limitations of the Cassette Tape Recorder.**

Having access to a record of a conversation of series of utterances seems to provide data which is more objective than field notes. Value judgements enter into the process of producing this kind of data. First the conversation or utterances take place in a context, and this needs to be explained if the transcript is to be meaningful. Such explanation compensates only partly for the absence of non-linguistic information. Secondly the researcher has made judgements about what to record, whom to record and where. Decisions have to be made about whether only static situations are suitable for recording or whether this can extend to children on the move. Dombey draws attention also to the decisions which have to be made over what is transcribed. Large amounts of recorded data can be produced during classroom research. (Dombey, 1986). Few teachers have, as does a full scale project like the Ford Research Project, secretarial help for transcribing. It is a time consuming process which takes practice to perfect. Appendix 7b sets out a Table of the Transcription symbols used in this study.

## APPENDIX 8.

a.) **Summaries of studies of non-fiction reading: a. Chapman et al b.) Neville and Pugh.**

a.) **Open University Reading Research Project. (Chapman.)**

(1970s and 1980s)

This study is grounded in Michael Halliday's functional theory of language. It deals with language as discourse beyond the level of the sentence.

The main aim of the work was to trace children's increasing control over certain linguistic features in texts. The survey was longitudinal: three groups of children were selected, aged 8, 10 and 13 years and their reading progress followed over three years.

The most systematic account of the philosophy, methodology and results of the Open University Reading Research Survey is set out in Chapman's book **Reading 5-11**, 1987.

There were 1,500 children from 23 schools in both rural and urban areas. Chapman wished to obtain data about the covert purpose of silent reading and turned first to Goodman's technique of miscue analysis since this allows 'errors' or 'miscues' to be analysed according to a three-layered cueing system, graphophonic, syntactic and semantic (Goodman 1973).

Miscue analysis allows the teacher or researcher to assess a reader's underlying metatextual base while not disturbing the dynamic quality of reading.

However, as many children were to read large numbers of texts, Chapman and his team modified the 'miscue analysis' strategy devising a new type of error analysis. The new procedure presents children with the same texts their teacher had selected for day to day use but with an important adjustment. Chapman describes the technique as follows:-

'This adjustment was done by removing one end of a cohesive tie from the text so as to create a gap, the presence of which was indicated by double lines of standard length. The cohesive ties chosen for this were considered to be part of a cohesive chain of ties that ran through the text. The reader was then asked to fill in the gap with an appropriate word'.

(Chapman, 1987, p. 58.)

Below is a summary of the main findings of The Open University Reading Research:-

1. Reading development in schools is partly to do with children's increasing ability to perceive cohesive relationships in their school texts.
2. This research team perceive **register** as the realization of **genre** and as worthy of consideration alongside the perception of **cohesion**.



3. The concepts of cohesion and register could usefully lead, in the research team's view, to the development of a profiling system for school, class and individual.
  
4. Advanced readers (as measured on standardized reading tests) were more able to reflect on an author's textual meaning (using the concepts of cohesion and register) than less advanced readers.
  
6. The children whose scores on standardized reading tests placed them in the lowest third of the sample found it difficult to make reading progress.

(based on Chapman's account of the main findings of the Open Univeristy Research Project, Chapman, 1987, p. 130.)

## APPENDIX 8.

### b.) The reading research studies of Neville and Pugh. (1982).

These researchers carried out a series of studies focussing on how 9-11 year old children move from the oral reading of the initial stages of learning to read to the silent reading demanded of the upper primary and secondary school stages. Twenty able and twenty less able readers were studied over their first year in a middle school. (The GAP test of Reading Comprehension was the main means of assigning children to each group). (Neville and Pugh, 1982, p. 42).

The most interesting part of the work from the point of view of the present study is the three studies of middle school children's ability to locate information in a book. A specially adapted reading stand made of wood and specialized glass was used to observe the strategies of young readers. Although the glass appeared clear to the young reader, the researchers could adjust the lighting to obtain a good reflection of the subject's face. Video recordings were made of the readers' strategies.

The readers were given a booklet entitled **Rats and Mice: friends and foe of man**, by Silverstien, A, and Silverstein, B (1968) Glasgow, Blackie. The researchers justify the choice as follows:-

'... its subject was likely to be of interest to both boys and girls, it contained a great deal of information of the kind used in the topic work, and it had a table of contents, index and running-heads giving chapter titles' (Neville and Pugh, 1982, p. 33).

The quickest way of answering the three questions was by use of the index. The researchers considered that unless the reader was very skilled in skimming and search reading information location skills would be needed. 30 children aged 9.4 and 10.6, all considered by their teachers to be of average or above average reading ability, took part. Eight out of the 30 managed to answer correctly in all three questions in the ten minutes allowed. Fourteen were using appropriate strategies (even if they did not answer all questions correctly) and sixteen were not. Four years later the same children were tested on the same task. Out of the 24 children still at the school ten had still not developed appropriate study skill strategies. Out of the ten six were not considered to be poor readers generally by their teachers. Neville and Pugh conclude that 'the ability to use a book is not a necessary product of good measured reading ability, that it does not develop of its own accord or "by maturation" in all children even though they can read well, and that how to teach it requires considerably more careful thought and experiment than hitherto.' (Neville and Pugh, 1982, p. 36.)

One great benefit of this research was that the childrens' teachers were able to observe on the video film exactly how the children used the books. While they often asked children to find information in books, they had not studied how the pupils went about it.

The other main finding is that proficiency in reading narrative independently does not automatically transfer to reading informational texts. Ability to read and use these is part of becoming a proficient reader. Neville and Pugh, following Fawcett, consider the use of reading laboratory materials might be of help (Fawcett in Lunzer and

Gardner, 1979). However they also recommend that teachers give appropriate individual help in both locating facts and in learning how to utilize the structure and organization of the book in the context of real 'research' situations in topic or project work.

## APPENDIX 9.

### Table 28. Non-fiction in the national curriculum

How far do these genres appear in the national curriculum and at what stage are they introduced? Those genres introduced at key stages 1 and 2 in Programmes of Study, English Ages 5-16 are set out overleaf, with the suggestion that some of the genres, introduced at later stages can also be used in the primary classroom.

**Table 28. Kinds of non-fiction text in the National Curriculum** *(before the 1995 changes)*.

**Narrative Non-fiction**

**Key Stage 1 (Ages 5-7)**

- o interest books and information books (organised within a time sequence) - paragraphs 16.22 and 16.23.

**Key Stage 2 (Ages 7-11)**

- o non-fiction information stories would be one category - paragraph 16.29.

[Diaries, and biographies are mentioned for Key stages 3 and 4 (ages 11/12/14 and 14-16) (16.30) but since they are widely used in the primary years they are discussed in Chapter 5].

**Writing organised procedurally**

**Key stage 1 (5-7)**

- o notices, books of instruction paragraph 16.22

[Programmes of study for Key Stages 3 and 4 suggest the following: guide books, sets of instruction, manuals, stage directions, forms (paragraph 16.34).

Many of these, in their simpler forms, are used in the primary years and it seems odd that none are mentioned in the programme of studies for Key stage

2. They are included in Chapter 3.]

**Table 29 - continued.**

**Non-fiction - Non-narrative**

**Reference Books:**

**Key Stage 1 (ages 5-7)**

- o plans, maps, diagrams, computer printouts paragraph 16.22
- o dictionaries, word-books, computer data, road signs, logos - paragraph 16.23

**Key Stage 2 (ages 7-11)**

- o List of contents, indexes, library classification, library catalogues paragraph 16.28

[The programmes of study key stages 3 and 4 include thesauruses, atlases, encyclopedias, subject reference books and databases paragraph 16.42. many children are ready for and are provided with these earlier and therefore they are considered in Chapter 5 ]

**Expository texts**

**Key Stage 1 (5-7)**

- o interest books (non-chronological) paragraph 16.22
- o information books (non-chronological) paragraph 16.22

**Table 29 - concluded.**

Key Stage 2 (7-11)

- o non-fiction (newspapers and magazines as well as non-chronological information books) advertisements (paragraph 16.29)

[The programmes of study for Key stages 3 and 4 include travel books, consumer reports, text books, contracts, information leaflets, publicity material and newspaper magazines (16.34) leader columns, pressure group literature (16.40). Some of these are often part of the primary school reading programme and are included in Chapter 5.]



## APPENDIX 10.

### Children's Difficulties When Reading Non-Fiction.

Paice, whose research on children's information books is considered in Chapter 5 feels considerable concern about children's limited capacity to use non-fiction from the earliest stages right through to the upper secondary school.

'I have become increasingly concerned about children's use of non-fiction books of all kinds. I know children of fourteen or fifteen unable to choose the right volume of an encyclopedia, unable to skim through a dozen pages to find out whether a chapter will be useful to them, unwilling to read deeply and thoroughly on a subject chosen by themselves as a 'project'. I have seen Junior children writing a topic with only one source book, apparently unwilling or unable to do much more than copy whole paragraphs and pictures, then writing on the cover **My book about the Romans**. Recently, I saw a boy looking for 'a book about ships'. He chose a book by the picture on the cover, but he could not even read the title, **Ocean Liners**, chiefly because he had heard of neither word. As I am an Infant School Teacher I often see infants looking at pictures in non-fiction books but never voluntarily reading a single word of the text. They can learn a lot from these pictures, I know, but I am more worried about the habit they are acquiring of not reading the words (Paice, 1984, p.3.)

## APPENDIX 11.

### ~~John~~ Langer's American Study of Children's Reading and Writing in Different Genres.

Langer's American study explored the notions of 67 high achieving children at Grade 3 (age 8), Grade 6 (age 11) and Grade 9 (age 14) of what stories and reports are and how they can be organized. The children read both stories and reports and wrote or recalled these and answered questions about each. Langer compared the ways in which they organized their knowledge across genre, story and report, and domain, reading and writing.

#### Summary of Langer's findings.

- o from about 8 years children showed good control over story both in retelling and in writing their own.
- o control over report (exposition) increases between 11 and 14 years, but <sup>only</sup> some knowledge of this genre is evident in children's oral retellings and writing before this.
- o Langer suggests two explanations. First the spoken forms they hear familiarize children with particular genres. The language of academic report is unlikely to be heard at home in the way that stories often are. Second, it seems likely that knowing the functions particular forms serve is helpful in children's acquisition of them. (Langer, 1985 pp 157-187).

## APPENDIX 12

### Using books to learn about Whales.

A large group of twenty four year olds in a South East London nursery school engaged in a range of activities on a 'whale' theme. There was to be a visit to the National History Museum and preparation for the visit included water play with rubber models of blue, humpback and killer whales. Two features of the work prepared the children for both learning at the museum and for non-fiction reading.

First the teacher/researcher introduced new vocabulary as the children played with the models. New terms included 'blowholes', 'fins', 'blubber', 'mammals' and 'calves'. These terms would be found on museum labels and later on in non-fiction texts. Second, models of sharks and other sea creatures were added to the water play items and the children were helped to look for some of the differences between sea creatures which like the whale were mammals, and sea creatures which were fish, like the shark. This classification task also encouraged the kind of thinking necessary for reading some information texts when phenomena are organized in categories. The researchers observe that by the time they visited the whale floor of the National History Museum the children had much interest and concern invested in the topic. They were shown the words on labels like 'calf', 'Blue whale', and 'blow hole' that they had heard during water play. They guessed that the numbers had something to do with the size of the creatures. These young children were learning to use all kinds of cues to make sense of print and the nursery staff reinforced this. On their return

to the nursery teacher and children began work on a huge chicken wire and papier maché blue whale which was as accurate as possible.

The teacher-researcher followed up work with four of the children - Jason, Joyce, Kamal and Opal - in the reception class of the nearby infant school. They were now aged almost five years. On entering the library where the group work was to take place the children were pleased to observe that the huge papier maché whale they helped make in the nursery was suspended from the ceiling. The whale proved to be a successful link between the new book-based work and the experiences in the nursery from some weeks before. The teacher-researcher sought some sort of strategy or device that would create a motivating context for asking questions about whales which would then move the work towards the books on whales that had been gathered together. The use of pretend animals in a playful way is sometimes a way of generating a good quality of concentration and interest. For example Peter Lloyd, quoted in Donaldson 1978, used a talking Panda to encourage young children's spoken communication in a study to examine how far egocentrism seems to be a barrier to communication. In the tradition of this way of motivating children the teacher-researcher produced a letter from the whale asking them to write back guessing her name and asking any questions they might have about whales. The children entered easily into this secondary world where whales could talk and write, and with the teacher's help they named the whale 'Bluey'. Each child was then helped to formulate a question and the teacher-researcher, acting as scribe, wrote the questions on cards and put them in an envelope marked 'Bluey'.

The questions were: how many babies do whales have? (Joyce); were dinosaurs bigger than whales? (Jason); how big is the Blue Whale and other kinds of whale? (Kamal). Why do killer whales harm seals? (Opal) Bluey wrote back suggesting the children use the books to find the answers to their questions and to write back letting her know.

Doyle and Mallett describe how the children, with teacher as model reader, look at pictures and print in the collection of books. The teacher-researcher demonstrated using contents and index as ways of retrieving information quickly. The children helped find 'song' in the index of Martin's book **Whale and Dolphins** to answer a question about the singing of whales.

The children talked about the new information, and the researchers believe the use of spoken language in this small teacher-led group encouraged reflection. They support this by including the following vignette; Jason questioned what the teacher read out of a rather an old book - that

'some (whales) are even bigger than brontosaurus, the largest of all the dinosaurs'

(**The Blue Whale** by Mizumura, 1970, p.4).

He said he had heard that a new dinosaur skeleton had been found, the supersaurus, and that all the bones had not yet been found, 'it might be bigger than a blue whale,'

he thought. The children were getting the message that knowledge is not static but constantly changing. Opal pointed to a page in the same book which showed a whale bone corset, an old fashioned perambulator and a four poster bed all made of whale products and dismissed it with 'we don't have these things now'. The researchers consider the collaborative character of the work encouraged a reflective approach.

What other evidence do the researchers suggest that the children benefited from the strategies employed in this study?

First Doyle and Mallett note that there was evidence of the children using an appropriate metalanguage to talk together about their use of the books. There was increasing evidence of terms like 'contents page', 'index', 'writing', 'diagram', and 'mean' in context. The teacher researcher's modelling of reading behaviour seemed to have made an impact.

Second the children's ability to challenge what the teacher read out from one particular book - that new fossil evidence might make the statement in a book that the blue whale is the largest mammal ever out of date - makes us question traditional views on the ability of the very young to reflect on information and ideas in books.

Thirdly the enthusiasm and the sustained concentration characteristic of the children's work seems linked to the grounding of the work in a strong motivating context. The rich activities in the nursery, the exciting visit to the museum and the collaborative

nature of the work strike the researchers as significant factors here.

The detailed account of each stage of the work makes it possible for other practitioners to relate closely to the challenges that faced this teacher-researcher and to the strategies employed. It must be noted that the reception class stage of the work involved only four children. The main study in this dissertation is an example of a whole class being helped to become reflective readers. While much can be learnt from classroom studies using small groups - issues can be raised and strategies can be tried out - other practitioners can relate more closely to whole class examples which reflect more realistically their daily situation.

## **APPENDIX 13.**

### **DARTs**

#### **Unmodified or 'text analysis' DART.**

A very simple DART exercise for very young children or children with special learning needs is set out in **A Question of Reading** by Moon and Raban. A short text about seeds growing into flowers is organized in four paragraphs. Pairs of children read the text and place cards with the titles 'seeds', 'sun and rain', 'seeds' and 'flowers' in boxes beside the appropriate paragraphs together with appropriate pictures. (Moon and Raban, 1992).

#### **Modified and 'text reconstruction' DART.**

A passage is written out and then each paragraph is cut out and children are asked to work in pairs to place the paragraphs (or sentences) in sequence.

#### **Deletion DART or Cloze Procedure.**

Cloze procedure, like miscue analysis, stems from a theory of reading that maintains 'the belief that children could be using all levels of language even in the early stages of learning to read'. (Southgate et al, 1991. p. 310). The use of cloze procedures, as an alternative or supplement to other tests of children's reading ability, has been recommended by a number of reading specialists (Bormuth, J.R., 1973; Southgate, Arnold and Johns, 1981; Chapman, 1983; Beard, 1987; Wray, Bloom and Hall, 1989; Dougill, 1993).



Cloze exercises take different forms but all present the reader with a passage of text from which a number of words have been deleted. Particular categories of words may be missed out, or words in a particular position in a sentence. There are three main benefits of cloze exercises. First they have a potential diagnostic power since a young reader's ability to predict what is likely to come next, using linguistic and semantic clues, is exposed. Secondly where several pupils are encouraged to collaborate over supplying appropriate words to fill gaps, the discussion can help make explicit knowledge about language.

'They (the children) may become aware of different ways of reasoning to reach a common goal, and vocabulary may be extended through shared experience'. (Southgate, 1981, p. 302).

The third benefit is linked with the second: cloze may not only test comprehension, but can also help it.

### **Evaluation of DARTs**

The important principle to keep as an underpinning to DARTs is that they must be embedded in current work. Beard suggests a programme of mixed activities of 'super DARTs' in which the activities are planned to fit with evolving work. A topic on water could include:

'a text analysis activity on some introductory information on the local river,

a text completion activity on the key concept words of the water cycle; a sequencing activity from a text on the stages of a river and a prediction activity on a novel or short story...' (Beard, 1987, p. 155).

The best DARTs for children are those they write themselves for each other.

APPENDIX 14.

Table 17: Books and Resources for the Squirrel Project.

APPENDIX 14 Books and resources used in the course of the squirrel project		*Particularly strong feature		Page 1	
TABLE 17 AUTHOR	BOOK/PUBLISHER/ SERIES	CONTENTS INDEX PAGE	GLOSS-ARY	NOTES	BRIEF DESCRIPTION
1. Angela Sheehan (1976) (Illustrator M. Pledges)	The Squirrel Angus & Robertson Eyevlew Library	-	-	✓	A simple narrative taking reader through a squirrel's year. Nature notes at end. Drawings. 25pp.
2. E & A Propper (1977) (Illustrator P. Oxenham)	The Squirrel Macdonald Educational Animal World	-	-	✓	Simple text. Introduces non narrative text within an overall season sequence. Drawings. 21pp.
3. C. Butterworth (1988)	Squirrels Macmillan	-	-	-	Bold print, simple text. Continuous present tense. 32pp.
4. A. Davics (1986)	Discovering Squirrels Wayland Discovering Nature	✓	✓	Suggestions for further reading.	Clear format*, very good retrieval devices*. Photographs integrate well with the text*. Key words in bold print. Clear text, more demanding than books above, ('Like all rodents squirrels have two pairs of chisel-shaped incisor teeth'). 46pp.
5. L. Bomford (1986)	Squirrels A & C Black Nature in Close Up	✓	-	-	Clear inviting text*. 'Did you know the grey squirrel comes from America?' Excellent photographs which are well integrated into text*. Key words in bold print. 25pp.
6. J. Coldrey (1982)	Grey Squirrels Andre Deutsch	-	-	-	A picture book with a challenging introduction using vocabulary like 'independent', 'native' and 'undoubtedly'. Two lines under each photograph. 32pp.
7. J. Coldrey (1986)	The Squirrel in the Trees Methuen Animal Habitats	-	✓	-	Key words in bold print. Beautiful photographs by Oxford Scientific Films*. Food chain diagram. This text takes the young reader further in dealing with book language than nos. 1-6. 'Squirrels that live and shelter in trees are common in many countries'.

APPENDIX 14 books and resources used in the course of the squirrel project\*Particularly strong feature Page 2

Table 17 AUTHOR	BOOK/PUBLISHER/ SERIES	CONTENTS INDEX PAGE	GLOSS- ARY	NOTES	BRIEF DESCRIPTION
8. A. Tittenson (1980)	The Red Squirrel Blanford Press with the Mammal Society	✓	-	Points about further study at end.	Clear but quite challenging text by a naturalist. Goes beyond basic information. Good photographs* and diagrams*. Latin names of species given. 'Red squirrels are most abundant in large and continuous areas of mature coniferous forest', whether these originate from planting or from natural regeneration', 43pp.
9. R. Whitlock (1974)	Squirrels Priory Press Ltd. Young Naturalist Books	✓	✓	Further reading & places to visit.	Inviting but detailed text*. Fine black & white photographs*. Introduction raises interesting questions e.g. 'Do squirrels really hibernate?' 'Are grey squirrels killing off their smaller red cousins?' 80pp.
10. J. Holm (1987) (Illustrator G. Troughton*)	Squirrels Whittet Books 'Companion Volumes' on Hedgehogs, Bats, Robins, etc.	✓	✓	F u r t h e r * information - books, & useful addresses.	A text which manages to be accessible, humorous & scholarly* '...they wrongly see the grey squirrel as the baddie who drove out the reds by chasing and killing them'. 127pp.
11. A. Leutscher (1979)	Animals, Tracks and signs Usborne Usborne Spotters Guides	✓	✓	Further reading etc. & guide to making nature notes.	A field guide for abler readers.
12. 12 H. Hvass (1961 edition)	Mammals of the World Methuen	✓	✓	Foreward.	Reference book, 17 chapters, with chapter on rodents. 212pp.

Table 17 AUTHOR	BOOK/PUBLISHER/ SERIES	CONTENTS INDEX PAGE	GLOSS- ARY	NOTES	BRIEF DESCRIPTION
13. J. Taylor (1978)	Sciurus: The Story of a grey squirrel Collins	**	-	Reading list. Foreward	An 'information story' with much authentic detail from a naturalist author: parts read to class by teacher. 92pp.
14. J. Reynolds	'Rules of the Game' Article in Country Life 4 May 1989	-	-	-	An article by a zoologist which needed to be paraphrased by teacher on the theme - what is the role of the grey squirrel in the demise of the reds? Colour photographs*.
15. D. Harbour (Design & drawings by D.E. Walton)	The Grey Squirrel World Wildlife Fund Education Dept. with Lloyds Bank.	-	-	-	A green & white wallchart with well integrated text and illustrations. Small print and quite challenging text. Children liked the diagrams.*
16. John Paling Script Writer & Photographer	'Squirrel on my Shoulder' BBC Wildlife Video Film. One of a series of wildlife films.	-	-	-	A BBC videofilm narrated by David Attenborough. Book language flavour- technical vocabulary 'gestation', 'aboreal', but unfolding time story aids understanding, giving a narrative framework for non-narrative elements.
17. P. Heeley Jessica Holm Scientific Editors	'The Case of the Vanishing Squirrel' Wildlife on BBC1 One of a series of nature films.	-	-	-	Jessica Holm, zoologist, investigates the cause of the red squirrel's demise. Very little technical language. Fascinating glimpse into a working life observing squirrels - weighing, tagging & checking them for disease. Stresses the painstaking nature of scientific investigation.

\*\* Chapters with story type titles e.g. 'Sciurus Waking Up'

## **APPENDIX 15.**

### **Features of Non-Fiction Texts.**

#### **Narrative (Chapter 4)**

##### **Information Stories.**

It is argued that the narrative organization makes this a sympathetic form for the youngest readers. Some texts in this category can be thought of as "transitional" texts since some general statements are made about phenomena within a mainly chronological organization.

Familiar forms of this genre are accounts of life cycles, journeys or whatever that are detailed enough to provide satisfying information. It is maintained that it is less confusing for young readers if the writing stays within the convention of non-fiction avoiding such aberrations as talking animals and "cosy" names and terminology. Clear, well integrated diagrams and illustrations, whether photographs or drawings are headed in this as in other forms of non-fiction.

##### **Procedural Writing.**

The most successful books and other materials like work cards and manuals in this form use clear text and illustration, carefully organized in stages so that the experiments, recipes and so on can be followed easily. New vocabulary needs to be contextualized and the ordering of practical action as unambiguous as possible. Illustrations integrate well with text complementing, explaining or extending it. The tone, use of headings and lists typical of this genre become more familiar with use.

##### **Biographical Writing.**

The global organization, as with the adult kinds, is narrative but analysis and evaluation is also present. Clear, accurate accounts embedding the happenings of peoples' lives in an historical context invite young readers in.

#### **Non-narrative (Chapter 5)**

##### **Reference.**

Dictionaries, thesauruses, encyclopedias and atlases are organized in conventional ways. Children need help in becoming familiar with the kinds of language use and illustrations in these genres. It is argued that a strong context is likely to ensure the purpose and interest best brought to using these texts.

##### **Exposition (Information Books).**

The children's information book is an illustrated book usually on one topic. Information books vary in style and complexity but research evidence suggests that to qualify as an example of the genre three elements have to be present: topic presentation, description of attributes (essential features of subject of the book) and characteristic events. (Pappas, 1986). The demands of the topic or subject provide the organizing framework.

A summary of research evidence suggests that:-

1. Early books in which "characteristic events" can be presented, at least partially in time stages, seem to help a transition from narrative to non-narrative forms.
2. The overall or global cohesion of the book needs to be clear. The contents page and section headlining are helpful here.
3. Local cohesion - the interlinking which makes a relationship between the meaning in one part of the text and another needs to provide a coherent internal structure to aid the reader.
4. It seems helpful for younger readers if descriptions of attributes of the subject are blocked together rather than dispersed throughout the text.
5. The language register of information texts can be difficult for young readers. Strategies which help are the careful contextualizing of new terms, use of personal pronouns and a conversational tone where appropriate.
6. Illustrations need to be accurate and to complement, explain and extend the text as appropriate.
7. Where children are using information books for research the quality of the retrieval devices - contents pages indexes and glossaries - is important, and they need to be well designed and easy to use.

## APPENDIX 16.

### Biography.

It is helpful to place the person under study in his or her historical context. This is achieved in Olivia Bennett's biography of **Annie Besant** partly by including many contemporary photographs, for example the photographs of the pinched faces of the Match Girls whose cause Annie championed, and partly by sometimes breaking away from the narrative to comment and provide information. We learn for example that 'most opportunities for training or further study were open only to men' (Olivia Bennett, 1988, p. 8). Thus Annie's achievements are seen to be all the more remarkable given the difficulties for ambitious women in Victorian times. A Time Chart and list of key dates in social reform make this **In her own time** series useful as contributions to historical understanding. Another way of providing strong historical background is by providing fact files alongside the narrative pages. Richard Tames does this very effectively in **Lifetimes** series. Thus in **Mother Theresa** there are important facts about leprosy and the partitions of Bengal so that young readers can come closer to understanding the social conditions in which her work is carried out. Sheer admiration for what has been achieved against all the odds is inspired by some biographies, for example **Rosa Luxemburg** by Wendy Forrest: Rosa became an international socialist leader at a time when women could not even vote. The better biographies, even for young readers, manage to indicate the complexity of human beings, even those who have made great contributions to the welfare of humankind. In **Guglielmo Marconi** the inventor's flirtation with fascism is not hidden, but included alongside his achievements.

There is no point in hiding the unbearably sad or unpleasant things that are part of people's lives. The appalling details of the Frank family's capture and death which contrasts so sharply with the friendly and hopeful tone of Anne's diaries (extracts are used) are included in Tames' **Anne Frank**.

A main problem in more conventional information books is how to invite young readers in. Good biography by the very nature of its form can achieve this and be an important source of historical information.

Autobiography, either in the form of diaries or letters, provides primary evidence of historical work. Anne Frank's diary is perhaps the best way for children to learn about the horror and unacceptability of Nazi anti semitism.

Older juniors can, with help, sometimes draw on adult work: for example 11 year old children on a historical project at Dove Cottage used, with help, part of Dorothy Wordsworth's letters and journals. (Mallett, 1992b.). The provision of this kind of source material enables young readers to judge people's actions and beliefs for themselves.



## **APPENDIX 17.**

### **Paice's study of information Books for Infants.**

Paice examined the non-fiction provision in her own infant school: some information books were on loan from the County Library to support particular themes and topics, others like Macdonald's Starters, Ladybird books and sets of Junior Encyclopedias are in the permanent book collection. Paice observes that one obvious problem was that most of the books were beyond the reading level of nearly all the children.

There are hundreds of books in the school library and Paice decided to narrow her analysis and evaluation of books to one topic. Honeybees was the chosen subject as this was the theme the 6-7 year olds Paice was teaching at the time were studying. Paice herself was a bee-keeper and her own expertise and her professional knowledge of infant age children, 5-7 year olds at Key Stage 1, put her in a strong position to evaluate the books for this age range. Indeed she is one of those rare people combining subject expertise and knowledge of young children's conceptual development whom Meek would welcome as a reviewer of children's non-fiction. (Meek, 1977).

Paice evaluated the books according to the following categories: invitation to the topic; presentation and illustration; accuracy; style and readability; presence of characteristics of non-fiction genre. Paice, (1984).  
These categories are used to summarise Paice's results.

### **Invitation to the topic.**

Paice considers the cover, size and feel of the books were not attractive to the age groups for which they were intended. She gives an example of a book entitled **Honeybees** by Mervyn Kaufman (Angus and Robertson) which is well written, but off putting because of a dull cover.

### **Presentation and illustration.**

Paice finds shortcomings in the choice of illustrations which in many cases were not sufficiently clear and accurate, and the typeface which was also not always bold and clear enough for the youngest readers and the arrangement of the text in the book.

### **Accuracy.**

In the topic books about Honeybees Paice found many inaccuracies. Errors of emphasis and omissions were noted. Writers of even the most recent books seemed unsure about the prior knowledge of the topic to assume in very young readers and no attempt was made to clarify definitions of wasps, honeybees and bumble-bees. Paice's experience of teaching infants suggests that children are excited by interesting details, for example the fact that even so-called busy bees work for only twenty minutes in each hour. But these details are rarely present in the books analyzed.

Where illustrations are photographs accuracy is likely to be achieved, but Paice questioned the relevance of some chosen pictures; for example a photograph of honeybees nesting in a tree in India without the provision of a supporting context. Paice suspects that publishers sometimes already possessed a series of pictures and commissioned writers to produce captions and a text to link the illustrations. Some editors did not even get the photographs the right way up! She deplores this practice, maintaining:

'A professional writer possessing a reference book is **not** equipped to produce a Junior topic book.' (Paice, 1984, p.4.)

Others who care deeply about the quality of children's books argue in similar vein (Meek, 1979; Arnold, 1992). Illustrations other than photographs were far from satisfactory:

'Many of the drawings and paintings are very bad. The proportions and shapes of the bees are wrong, and action drawings are particularly poor. In one book bees seem to be trying to dive head first into the flowers! All the artists seem to have a passion for drawing bees with full pollen baskets even where the text mentions that they have been collecting nectar or water. (Paice, 1984, p.6).

### **Style and readability.**

Paice finds too many examples of unnecessarily difficult syntactic forms and use of scientific terminology in the books. She criticizes Lliane Rod's **The Bee** (Chambers) for its use of complicated noun phrases and double negatives.

'Nothing that does not belong to the hive gets past the sentries. Only the bees that get past the sentries are allowed inside the hive.'

While Paice's critical points about style of language, particularly syntax seem valid some encounter with scientific terminology is necessary to familiarise children with the register. Indeed she allows that:

'a small amount of this scientific language could prepare children for later reading.'

but qualifies this by adding:

'... but too much will confuse and perhaps bore them.' (Paice, 1984, p.6.)

Some of the terms Paice objects to, including 'gauzy' of a bee's wings, 'pupate', 'sources' and 'intruders' seem to me to be food for metalingual discussion and understandable if situated in a strong enough context.

#### **Characteristics of non-fiction exhibited.**

Finally Paice found few of the books helped children learn about information books as a genre. There was a lack of helpful sequencing of facts. Indexes, contents pages and suggestions for follow-up reading were by no means standard. As Paice points out, without good indexing children are obliged to read through the whole book rather than engaging in the flexible kind of reading appropriate to reading for information.

## APPENDIX 18.

### Non-fiction reading and National Curriculum English.

The traditional division of reading materials into fiction and non-fiction was evident in the first version of **English 5-16** which set out two attainment targets for reading. First 'the development of the ability to read, understand and respond to all types of writing' and second 'the development of information and retrieval strategies for the purposes of study'. (DES, Nov., 1988). The two elements were brought together in the second version of **English 5-16** as follows:

'the development of the ability to read, understand and respond to all types of writing, as well as the development of information-retrieval strategies for the purpose of study'. (DES, May, 1989).

In spite of this conflation of the original two attainment targets the 'reading for learning' strand is easily identified within each level of the statutory guidelines at the time of writing. [There may be some change from 1995]. Table 1. sets out the knowledge, skills and understanding at the different National Curriculum levels as far as non-fiction reading is concerned.

**Table 1. Non-fiction reading in the National Curriculum: Key Stages 1 and 2.**

- o Talk in simple terms about information in non-fiction books (AT2: Reading: Level 1(d)).
- o Read accurately and understand straightforward signs, labels and notices (AT2: Reading: Level 2(a)).
- o Demonstrate knowledge of the alphabet in using word books and simple dictionaries (AT2: Reading: Level 2(b)).
- o Read a range of material with some independence, accuracy and understanding (AT2: Reading: Level 2(f)).
- o Devise a clear set of questions that will enable them to select and use appropriate information sources and reference books from class and school libraries (AT2: Reading: Level 3(f)).
- o Find books or magazines in the class or school library by using the classification system, catalogue or database and use appropriate methods of finding information, when pursuing a line of inquiry (AT2: Reading: Level 4(a)).
- o Demonstrate, in talking or writing about non-fiction, that they are developing their own views and can support them by reference to some details in the text (AT2: Reading: Level 5(b)).
- o Show in discussion that they can recognize whether subject matter in non-literacy and media texts is presented as fact or opinion (AT2: Reading: Level

- 5(c)).
- o Select reference books and other informational materials and use organizational devices to find answers to their own questions and those of others (AT2: Reading: Level 5(d)).
  - o Show through discussion an awareness of the writer's choice of particular words and phrases and the effects on the reader (AT2: Reading: Level 5(e)).

(DES/WD, 1990)

These abilities provide a checklist as children move through Key Stage 1 and 2. However there are two main problems with this kind of list of abilities. First I believe abilities which are quite advanced and sophisticated appear easier to acquire than in reality they are. For example knowing whether subject matter is opinion or fact (Level 5 (c.)) depends partly on how information books are written (see Chapter 5) and on the quality of the conversation about such matters between teachers and children. Such abilities, like the ability to show through discussion an awareness of a writer's choice of particular words and phrases and the effects on the reader (AT 2: Reading: Level 5 (e.)), develop gradually.

Secondly it is not made clear enough that the many different abilities children need need to develop, from acquiring proficiency in using library classification systems (AT2: Reading: Level 4 (a.) to becoming able to develop their own views supported by reference to a text (AT2: Reading: level 5 (b)) are best acquired in a supporting context. Children's desire to find out is nourished by motivating contexts. These contexts may arise in project work, as in the classroom example in this dissertation, or in the course of more subject centred work in the primary curriculum areas. Examples of good practice in the new statutory guidelines would be of further help.

Nevertheless there is some useful guidance here which is compatible with the main arguments in this study. First there is a recognition that talk about information in non-fiction books should be encouraged (AT2: Reading: Level 1 (d)); AT2: Reading: Level 5 (b.); AT2: Reading: Level 5 (c)). Second, the role of both talking and writing is acknowledged as a way of **reflecting** both on the information and ideas in texts (AT2: Reading: Level 4 (a.)) and on the features of the texts themselves (AT2: Reading: Level 5 (a.)). Thirdly, the need for children to formulate their own questions to take to their research, is reinforced in AT2: Reading, Level 3 (f) and in AT2: Reading: Level 5 (b). Fourthly, the Non Statutory Guidance at Key Stage 2, advises that children learn to read a range of non-fiction in a context that requires interpretation of what they read. According to this guidance children need:

'activities which lead them to formulate their own questions, identify main points and gather relevant evidence from a number of sources'. (National Curriculum Council, 1990, p. 5).

Thus the National Curriculum recommends the contextualising of children's use of

non-fiction in meaningful enquiry, although more guidance and explanation about these motivating contexts would be helpful. Cross curricular work is still commonly encountered in primary schools in spite of the push towards a more subject-centred curriculum after the 1988 Education Reform Act. For example the Key Stage 2 history units encourage a broad approach drawing on Art, music, creative writing, drama and technology. These are the potentially motivating contexts in which I believe reading to learn needs to be embedded.

## **APPENDIX 19.**

### **Ethical Issues.**

The ethical aspects of carrying out research deserve scrutiny whether the study is large or small scale, quantitative or qualitative. These will be considered as they apply to the education context under four main headings: confidentiality; subjects' informed consent to what happens; acceptable standards of behaviour from the point of view of maintaining the good general reputation of researchers; the ability to justify the value of the research project.

### **Confidentiality**

Confidentiality is not usually a problem in large scale quantitative research, since subjects are unlikely to be identified (Croll, 1986). However the small number of settings, and the nature of the data in qualitative studies can make confidentiality more of an issue. Small scale classroom studies like the present one call for care on the part of the researcher in ensuring the privacy of the subjects. Thus what is needed is an ethical framework to govern the collection, use and release of data (Elliot, 1978; Hitchcock and Hughes, 1989; Kemmis and McTaggart, 1981; Hopkins, 1985; MacDonald and Walker, 1974).

The teachers and children regarded me as a teacher, rather like a supply teacher, who came to teach sometimes at the school, but who was not part of the permanent staff. Thus I observed general professional standards by for example not speaking about individuals in the school except in professional conversation with other teachers. In consultation with the head and class teacher, it was agreed that I should use the first names only of the children and the teachers' titles and the first letter of their second names in all written materials. The head teacher requested that a general acknowledgement to the school should be made in books and journals. This public recognition of a school's cooperation with research, hopefully of benefit to professional knowledge about an important area seems reasonable, but it has to be balanced with the individual's right to confidentiality. In ethnographic studies in the areas of sociology and anthropology things said in private are sometimes made public. Hammersley insists that the argument that the findings of research studies are produced for and read by a specialized audience does not mean that invasion of privacy can be ignored (Hammersley, 1990). However the present study centred on the relatively public area of everyday lessons. No confidential matters to do with individual children's out of school lives are exposed, nor was any kind of deception necessary. Examples of the sort of situations where to be completely honest about one's purposes would invalidate the results are the Swann and Graddol (1988) and French and French (1984) studies which aimed to examine teacher behaviour towards the sexes. Knowledge of the researchers' intentions to observe differences in their interaction with male and female children might at best make teachers self conscious and at worst affect their behaviour. Here the interests of total honesty and openness

have to be weighed against the value of the research findings. Hammersley suggests that it is not a matter of "to deceive or not to deceive" in the abstract but of what or how much to tell on what occasion (Hammersley, 1990, p. 134). Roth invites us to conceive of research studies being allotted along a continuum. The present study fits near the "completely open" end of the "completely open" to "completely covert" continuum (Roth, 1962, p. 283). It would be naive to rule out the possibility that some things were not made fully explicit, perhaps unconsciously. However I aimed to follow Bell's suggestion that researchers should make clear what teachers would be asked to do, how much time it would involve and what use would be made of the information (Bell, 1987).

### **Subjects' Informed Consent.**

In classroom studies we must ensure, as far as possible, that all who are involved in the research are willing. It would be unwise to oblige a reluctant teacher to participate even if the LEA and headteacher had given permission. Judgements about how far a researcher should request teachers to give up their time has always been a difficult issue (Johnson, 1984). The great demands on schools in the areas of curriculum development and change and assessment brought about by the 1988 Education Reform Act makes it even more necessary to make clear what is involved for teachers and children when co-operating with researchers. This has implications too for justifying the work of a particular study (see 7.8.d.).

The general issues of the interests of subjects is taken up in the British Sociological Association's "Statement of Ethical Practice", 1970. Hitchcock and Hughes provide a helpful summary of this document as it applies to school-based research (Hitchcock and Hughes, 1989, p. 201). Following the Sociological Association's Statement, Hitchcock and Hughes insist that all subjects should be able to refuse to participate. The questions of the consent of primary age children is problematic, firstly because they tend to fall in with what adults seem to want, particularly in the school setting, and secondly because their experience of the world may not enable them to appreciate precisely what is involved. The context of the present study minimized these difficulties. Firstly I was known as a teacher who contributed to the work of the school over several years, sometimes working with whole classes, sometimes with groups and sometimes with individuals. This work was in line with the Council of Accreditation of Teacher Education requirement at the time of writing that Education tutors should maintain recent and relevant experience in schools. Much of this teaching was carried out with the class whose project work is the case study in the present work. As all my teaching was carefully planned and negotiated with the head and class teacher to integrate with the total programme of work it was inappropriate to ask for children's consent.

A second reason for my privileged access to the school and the comfortable working atmosphere in which the work was carried out was to do with the two-way nature of the college-school relationship. Several members of staff regularly helped with the



interviewing of candidates for the BA (Ed) degree course and the headteacher made a major contribution to an advanced college course in the area of language and literacy. The shared knowledge and experience of the two environments, college and school, ensured a high degree of sensitivity to each other's feelings and assumptions and made inconsiderate behaviour less likely (Hitchcock and Hughes, 1989, p. 197).

Thirdly, the nature and scope of this study was carefully explained to all the teachers: it involved one half day of project work where the use of non-fiction texts was important each week for a term. I would plan and carry out the work, explaining to the teacher and children both the total shape of the work and the more detailed weekly plans. Mr P, the teacher with whom I had worked most, expressed interest in the project and willingness that I should carry out the work with this class of 24 third year juniors. There was already a feeling of mutual trust and professional respect between us.

Fourthly the teacher explained the plan to the whole class in my presence as follows:

"Mrs M, who you have already worked with when you were in your first and second years, would like to carry out some project work on Thursday afternoons during the summer term. Mrs M and I have chosen 'Squirrels' as the topic and some of the time you will be working with information and reference books and materials. Helping and sharing in your book research will help Mrs M in her work with students at her college, who want to teach children of your age. You will have the opportunity to make your own book and Mrs M will do some writing about the progress of the project to help other teachers".

The children were not given a choice about whether or not to take part since my work was near to the sort of thing they would have been doing anyway with Mr P. However since Mr P would be taking up the opportunity to attend to other tasks sometimes to help individuals and sometimes to join the lesson while I took on the role as "main teacher", it seemed both sensible and courteous to explain this to the children. In short my general responsibility towards the children was the same as that of any conscientious teacher.

Related to the issue of consent is the question of whether any actual harm might occur to any subject as a result of research. In the present case we can of course rule out the sort of damage that might be a risk in medical or scientific research or the danger of harming whole groups of people or whole categories of workers as is possible in certain kinds of ethnographic study (eg Ditton's study of "fiddling and pilferage" among bread salesmen (Ditton, 1977:VII, referred to in Hammersley 1990). The nature of the present study, based as it is on normal classroom work, and negotiated with the teacher at each stage makes it unlikely to be harmful in any material sense. It could be argued that the reverse was true since the children had the benefit of an extra teacher with particular knowledge to share about non-fiction reading and learning. Nevertheless, every researcher brings into someone's classroom their own

collection of values, assumptions and prejudices and Mr P's generosity in exposing himself to mine cannot be overstated.<sup>6</sup>

### **Effect on Other Research.**

Educational researchers rely on having access to schools and their behaviour and the way they conduct themselves during the research may effect the success of other researchers in gaining access for future projects. In my work in the case study school I aimed to keep their good will in the following ways. I communicated with them as openly as possible. I showed understanding on the rare occasions when work plans had to be changed because of other school events. I marked all the work the children did in my sessions. I kept in regular touch by telephone and letter whenever my own plans changed and I wished perhaps to show a video or involve another class in the work; for example near the end of the study the nine year olds read their books to the seven year olds. Sudden requests for machines or altered arrangements on arriving at the school were thus avoided.

On completion of the research I asked if I could help in any way. This resulted in my giving a talk to the whole school about the work with some readings from non-fiction and a book display.

All this may seem to be the mere lightweight detail, but I feel sure it increased the mutual feeling of being professional colleagues, and helped lessen the impression, so easily given if we do not take care, that researchers feel entitled to use teachers' and childrens' time for their own purposes. I believe research work in schools should have built within it some short term benefits for the participants, as well as longer term benefits to knowledge and understanding in an area of educational concern.

### **Justifying the Value of School Based Research.**

The value of a particular research study should be capable of being made explicit to participants. Occasionally research has to be partly covert if, as in the cases cited earlier on teachers' interaction with male and female pupils, complete openness would invalidate the research. The worth of the present study was explained to both class teacher and to the pupils: little research has been carried out on promising ways to integrate knowledge from non-fiction texts into the whole programme, so that reflection on the ideas and information is encouraged. Thus the present study is a needed contribution to professional knowledge. The value of this project is made clear in articles in academic and professional journals as well as in this thesis. However, the children themselves were helped to understand the importance of critical reading. They were encouraged to make their own progress here explicit. Thus the children were involved consciously in the research in the way that Pollard recommends. (Pollard, 1987).

One of the main claims of teacher researchers is that aspects of their own practice are

changed and improved. In a general way this was true in my own case, but since my work in the school ended some few months after the study it would not be true to claim that I permanently changed practice in this school. The implications for other colleagues were discussed when solicited only since teachers have a right to freedom from pressure in their staffroom!. Copies of all publications were made available in the headteacher's office for anyone who wished to know more about the findings of the study. Thus the spirit of Stenhouse's belief that action research should contribute to both practice and to a theory of education and teaching, which is accessible to other teachers was maintained within the limitation of the context in which I was researching (Stenhouse, 1979).

Constant feedback was in fact available to me from the classroom teacher and from the children who had become conscious through the research of their own development as readers of the non-fiction genres.

Ethical issues have been covered systematically in this section, but as Burgess indicates, ethical aspects are not confined to one stage of a study but rather interpenetrate throughout the research process. (Burgess, 1980).

## APPENDIX 20.

### Genre as a Social Category.

Kress believes children need both to become familiar with a range of texts, and to understand the social and cultural reasons for their existence:

'Our assumption is that it is possible to make school children aware of the manner in which different social situations lead to different kinds of text and that by making children sensitive to the relation between social factors and forms of language in texts they will gain a knowledge both about language and about society from which they will be able to generalise, and which they will be able to use productively in making texts of their own' (Kress and Knapp, 1992).

Kress sets out two beliefs which nudge him into a more central position along the continuum ranging from a belief in a fixed forms at one extreme and fluid forms at the other in his paper 'Genre in a social theory of language'. (Kress, 1992).

Firstly, in any society, there are types of text which achieve a relative stability because there are some social situations which come about regularly enough to make them appropriate:

'...these are recurring types of social encounters, situations, events, which have very similar structures. As these are repeated over and over, certain types of texts appear over and over and over.' (Kress, 1992, p.5)

Once these texts become recognisable they become conventionalised. This leads to a belief that the rules of the forms and what Kress terms their 'social meanings' should be taught in the classroom.

Secondly, it is claimed that a knowledge of how language works is necessary to put pupils in control of the forms and meanings in their culture. In Kress' words a knowledge of grammar:

'as a means of gaining a full understanding of the range of things it is possible to mean, say and write in a particular culture, and to do with its language'. (Kress, 1992, p.5)

A social theory of language does not concentrate on sounds, words and sentences as a notion of what language is, or on grammar in the sense of describing parts of speech and the rules that govern them. For those preferring a social view it is the text which is:

'a socially and contextually complete unit of language' (Kress, 1992, p. 6).

Texts may be written: as a newspaper article, a recipe, an account of a scientific experiment or a poem, or spoken: an exchange in a law court, a conversational exchange with an acquaintance, an argument or the telling of a story. All these texts are conventional and come into being through social need: thus both origin and function are essentially social.

Spoken and written texts differ in important ways, as Chapter 6 in this work explains. It is also the case that there are great variations within spoken and written discourse. Genre theorists who, like Kress, take text as the social unit of language seek the significance of a particular text whether spoken or written, formal or informal, whether it is discourse produced in the world of work or by children in the classroom by asking the following questions: who produced the text? For what audience was it produced? In what context or under what constraints was it produced?

Regularities in particular kinds of social situation lead to regularities in texts. But even the most apparently 'natural' conversation is constructed and conventionalized and it is this which makes a text a particular genre. It is the conventions and the social situation giving rise to them that pupils need to understand, in order to control the different kinds of discourse.

It is the belief that all pupils should have the opportunity to understand the principles underlying the production of meaning through language on the grounds of equity that is such an attractive aspect of the genre theory. Understanding these principles does mean pupils need to understand grammar: not the old fashioned classical latinized grammar, but a study of grammar that reveals how language functions in different social situations. Knowledge of how language functions, of how it can be used to achieve particular aims, according to this view puts individuals in control of their lives.

## APPENDIX 21.

### Retrieval Devices.

A good contents page sets out the structure of a book. Publishers are becoming more skilful in using contents pages to reveal how the material in an information book is organised. In the 'Squirrel' project, the case study described in some detail in chapter 8, the 9 year old pupils on being invited to evaluate the books said they appreciated the headings and subheadings in the contents pages of Davies' **Discovering Squirrels**. The type of book, its subject matter and complexity are important factors in how detailed the contents page needs to be.<sup>5</sup> The contents pages of children's books to support science, nature study, mathematics, history and geography are usually best set out in a clear, unambiguous manner indicating the structured outline of the subject. The more catchy alternative lists require a certain level of verbal sophistication or prior knowledge of the subject for their interpretation. (Von Schweinitz, 1989).

Von Schweinitz chooses not to name the author or publisher of her supporting example on *The Media*, but the contents list includes 'What are the media?', 'What makes a good story?', 'All the news that's fit to print', 'Subversive Agents', 'Beautiful People' and so on. These headings could be mystifying rather than illuminating to the young people and Von Schweinitz' point is a valid one. However, I think there is a case for playful contents pages for some readers in some contexts. Many of the nine year olds whose work is described in Chapter 8 claimed to enjoy the humour of Jessica Holm's contents page in her book *Squirrels* which has sections on 'Some other members of the squirrel clan', 'Nest Sharing', 'Do reds and greys mix?' and 'Gadding About'. Used together with the index the maturer readers managed to find the information they wanted in this book.

The index is intended to work with the contents page to make retrieval of information possible. More specific information is sought in the index and items discussed in sections across the book are listed.

The very earliest non-fiction may not cover enough to justify an index or it may simply be inappropriate or unnecessary as for example in the Franklin Watts lively 'Ways to ...' Series (Titles include *Ways to ... change it*, *Ways to ... build it*). Barrie Watt's *Tomato* (Stopwatch series) has a simple index suitable for the 6-8 year old age range. The index includes all the key concepts covered: for example 'Seed', 'Seed-coat' and 'Sunlight'.

There is a problem for indexers when information books cover a large range of topics rather superficially. It is frustrating for a young reader to look up a word and find only a slight mention. Apart from the indexing problems posed we need to question the value of such general books for a younger primary age range.

Another obvious weakness is failing to include ideas, terms and phenomena covered

in the book in the index. Each topic for a particular age range usually has some core concepts we would expect to be covered. Their omission in the index might reflect a serious weakness in the book. Also to be avoided are lists of pages where a topic appears, when helpful differentiation could have been given. Differentiation of a long index topic becomes increasingly important as children move through the primary years. Below is an example of an index item which has been helpfully differentiated, from Macauley's *The Way Things Work*.

**Table 3. Example of a Differentiated Index.**

<b>Magnetism</b>	294-309, 322-3, 340, 370
Magnet compass	371
Magnet field coil	181
Magnet induction	50
Sound recording	243, 245, 247.

This helps direct the readers quickly to the aspect of the topic they need.

On the other hand good indexes avoid relegating to a sub topic under a main entry items which deserve a full alphabetical slot of their own. Eleanor Von Schweinitz gives the extreme example of a book on the environment which lists 'Whale' under 'Hunting' and 'Greenhouse effect' under 'Weather'. (Von Schweinitz, 1989).

There are ways of making an index easier to use by spacing it helpfully: for example in one of the books used in Chapter 8, Jessica Holm's *Squirrels*, there is a space between each group of items under one alphabet letter, and the first word of each new

letter is in strong print.

**Table 4.** Index Item from Holm's **Squirrels**

**Age**

A	Age	40, 41
	Aggression	18, 101, 102
	Albino	28
	Anatomy	25, 26, 27, 30, 31, 36

This kind of spacing makes an index considerably more inviting and helps make retrieval swift and efficient.

Newer information books, aimed at the older junior age range are increasingly featuring glossaries. Full definitions of some of the key concepts in the book are provided. The entries here should of course relate to parts of the text and not be a home for new ideas not incorporated in the body of the writing. Neil Ardley's **Sound Waves to Music** (Hands-on-Science Series) gives a definition of fourteen key concepts. Under 'compact disc' in the index we are referred both to the part of the book where it is covered and to the glossary entry which gives a more succinct definition. John Elkington and Julia Hail's book **The Young Greens Consumer Guide** has the glossary at the beginning of the book so that a young reader's attention is drawn to the key concepts thus preparing themselves for what is covered in the text.

In addition to contents pages, indexes and glossaries some information books provide lists of books for 'Further Reading'. **Young Greens Consumer Guide** mentioned above has a quite substantial and well organised list under 'Other Books to Read'. There are sections on non-fiction, fiction and some books for the very young but some annotation would have added further to its worth. However, the long and useful lists of Organisations and Useful Addresses are excellently annotated.



## APPENDIX 22

### The history of action research in educational settings

In the 1990s the structure of INSET courses makes Stenhouse's teacher as researcher" a familiar and well established notion. Similarly the modern teacher educator also takes up roles as classroom teacher and researcher as well as university tutor. Indeed this study and others like for example that of Cambourne and Brown in Australia, is evidence of the flexibility of the roles and activities of the latter. (Cambourne and Brown, 1989). However in the early sixties there was a more traditional approach to educational research. Teachers tended to be the subjects in research projects rather than initiators and researchers themselves. Much research was applicable to education, but there was not always a direct relationship between theory and practice. The changing emphasis in educational research has its roots in the establishment in 1964 of the Schools Council which financed curriculum research and development. In the late 1980s the Schools Council became the much smaller body, The School Development Committee, but in the 1960s and 1970s it was a major initiator of innovation and change across the school years. Teacher research as a movement began during the 1970s in British schools with Lawrence Stenhouse's **Humanities Curriculum Project**. Secondary school teachers were encouraged to take up a critical and reflective attitude to their own teaching. John Elliot and Clem Adelman broadened the concept of teacher research to the whole school age-range setting up **The Ford Teaching Project**. This involved forty primary and secondary schools in which teachers developed hypotheses about good practice as part of the process of teaching.

Teacher researchers were not unknown before the 1970s, but it was during this period that it became a distinctive movement. (Hopkins, 1985, p. 2). The Stenhouse and the Elliot and Adelman approaches were disseminated in modified forms through the Open University course **Curriculum in Action** (Easden and Paine 1982).

Stenhouse's approach was controversial since it sought to release or "emancipate" pupils from authoritarian teaching. This was brought about by three elements in the approach: the central role of pupil discussion, the provision of a range of documents to use as evidence and the teacher as a neutral chair person.

The teacher was also emancipated from control by advisers, researchers and examination boards since, by taking up a research stance, teachers refine and develop their own practice.

Cohen and Manion draw attention to the range of areas in school life in which action research can contribute. As well as innovatory work in teaching methods and learning strategies, teacher researchers might choose to look at assessment procedures, at attitudes and values in the school context, at INSET programmes, management and control and administration. (Cohen and Manion, 1989).

## Who Undertakes Action Research in Schools?

There are three main possibilities here. First a teacher may undertake some kind of planned new approach himself or herself with a group or class for a period of time. Although I was not the class teacher I had worked with the children in this case study on several occasions, and this model of single teacher-researcher is followed in the present work. This approach entails the same person being practitioner and researcher in one; "integrating practical and theoretical orientations within himself/herself" (Cohen and Manion, 1989, p. 220). The limitations here are two-fold: first that the lone teacher/researcher has no sounding board for developing ideas and strategies, (although we see in Appendix 4 the class teacher was involved in evaluating this work)<sup>1</sup>; and second that the educational change which is one aim of action research is more likely to be achieved if a cooperating team within a school works in an integrated manner. The scope of the present study made this the viable choice in spite of these limitations.

The second possibility is for several teachers in one school to collaborate over the carrying out of a new idea. The team approach has the advantage of fruitful discussion between colleagues and comparison of findings. Sometimes teams of teachers are helped by an outside researcher.

The third arrangement involves a number of people including teachers, researchers and possibly advisers and sponsors. This usually involves sustained relationships over a period of time and provides practitioners with several sounding boards for their developing ideas (Carr and Kemmis, 1986). However, some critics suggest that often the different members of the team, teachers and outside researchers particularly, may have differing and indeed incompatible ways of covering the research (Cohen and Manion, 1989).

**Table 7 - Summary of main Advantages and Disadvantages of Action Research**

<u>Advantages</u>	<u>Disadvantages</u>
<ol style="list-style-type: none"> <li>1. Achieves "on the spot" improvements of educational practice (Peters and White, 1973, p. 101).</li> <li>2. Potentially good interaction between research and world of the classroom (unlike traditional research where the relationship is less direct) (Bolster, 1983, p. 195).</li> <li>3. Has an empowering effect on the teacher who as teacher/researcher initiates research rather than merely applying findings of others.</li> </ol>	<ol style="list-style-type: none"> <li>1. The simpler forms may be merely "good management" (Travers, 1958, p. 66).</li> <li>2. Some projects tend not to see particular studies in a broad theoretical framework.</li> <li>3. By definition it is both specific and situational and may not be generalisable (Cohen and Manion, 1989, p. 277). Sample tends to be restricted and possibly unrepresentative. No control over independent variables.</li> </ol>

**APPENDIX 23.**

**Ethnomethodology.**

Ethnomethodology explores the methods by which people give meaning to their experience. A distinction is made between situational and linguistic ethnomethodology. Situational studies tend to have a wide focus and aim to illuminate the ways in which people negotiate in the different social contexts in which they find themselves. Linguistic studies recognize the importance of everyday conversations as a source of analysis. It is the linguistic emphasis which is of most relevance to the present study. Several interesting educational studies have used the ethnomethodological approach to gather and analyze classroom talk samples systematically. Examples of research using this approach include the gender studies of French and French (1984), Courtney Cazden's study of the language of teaching and learning (1988), the talk between teacher and children about texts in Baker and Freebody (1989), and Gregory's study of beginning readers (Gregory, 1992).

A strength of the ethnomethodological approach is its insistence that something formerly accepted is challenged. For example in the French and French 1984 study

gender imbalances between boys' and girls' classroom utterances are not seen in the way other researchers have tended to, as a result of sexist bias or poor classroom management, but instead in interactional terms. Hitchcock and Hughes believe it was the close analysis of the structure of the discussions, and particularly the turn taking pattern, that enabled French and French to conclude that boys were better able to manipulate the turn taking machinery (Hitchcock and Hughes, 1989, p. 163).

Researchers like Heap (1985, 1991) and Baker and Freebody (1989) have applied the ethnomethodological approach to examine how teachers and children negotiate and create meaning together. As Gregory makes clear, an ethnomethodological approach frees the researcher from viewing knowledge as solely preconstituted by cultural or social class background (Gregory, 1992, p. 190).

From the point of view of the present study there are some limitations which make ethnomethodology problematic as a main approach. Firstly the combining of teacher and researcher is not conventional. Since a strength of the approach is to see the familiar in a new way, the teacher researcher might be less able to view their own practice with a fresh eye. Hitchcock and Hughes believe that the teacher can "suspend some of their own common sense assumptions about classrooms and teaching". They suggest that listening to audio tapes and viewing video films of their lessons allows for the necessary distancing needed to see their practice in a new light (Hitchcock and Hughes, 1989, p. 163). Nevertheless, as Gregory makes clear, participant observation and the sharing of events with subjects is not at the centre of the approach (Gregory, 1992, p. 194).

The validity of "negotiated meanings" has also been questioned, particularly in the classroom setting where the teacher child relationship is an unequal one. Children's interpretations may be strongly influenced by the teacher's assumptions (Bereiter, 1986).

The ethnographer looks at the familiar in a new way, rather than at innovation and change as in the present study. However, the ethnomethodological approach is helpful to the classroom researcher in the following ways:

1. Although it is an approach to research with origins in phenomenology, symbolic interactionism and social psychology, it is inseparable from its research method, hence the name ethnomethodology. The conversational analysis distinctive of the approach is useful as one way of interpreting transcripts of classroom talk. The main dimension here are:
  - i. the bringing of a fresh view to the familiar
  - ii. the seeing of classroom knowledge as negotiated between teacher and children, each bringing their own subjective meanings to the joint task.
2. The attribution of meanings is seen a continuous process and this is an appropriate way of viewing the classroom as essentially dynamic. Meanings

can be modified by new experiences and interaction.

3. The negotiation of meanings takes place in a social context where individuals relate their actions and interpretations to those of others. This is helpful in my conception of the classroom as potentially a community of young learners.

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