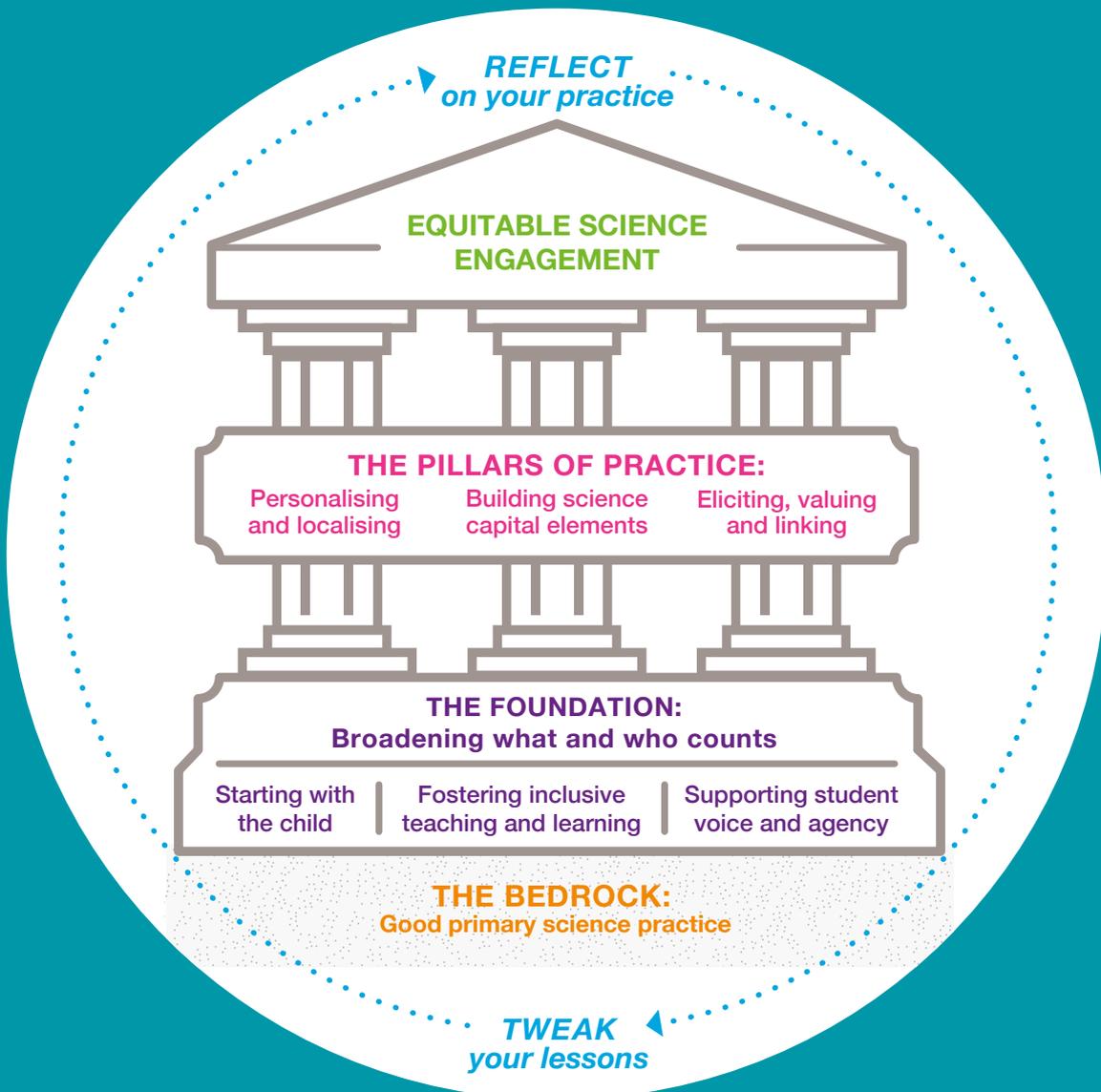


THE PRIMARY SCIENCE CAPITAL TEACHING APPROACH

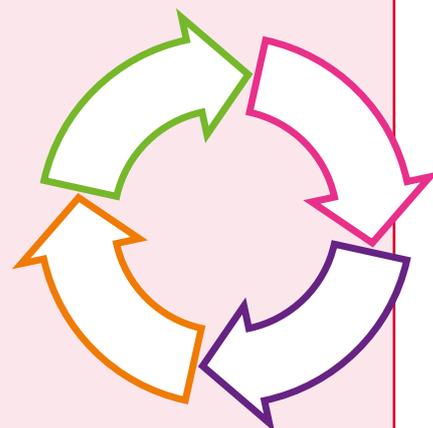
Are you training to become a primary teacher and want to learn how to make science meaningful and inclusive for all children?



Primary Science Capital Teaching approach is for you!

The primary science capital teaching approach, co-developed by researchers and twenty primary teachers, empowers teachers to make science primary teaching engaging and equitable.

- The approach is built on the bedrock of good primary science teaching practice.
- The foundation of broadening what and who counts in science challenges dominant representations and ideas of science.
- To strengthen the bedrock and foundation, the three pillars of support provides additional techniques for teachers to implement the approach.



What does this approach achieve?



A science identity

Children develop a sense of themselves as being 'science-y', that is, someone who does and cares about science, and who is recognised as such by others.

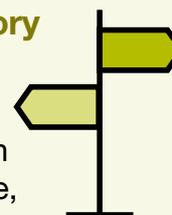
Critical science agency

Children develop the capacity to use science knowledge, skills and practices to take action on issues that matter to one's own life.



A science-related trajectory

Children develop the ability to see their future as being science-related either through participation in formal science, or more informally.



“The approach is not an additional demand but a flow! I have the handbook by my side while I plan my lessons, and if I am stuck or need inspiration, I flick through and find very useful examples that support me in coming up with new ideas.”

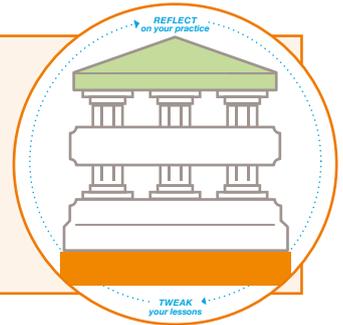
Shazia Choudury, Year 4 teacher, Birmingham

1 Bedrock of good primary science practice

The approach builds on the existing extensive evidence base and research literature regarding effective primary teaching practice

Good primary science teaching includes teaching through play based methods, encouraging students to test their own ideas, design experiments, and learn from the results. You can find more resources here:

www.ogdentrust.com/resources www.pstt.org.uk/resources



2 Foundation of Broadening what and who counts

Start with the child

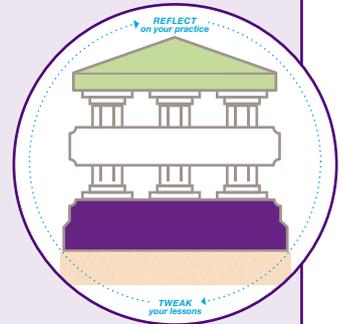
Focus on what the child 'knows' and brings with them to the science topics. Allow the lessons to be driven by these, rather than focusing solely on the learning objectives.

Fostering inclusive teaching and learning

Create a classroom where children who do not have certain resources are not unnecessarily disadvantaged. Make an effort to value wider ways of 'doing science'.

Supporting voice and agency of the child

Create a classroom where children's voices are heard and validated. Use the child's voice to direct the lessons so that children develops a sense of ownership towards the science topics.



3 Pillars of support

Personalising and localising

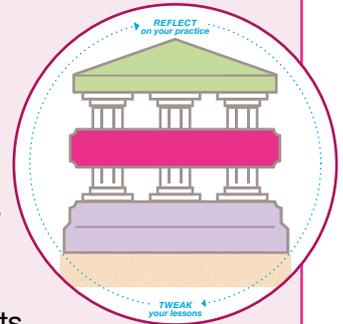
Focus on children's personal and local experiences and use that to build your science lessons. These include students personal experiences, environment, family, community life, and preferences.

Eliciting, valuing and linking

Meaningfully elicit student experiences, skills and home knowledge in relation to the science topic. Value and legitimate these in your lessons. Highlight the connections between student contributions and science topics.

Building science capital

Develop students' knowledge about science and how it works. Make students see science as relevant to their everyday life. Expose children to out-of-school science learning contexts. Introduce people doing science a meaningful way among their wider community circles who know about science.



Impact on primary teachers

100% of the participating primary teachers agreed or strongly agreed that their practice had developed as a result of the approach.

92% of the participating primary teachers involved in the project agreed or strongly agreed that their class's overall science learning had positively evolved.

93% of the participating primary teachers felt that their understanding of equity-based teaching and learning had developed as a result of the approach.

100% of the participating teachers would recommend the approach to other teachers!

Key takeaways

- **Science can be 'for' everyone:** This approach helps develop a sense of identity among the children. All children can feel that science is 'for me'.
- **Change practice, not the children:** The focus of the approach is to make small changes in everyday science teaching to reach all children rather than giving 'more' science to the child.
- **Adopt a social justice mindset:** The practice is based around rethinking ideas of equality, equity and social justice and its impact in classrooms.
- **Develop science pedagogical skills:** This approach makes science teaching accessible to all teachers. No need to fear the science content or science teaching!



"I was quite sceptical to start with but I saw it made such a huge difference!

The approach totally changed the classroom experience for those who typically don't put their hands up. I saw these children sit up in their chairs, look straight at me, and I could see them thinking: 'yes, I am part of this, I have something important to say'.

Being able to share their own life experiences and knowledge with the other children gave them a huge sense of achievement"

Clare Barry, Year 3 teacher, Worcester

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