



CURRICULUM AND ASSESSMENT REVIEW: Call for evidence | CCCSE Response November 2024

10. What aspects of the current a) curriculum, b) assessment system and c) qualification pathways are working well to support and recognise educational progress for children and young people?

Some opportunities exist within the current curriculum to develop students' understanding of climate change and sustainability, especially in science, geography and citizenship. There is also evidence that teachers from a wider range of subjects are choosing to incorporate these important topics into their practice.

Evidence:

- The findings of [UCL's national survey of teachers](#) in 2022 [1] indicate that climate change and sustainability are often incorporated into geography (59% of teachers report that they 'often' or 'very often' include climate change content, and 58% that they include sustainability) and science (45% climate change; 40% sustainability). To a lesser, but still noteworthy extent, teachers of subjects other than geography and science (especially PSHE, art and design, and design and technology) are reporting that they are incorporating climate change and sustainability into their practice. These responses indicate that there is potential to embed these issues across the curriculum, but that opportunities to access multi-disciplinary perspectives are not currently available to all students.
- UCL's 2024 [survey of 11-14 year-olds](#) [2] found that students report learning about climate change and sustainability in various subjects, most commonly geography (90%), assemblies or tutor time (75%), and science (68%).

References:

- [1] Greer, K., Sheldrake, R., Rushton, E., Kitson, A., Hargreaves, E., Walshe, N. (2023). Teaching climate change and sustainability: A survey of teachers in England. University College London. London, UK. Available at: discovery.ucl.ac.uk/id/eprint/10173208/1/Teaching%20climate%20change%20and%20sustainability_CCCSE%20survey_July%202023.pdf
- [2] Walshe, N., Sheldrake, R., Healy, G., Edwards, R.C., Wale, W., & Hargreaves, E. (2024). Climate change and sustainability education: A survey of students in England. University College London. London, UK. Available at: discovery.ucl.ac.uk/id/eprint/10195286/1/UCL%20Student%20Survey%20Report.pdf

11. What aspects of the current a) curriculum, b) assessment system and c) qualification pathways should be targeted for improvements to better support and recognise educational progress for children and young people?

Evaluations of educational progress should include how ready children and young people are for the changes that the climate and nature crisis will bring to their lives, including their jobs. Currently, too many young people report having received relatively little climate change and sustainability education. Meanwhile, their mental health and wellbeing, essential to their educational progress, are negatively affected by concerns about climate change and a lack of access to nature. Embedding climate change and sustainability education across the whole curriculum and incorporating more opportunities to learn outdoors would significantly enhance children and young people's readiness for future challenges, improve their wellbeing and improve their educational progress.

Evidence:

- 87% of respondents to a national survey of 11–14-year-olds in 2024 expressed concern about what the world will be like in the future because of climate change. When offered a list of emotional responses to climate change to choose from, the four most frequently selected responses were: sad (67% of respondents), anxious (53%), guilt (50%) and angry (48%). Positive emotions were the least frequently selected: optimistic (19%); empowered (18%), brave (17%), and happy (9%). 42% of students agreed that they would like to learn more about climate change and sustainability in school. Students expressed a wish to learn more about climate change impacts on future people (73%), global impacts of climate change (72%), and protection of the natural environment (70%) [1].
- Young people of secondary age do not feel they are taught enough about the climate and nature crisis [2] [3]. Furthermore, climate change and sustainability education are not sufficiently embedded across the curriculum. In UCL's [survey of 11-14 year-olds](#) in England [4], students reported that they most commonly learnt about climate change and sustainability in geography and science, but only occasionally in subjects such as English, Design and Technology, and Art and Design. There were very few references to these topics being addressed in Music and Mathematics. This is a missed opportunity to bring a pro-environmental orientation into all subjects. Indeed, a recent report from OCR [5] identified climate change and sustainability education as one of two 'glaring omissions' from the curriculum for 11–16-year-olds.
- Despite 76% of students in the recent survey of 11–14-year-olds agreeing that learning about climate change and sustainability is important, only 31% felt that this learning would lead to more job opportunities, while just 17% were interested in pursuing jobs related to climate change and sustainability [6]. Given the UK government's commitment to reaching net-zero emissions by 2050 [7], the limited interest in green careers amongst students raises concerns about the extent to which students recognize that climate change will affect them, the economy and society as a whole. Embedding climate change and sustainability across the curriculum would provide students with opportunities to recognize that all areas of study, and all disciplines, have a role to play in addressing the climate crisis. It will also help to expand their perspectives about what 'green skills' are, and how a wide range of disciplines can lead them to 'green careers' [8].
- There is strong evidence that children's wellbeing and academic engagement is supported by integrating nature-based practices and outdoor learning within the curriculum, including in subject areas unrelated to the outdoor context [9]. A survey of 11–14-year-olds [10] found that 73% of the 2,429 respondents wanted to spend more time outdoors in nature while at school, and 56% said that they would like to learn more about nature and wildlife at school. Unfortunately, the survey also identified a correlation between students' access to nature and socio-economic background. Students from higher socio-economic backgrounds report more opportunities to visit nature outside school than those from more disadvantaged socio-economic backgrounds. The curriculum can play a pivotal role in addressing this inequity of access by incorporating nature-based learning across a range of subjects for all children and young people.

References:

- [1] Walshe, N.; Sheldrake, R.; Healy, G.; Edwards, RC; Wale, W.; Hargreaves, E.; (2024). [Climate Change and Sustainability Education: A survey of students in England](#). IOE, UCL's Faculty of Education and Society: London, UK. Available at: <https://discovery.ucl.ac.uk/id/eprint/10195286/1/UCL%20Student%20Survey%20Report.pdf>
- [2] Gillow, E., Schwitzer, R., & Dorrell, E. (2022). Teaching about climate change: A report in climate change and sustainability education in schools. Public First. <https://rb.gy/s17iz>
- [3] Royal Meteorological Society. (2022). Climate Literacy Amongst School Leavers. Available at: https://www.rmets.org/sites/default/files/2022-09/rms_climate_literacy_report_1.pdf
- [4] Walshe, N.; Sheldrake, R.; Healy, G.; Edwards, RC; Wale, W.; Hargreaves, E.; (2024). [Climate Change and Sustainability Education: A survey of students in England](#). IOE, UCL's Faculty of Education and Society: London, UK. The report can be accessed at: <https://discovery.ucl.ac.uk/id/eprint/10195286/1/UCL%20Student%20Survey%20Report.pdf>
- [5] OCR (2024). Striking the balance. A review of 11–16 curriculum and assessment in England. Cambridge University Press and Assessment. Available at: <https://www.ocr.org.uk/Images/717919-striking-the-balance.pdf>
- [6] Walshe, N.; Sheldrake, R.; Healy, G.; Edwards, RC; Wale, W.; Hargreaves, E.; (2024). [Climate Change and Sustainability Education: A survey of students in England](#). IOE, UCL's Faculty of Education and Society: London, UK. Available at: <https://discovery.ucl.ac.uk/id/eprint/10195286/1/UCL%20Student%20Survey%20Report.pdf>
- [7] <https://commonslibrary.parliament.uk/research-briefings/cbp-9888/#:~:text=Download%20full%20report,-The%20UK%20is%20committed%20to%20reaching%20net%20zero%20by%202050,warming%20and%20resultant%20climate%20change.>

- [8] Healy, G., Walshe, N. & Edwards, R.C. (forthcoming) Students' Perspectives on Climate Change and Sustainability Education: Implications for Green Careers Provision, *National Association of Environmental Education (naee) publication*.
- [9] [Christie, B.; Higgins, P.; \(2020\)](#) The Educational Outcomes of Learning for Sustainability: A Brief Review of Literature. A Report for the Scottish Government Learning Directorate. Available at: <https://www.gov.scot/publications/educational-outcomes-learning-sustainability-brief-review-literature/documents>
- [10] Walshe, N.; Sheldrake, R.; Healy, G.; Edwards, RC; Wale, W.; Hargreaves, E.; (2024). [Climate Change and Sustainability Education: A survey of students in England](#). IOE, UCL's Faculty of Education and Society: London, UK. Available at: <https://discovery.ucl.ac.uk/id/eprint/10195286/1/UCL%20Student%20Survey%20Report.pdf>

12. In the current curriculum, assessment system and qualification pathways, are there any barriers to improving attainment, progress, access or participation (class ceilings) for learners experiencing socioeconomic disadvantage?

Urgent action is required so that high quality climate change and sustainability education, access to nature, and green career opportunities are available to all children, particularly those from more disadvantaged socio-economic backgrounds.

Evidence:

- A [survey of 11-14 year-olds](#) in England (2024) found significantly different levels of engagement with climate change and sustainability education between more and less disadvantaged students. When asked if they enjoyed learning about climate change and sustainability, only 30% of students from disadvantaged socio-economic backgrounds (using 'books at home' as a proxy measure) reported that they did, compared with 54% of students from more advantaged backgrounds. Furthermore, 58% of students from disadvantaged socio-economic backgrounds felt it was important to learn about these issues compared with 83% of students from more advantaged socio-economic backgrounds [1].
- Students from disadvantaged socio-economic backgrounds report being less likely than their more advantaged peers to be encouraged to spend more time outdoors by their parents (76% of students from more advantaged homes report being encouraged, compared to 63% of students from disadvantaged homes). They also report being less likely to learn outdoors at school (25% reported doing so compared with 40% of more advantaged students) which indicates an inequity of provision across schools. In order for all students to have more equitable opportunities, access to nature and learning outdoors need to be integrated across the revised curriculum. [2]
- The benefits of access to – and engagement with – nature are higher for groups from lower socioeconomic backgrounds living in deprived areas, and socioeconomic health inequities are lower in greener communities, suggesting that nature mitigates the negative effects of deprivation on health [3, 4]. The HM Government's 25-year strategy [5] urges investments in nature-based practices, especially in communities where mental health has been disproportionately affected by health inequities.
- Evidence from the Eco-Capabilities project found that providing children with arts-in-nature experiences through the curriculum promoted fundamental changes in children's mental health, autonomy, self-esteem, calmness, and nature connectedness [6]. Children were found to feel happier with their life and being outdoors and were more optimistic about what the future holds for them [7]. A further study showed that such arts-in-nature experiences was particularly beneficial for children from low-income households, with Special Educational Needs and Disability (SEND) and Adverse Childhood Experiences (ACE), all of whom may feel excluded from existing educational programmes [8].

References:

- [1] Walshe, N.; Sheldrake, R.; Healy, G.; Edwards, RC; Wale, W.; Hargreaves, E.; (2024). [Climate Change and Sustainability Education: A survey of students in England](#). IOE, UCL's Faculty of Education and Society: London, UK. Available at: <https://discovery.ucl.ac.uk/id/eprint/10195286/1/UCL%20Student%20Survey%20Report.pdf>
- [2] As above.
- [3] McCormick R. (2017). Does access to green space impact the mental well-being of children: A systematic review. *Paediatric Nursing*, 37. <https://doi.org/10.1016/j.pedn.2017.08.027>

- [4] Mitchell R, Popham F. (2008). Effect of exposure to natural environment on health inequalities: Observational population study. *Lancet*, 8;372(9650). [https://doi.org/10.1016/s0140-6736\(08\)61689-x](https://doi.org/10.1016/s0140-6736(08)61689-x)
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- [6] Walshe, N., Moula, Z. & Lee, E. (2022) Eco-Capabilities as a Pathway to Wellbeing and Sustainability. *Sustainability*, 14(6), 3582. <https://www.mdpi.com/2071-1050/14/6/3582>
- [7] Moula Z., Walshe N., Lee E. (2023). “It was like I was not a person, it was like I was the nature”: The impact of arts-in-nature experiences on the wellbeing of children living in areas of high deprivation. *Journal of Environmental Psychology*, 90, 102072. <https://www.sciencedirect.com/science/article/pii/S0272494423001202>
- [8] Dadswell, A., Bungay, H., Acton, F. & Walshe, N. (2024) Branching Out: Mobilising community assets to support the mental health and wellbeing of children in primary schools. *Frontiers in Public Health*, 12. <https://doi.org/10.3389/fpubh.2024.1386181>

13. In the current curriculum, assessment system and qualification pathways are there any barriers to improving attainment, progress, access or participation which may disproportionately impact pupils based on other protected characteristics (e.g. gender, ethnicity)?

Girls are more worried about climate change than boys are and more likely to engage with climate change and sustainability education. Embedding climate change and sustainability across the curriculum will provide more opportunities to engage boys in these issues and help to address all students' worries about climate change.

Evidence:

- UCL's [survey of 11-14 year-olds](#) in England [1] highlights that boys tend to convey lower engagement than girls in climate change and sustainability education. Boys were less likely than girls to worry about climate change (44% of girls selected that they 'worry about what the world will be like the future because of climate change; a lot or all of the time', as compared with 27% of boys) and less likely to want to do more to look after the environment (66% of girls reported that they wanted to do more, vs 46% of boys). This presents a troubling picture of inequality of engagement and aspiration between boys and girls.

Reference:

- [1] Walshe, N.; Sheldrake, R.; Healy, G.; Edwards, R C; Wale, W.; Hargreaves, E.; (2024). [Climate Change and Sustainability Education: A survey of students in England](#). IOE, UCL's Faculty of Education and Society: London, UK. Available at: <https://discovery.ucl.ac.uk/id/eprint/10195286/1/UCL%20Student%20Survey%20Report.pdf>

15. In the current curriculum, assessment system and qualification pathways, are there any enablers that support attainment, progress, access or participation for the groups listed above?

Embedding climate change and sustainability education across the whole curriculum increases the opportunities for all groups to develop a pro-environmental orientation. Increasing access to nature through the curriculum for all children will offer benefits in terms of engagement and wellbeing.

Evidence:

- Prominent examples of outstanding whole-of-curriculum approaches to climate change and sustainability education include the [XP Trust](#)'s use of 'big questions' to frame the curriculum [1] and [Rathfern Primary School](#)'s curriculum which is oriented around the Sustainable Development Goals [2]. These schools have demonstrated that a coherent approach to climate change and sustainability education is possible by threading environmental and sustainability issues across the curriculum in ways that support the engagement, progress and agency of all children, regardless of their background. However, research indicates that wider adoption of these approaches is impeded by the absence of statutory requirements [3, 4].

- Arts-in-nature initiatives, such as the [Eco-Capabilities project](#) [5], have been found to benefit children’s mental health, autonomy, self-esteem, calmness, and nature connectedness [6]. Researchers found that because of these practices outdoors, children felt happier with their life and were more optimistic about what the future holds for them, particularly those from disadvantaged areas [7]. We therefore recommend that more opportunities to learn outdoors are embedded in the revised curriculum to make this type of learning available to all students.

References:

- [1] <https://sites.google.com/xpschool.org/curriculum>
- [2] <https://www.rathfern.lewisham.sch.uk/Curriculum/>
- [3] Higham, R. & Kitson, A. (2024). Leading in Partnership: The need for shared leadership for Climate Change and Sustainability Education in English Schools. Available at: www.researchgate.net/publication/385556201_Leading_in_Partnership_The_need_for_shared_leadership_for_Climate_Change_and_Sustainability_Education_in_English_Schools.
- [4] Higham, R., Kitson, A. & Sharp, S. (forthcoming). ‘What do I do? Save the environment or let children go hungry?’ Leading English schools at a time of climate crisis.’
- [5] www.ucl.ac.uk/ioe/departments-and-centres/curriculum-pedagogy-and-assessment/research/eco-capabilities-supporting-childrens-wellbeing-through-participatory-art-nature
- [6] Walshe, N., Moula, Z. & Lee, E. (2022) Eco-Capabilities as a Pathway to Wellbeing and Sustainability. Sustainability, 14(6), 3582. <https://www.mdpi.com/2071-1050/14/6/3582>
- [7] Moula Z., Walshe N., Lee E. (2023). “It was like I was not a person, it was like I was the nature”: The impact of arts-in-nature experiences on the wellbeing of children living in areas of high deprivation. Journal of Environmental Psychology, 90, 102072. <https://www.sciencedirect.com/science/article/pii/S0272494423001202>

18. To what extent does the content of the a) English and b) maths national curriculum at secondary level (key stages 3 and 4) equip pupils with the knowledge and skills they need for life and further study? Are there ways in which the content could change to better support this aim?

There is considerable scope to incorporate climate change and sustainability into English and maths so that the disciplinary knowledge and skills that young people develop through these subjects is more relevant and useful for their futures.

Evidence:

- A recent report by [The Royal Society](#) [1] argues that the way we develop maths skills in schools must change to meet the pressing needs of our time. The report argues for a stronger focus on data education and explicitly mentions that climate change should be taught as part ‘Foundational mathematics skills and general quantitative literacy (GQL) for all citizens’.
- A recent report from UCL [2] offers examples of how English and mathematics can contribute meaningfully to a pro environmental orientation. In English, these include the use of texts that illustrate how different cultures relate to their environment, a critical awareness of the language we use to discuss climate change, and the cultivation of empathy for others, including more-than-human communities. In maths, they include the development of sustainability consciousness by calculating the carbon footprint of food served in the school canteen, analysing data about the biodiversity of the school estate, and understanding the different ways climate data can be interpreted. These types of examples are also included in UCL’s programme of teacher professional development, [Teaching for Sustainable Futures](#) [3], which already offers support for teachers of maths and English (primary and secondary) who want to embed more environmental perspectives into their teaching. Similarly, Teach the Future’s Tracked Changes project exemplifies relatively light touch ways to enhance the current curriculum [4].
- At an event with Minister Morgan, young people aged 13-21 described effective climate change and sustainability education as being embedded in lessons across the curriculum, including maths and English [5].
- Despite these opportunities, a national survey [6] found that teachers are incorporating climate change and sustainability into English/literacy and mathematics/numeracy to a relatively limited extent. 27% of survey respondents reporting that they ‘often’ or ‘very’ often incorporate climate change into their English teaching (26% for

sustainability) and 25% of maths respondents for climate change and sustainability. There is therefore much scope to embed climate change and sustainability further in English and maths, especially because both are compulsory until age 16.

References:

- [1] The Royal Society. (2024). A new approach to mathematical and data education. Available at: <https://royalsociety.org/-/media/policy/projects/maths-futures/mathematical-and-data-education-policy-report.pdf>
- [2] University College London. (2024). The Role of Subjects and Subject Associations in Climate Change and Sustainability Education. Available at: www.ucl.ac.uk/ioe/departments-and-centres/ucl-centre-climate-change-and-sustainability-education
- [3] www.ucl.ac.uk/ioe/departments-and-centres/ucl-centre-climate-change-and-sustainability-education/teaching-sustainable-futures
- [4] www.teachthefuture.uk/tracked-changes-project
- [5] University College London. (2024). *A conversation with young people about climate change and sustainability education in England: Ministerial policy briefing*. Available at: www.ucl.ac.uk/ioe/departments-and-centres/ucl-centre-climate-change-and-sustainability-education
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19. To what extent do the current maths and English qualifications at a) pre-16 and b) 16-19 support pupils and learners to gain, and adequately demonstrate that they have achieved, the skills and knowledge they need? Are there any changes you would suggest that would support these Outcomes?

As core subjects up to the age of 16, maths and English are uniquely positioned to teach all students up to 16 about climate change and sustainability through their respective disciplinary lenses. Climate change and sustainability are real-world issues that can be embedded into the examination of disciplinary knowledge and skills.

Evidence:

- A recent report by [The Royal Society](#) [1] argues that the way we develop mathematics skills in schools must change to meet the pressing needs of our time. The report argues for a stronger focus on data education and explicitly mentions that climate change should be taught as part ‘Foundational mathematics skills and general quantitative literacy (GQL) for all citizens’.
- A climate literacy survey carried out with school leavers in 2022 [2] that 46% of school leavers in England do not remember having been taught about climate change in their GCSE years. This is concerning for many reasons, including that large numbers of students are selecting their 16-19 qualifications and laying the foundations for post-secondary study and careers, without understanding climate change and the impact it will have on their lives and careers. This needs to be integrated across the curriculum, especially in core subjects that are compulsory to 16.
- Opportunities exist to expand the focus on climate change and sustainability within current English and maths GCSE qualifications. AQA, for example, have recently highlighted these opportunities for GCSE maths by signposting teachers to [useful resources](#) [3]. A report from the Royal Meteorological Society has identified opportunities for a stronger emphasis on climate change within GCSE English and maths specifications (although they also note constraints, such as set texts in English) [4].

References:

- [1] The Royal Society. (2024). A new approach to mathematical and data education. Available at: <https://royalsociety.org/-/media/policy/projects/maths-futures/mathematical-and-data-education-policy-report.pdf>
- [2] Royal Meteorological Society. (2022). Climate Literacy Amongst School Leavers. Available at: https://www.rmets.org/sites/default/files/2022-09/rms_climate_literacy_report_1.pdf
- [3] <https://cdn.sanity.io/files/p28bar15/green/7686120077093f1a120aacc7cddafa356772c27.pdf>
- [4] Royal Meteorological Society. (2023). Opportunities for Enhanced Climate Change Education in Current English GCSE Specifications and KS3 Teaching. Available at: www.metlink.org/wp-content/uploads/2023/06/Synthesis-Report-final.pdf

22. Are there particular curriculum or qualifications subjects where:

- a. there is too much content; not enough content, or content is missing;
- b. the content is out-of-date;
- c. the content is unhelpfully sequenced (for example to support good
- d. curriculum design or pedagogy);
- e. there is a need for greater flexibility (for example to provide the space for
- f. teachers to develop and adapt content)?

Please provide detail on specific key stages where appropriate.

The current curriculum pays scant attention to the climate and nature crisis and lacks a pro-environmental orientation. Reframing the curriculum, not increasing the overall burden of content, will help to address these limitations. We therefore recommend strengthening climate change and sustainability in geography and the sciences AND including climate change and sustainability in the programmes of study for every subject across the curriculum.

Evidence:

- Uncertainty about anthropogenic climate change is implied in the only two direct curriculum references to climate change up to and including key stage four (both in science). For example: ‘... uncertainties in evidence, for additional anthropogenic causes of climate change’ (Chemistry, KS4) [1]. This emphasis on uncertainty must be removed given the acknowledge by the Intergovernmental Panel on Climate Change in 2023 of a consensus that ‘Human activities, principally through emissions of greenhouse gases, have unequivocally caused global warming, with global surface temperature reaching 1.1°C above 1850-1900 in 2011-2020.’ [2]
- According to the Geographical Association (GA), the geography curriculum has an important role in “enabling young people to use their geographical understanding to live in harmony with others and to share responsibility for the well-being of the planet” and the GA has highlighted real-world applications of geography which link to green careers [3]. Yet, human responsibility for the causes of climate change are currently downplayed in the geography curriculum, for example through the adoption of a ‘benign tone’ which merely requires students to ‘understand how human and physical processes interact to influence, and change landscapes.’ [4]
- Notably, some geography teachers are starting to embed climate change and sustainability as themes that run across the geography curriculum, rather than treating them as separate topics [5]. This helpful approach can be implemented to geography without adding more content and could also be used for the curriculum as whole through the introduction of a cross curricular theme to be embedded across all subjects. Examples of outstanding whole curriculum approaches to climate change and sustainability education include the [XP Trust](#)’s use of ‘big questions’ [6] and [Rathfern Primary School](#)’s curriculum which is oriented around the Sustainability Development Goals [7]. These schools have demonstrated that a coherent approach to climate change and sustainability education is possible by threading environmental and sustainability issues across the curriculum in ways that support student engagement, progress and agency. However, research indicates that wider adoption of these approaches is impeded by the absence of statutory requirements, suggesting that a cross-curricular theme would need to be subject to inspection by Ofsted [8] [9].
- UK based subject associations and learned societies agree that climate change and sustainability education should become part of all subjects’ identities and they can point to examples of how this could be achieved [10]. [Teach the Future](#), working with academics and practitioners in England, has similarly articulated where climate change and sustainability can be integrated into the curriculum, demonstrating that this integration need not amount to significant increase of content [11]. UCL’s programme of teacher professional development, [Teaching for Sustainable Futures](#), exemplifies how teachers can incorporate environmental sustainability perspectives into their practice by building on what they already do [12].

- At an event with Minister Morgan, young people aged 13-21 described effective climate change and sustainability education as being embedded in lessons across the curriculum [13].

References:

- [1] https://assets.publishing.service.gov.uk/media/5a7efc65ed915d74e33f3ac9/Science_KS4_PoS_7_November_2014.pdf
- [2] IPCC, 2023: Summary for Policymakers. In: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001. Available at: www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf
- [3] <https://geography.org.uk/ga-curriculum-framework/>
- [4] Greer, K. King, H. & Glackin, M. (2023) The 'web of conditions' governing England's climate change education policy landscape, *Journal of Education Policy*, 38:1, 69-92, DOI: 10.1080/02680939.2021.1967454
- [5] Healy, G., Mitchell, D. & Walshe, N. (2024). 'Climate Change, Sustainability, and Education: Conceptions of Teachers of Geography in England', *Sustainability*, 16(16)
- [6] <https://sites.google.com/xpschool.org/curriculum>
- [7] <https://www.rathfern.lewisham.sch.uk/Curriculum/>
- [8] Higham, R. & Kitson, A. (2024). Leading in Partnership: The need for shared leadership for Climate Change and Sustainability Education in English Schools. Available at: www.researchgate.net/publication/385556201_Leading_in_Partnership_The_need_for_shared_leadership_for_Climate_Change_and_Sustainability_Education_in_English_Schools.
- [9] Higham, R., Kitson, A. & Sharp, S. (forthcoming). 'What do I do? Save the environment or let children go hungry?' Leading English schools at a time of climate crisis.'
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24. To what extent does the current curriculum (including qualification content) support students to positively engage with, be knowledgeable about and respect others? Are there elements that could be improved?

The current curriculum does, to some extent, cultivate students' positive engagement with others. However, given that a socially and environmentally just future depends on people having empathy and compassion for other humans and other species, this aspect could be further strengthened.

Evidence:

- The need for schools to foster empathy amongst young people has been captured in research with policy influencers in England, who have argued for education that supports young people to learn about their role as global, national and local citizens, to care for those who are disadvantaged and those who are, and will be, affected [by climate change. As one policy influencer stated, 'I think, more broadly, education should teach us to not be selfish. And climate change, in a lot of cases, is a problem of selfishness' [1].
- The curriculum can play a key role in nurturing capabilities for empathy and compassion. In relation to the climate and nature crisis specifically, creative arts subjects, English and the humanities can play an important role in developing empathy for other communities and for the (non-human) environment. Modern Foreign Languages offer valuable opportunities for developing global perspectives. helping students to recognise that everyone shares the risk of climate change [2]. In many subjects, including Citizenship, there are opportunities to engage students in participatory learning which builds understanding that local solutions are fundamental to an effective global response. Finally, the sciences, maths, geography and history can provide information to underpin empathy and compassion for the human and non-human world, helping children and young people to understand why we should care about the state of the environment, why some communities unjustly suffer the worst impacts of climate change and how we came to be in

a crisis at all. These examples point to a curriculum that frames climate change and sustainability education as knowledge, skills, dispositions and values that are developed across the whole curriculum.

- Developing the necessary knowledge, skills and capabilities through climate change and sustainability education supports students to become responsible citizens, including considering the relationships between people of different backgrounds, nationalities and cultures, and our collective and individual relationships with the natural world. This has been found to facilitate responsible actions with regard to the natural and social world and issues such as fairness, justice and equity [3].
- Spending more time in nature is likely to enhance children and young people's ability to empathise with others and with the environment. The Eco-Capabilities project found that art-in-nature experiences in school support children and young people to develop relationships with both peers and teachers, particularly those marginalised children who previously found it difficult to engage with both others and school [4].

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25. In which ways does the current primary curriculum support pupils to have the skills and knowledge they need for life and further study and what could we change to better support this?

The climate and nature crisis will increasingly shape children's futures, including their jobs, families, communities and environments. We need a curriculum that helps children to prepare for this future and which maximises their wellbeing and supports their mental health.

Evidence:

- The NHS reports that 20.3% of children and young people aged 8-16 years old in England suffer a severe mental health illness [1], and yet 70% of those who experience mental health problems have not received appropriate support at a sufficiently early age [2]. To combat these urgent problems, schools are increasingly expected to support mental health and wellbeing [3] but receive few resources to do so. In addition, there is increasing evidence of eco-anxiety in children and young people as a result of the climate and nature crisis [4].
- Such negative emotions are entirely consistent with an approach to climate change education which provides young people with knowledge about the impacts of climate change, without the implementation of emotionally responsive pedagogies [5]. These could include, for example, arts-in-nature practice which offers a creative and inclusive way to promote mental health through engaging children with nature, as well as engaging them with issues of environmental sustainability and sustainable behaviours [6, 7].
- There is evidence that integrating climate change and sustainability education across the curriculum, including nature-based practices and outdoor learning, boosts academic learning, as well as developing skills for life and work specifically [8].
- There is an increasingly urgent need for employees in every sector – education and health, hospitality and retail, agriculture and manufacturing – to be able to operate in a dynamic low-carbon context. The disruptions caused by the impacts of climate change, which are already being experienced locally and internationally, will require ongoing personal and professional adaptation. Within this volatile context, all children must be resourced with diverse skills and capabilities, especially those associated with adaptability, such as problem solving, critical thinking, skills for

action and, resilience amidst change. There is scope to give these skills more prominence in the primary curriculum in order to build foundations on which secondary schools can build.

- In a survey of 11–14-year-old students in England, UCL research found 92% of students reported learning about climate change and/or sustainability during secondary school, 78%, from news and media, 77% during primary school, 61% from family, and 43% through doing activities outside of school [9]. Statistically significant differences were found to exist between students with the fewest and most books; fewer students with the fewest books report learning about climate change and sustainability during primary school, from news and media, from family, or in activities outside school. This emphasises the importance of primary school learning to reduce socio-economic inequalities.

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26. In which ways do the current secondary curriculum and qualification pathways support pupils to have the skills and knowledge they need for future study, life and work and what could we change to better support this?

The climate and nature crisis will increasingly shape young peoples' futures, including their jobs, families, communities and environments. We need a curriculum that helps children to prepare for this future, maximising their wellbeing and supporting their mental health.

Evidence:

- Young people should have adequate access to accepted scientific understanding about climate change and biodiversity loss and be able to understand the debates about how to secure a more sustainable future. This is not currently guaranteed by the current curriculum. For example, in a survey of school leavers in England in 2022, 46% did not remember having been taught about climate change in their GCSE years [1].
- Uncertainty about anthropogenic climate change is implied in the only two direct curriculum references to climate change up to key stage four (both in science). For example: '... uncertainties in evidence, for additional anthropogenic causes of climate change' (Chemistry, KS4) [2]. This emphasis on uncertainty must be removed given the acknowledge by the Intergovernmental Panel on Climate Change in 2023 of a consensus that 'Human activities, principally through emissions of greenhouse gases, have unequivocally caused global warming, with global surface temperature reaching 1.1°C above 1850-1900 in 2011-2020.' [3].

- The disruptions caused by the impacts of climate change, which are already being experienced locally and internationally, will require ongoing personal and professional adaptation. Within this volatile context, all citizens must be resourced with diverse skills and capabilities, especially those associated with adaptability, such as problem solving, critical thinking, skills for action and, resilience amidst change [4].
- The Institute for Public Policy Research has suggested that by 2030, more than 200,000 ‘green jobs’ could be created in energy efficiency and that there might be 70,000 new jobs in offshore wind by the end of 2023 [5]. ‘Green jobs/skills’ are also commonly framed relative to financial, information technology and legal sectors, and there is an increasingly urgent need for employees in every sector – education and health, hospitality and retail, agriculture and manufacturing – to be able to operate in a dynamic low-carbon context. However, there is evidence to indicate that young people are not aware of this context or of the breadth of jobs that could be classified as related to climate change and sustainability. In a survey of 11–14-year-olds in 2024, only 17% reported that they would like to work in a job related to climate change and sustainability (14% disadvantaged, 18% more advantaged); whilst 31% of students believed that learning about climate change and sustainability would enhance their job opportunities (25% disadvantaged; 35% more advantaged) [6]. At an event with Minister Morgan, young people aged 13-21 expressed concern that they were not taught anything about ‘green jobs’ at school, which meant that they were not desirable [7]. Raising awareness of the breadth of these opportunities should be embedded and made explicit throughout the curriculum. In geography, for example, there are opportunities to understand how geographical knowledge and skills can be applied to the real world, including jobs in the green transition [8].
- The climate and nature crisis affects all dimensions of our lives and responding to it requires a reorientation of values, new skills and multi-disciplinary understanding that can only be developed through a whole curriculum approach. All subjects provide distinct sets of knowledge and skills that will help students to prepare for an uncertain, climate altered future [9]. Hence, the curriculum should include knowledge about climate change and biodiversity loss and it should seek to build understanding about how to foster more sustainable and equitable futures. It should incorporate different types of knowledge, including indigenous and local knowledge, and support the development of skills, including empathy, critical thinking, imagination, curiosity and creative thinking. This breadth of knowledge and skills was articulated by students aged 11-14 as being important in the UCL survey of students [10], and extends well beyond what can be taught through the science and geography curriculum.

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28. To what extent does the current primary curriculum support pupils to study a broad and balanced curriculum? Should anything change to better support this?

The primary curriculum and associated assessment requirements place too much emphasis on English and maths. Together with a heavy content burden, this reduces opportunities to explore areas likely to engage young people, including more study of the natural world. Threading themes such as nature, climate change and sustainability across the whole curriculum is not encouraged by the current curriculum, assessment or inspection frameworks.

Evidence:

- A longitudinal study of 23 lower-attaining children between years 3 and 7 found examples of areas of interest not addressed at school [1]. Some of the students were passionate and knowledgeable about animals but noted that the school ‘wouldn’t know how good I know about animals’ [Fin, 10 years] because little focus was given to nature study. Meanwhile, Jon stated that if he could replace mathematics and English lessons each morning, he would ‘learn about animals’ instead. Nature study was not included in their schools’ curriculum, despite Zeph (age 11), for example, being ‘known as the person that knows a lot about animals’. Zeph’s response was to assess himself as ‘intelligent about animals but not on every other thing’.
- Arts-in-nature practice offers a creative and inclusive way to promote mental health through engaging children with nature, as well as engaging them with issues of environmental sustainability and sustainable behaviours [2, 3]. There is strong evidence that including nature-based practices and outdoor learning in the curriculum further boosts academic learning, as well as broader personal development and citizenship [4].
- Many UK-based subject associations and learned societies agree that climate change and sustainability education should become part of all subjects’ identities and can point to examples of how this could be achieved [5]. [Teach the Future](#), working with academics and practitioners in England, has articulated where climate change and sustainability can be integrated into the curriculum, demonstrating that this integration need not amount to any significant increase of content [6].
- Opportunities do exist within the current curriculum to thread relevant themes across subjects. In the Charter Schools Educational Trust, for example, the primary curriculum has been reviewed in order to highlight themes such as biodiversity, water, waste, energy, food, air, and climate science [7]. The aim is not to add more content but to reframe existing content around these themes, with consistent stories of hope and action. For example, alongside a revision of geography units to highlight climate justice and river management, they have reviewed their use of texts in English to ensure that themes of sustainability are represented, for example in *The Great Kapok Tree*. This kind of approach needs to be a requirement in the new curriculum if it is to be implemented across all schools, and professional development will be needed for teachers. Note that the *Teaching for Sustainable Futures* programme of professional development for teachers [8] models how primary teachers of a wide range of subjects, including the creative arts, can quite easily embed climate change and sustainability across their lessons.
- Interdisciplinary collaborations that support young people to make connections and track themes across subjects and through key stages can support pupil wellbeing, as evidenced in research which has connected the arts with other subjects to promote nature connection [9].

References:

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29. To what extent do the current secondary curriculum and qualifications pathways support pupils to study a broad and balanced curriculum? Should anything change to better support this?

Although students are able to study a wide range of subjects to age 16, the EBacc has unhelpfully marginalised creative arts subjects. Together with a content-heavy curriculum, especially at key stage four, this reduces teachers' flexibility to respond to the climate and nature crisis in holistic and creative ways and reduces opportunities to learn outdoors.

Evidence:

- Creative arts subjects have an important role to play in climate change and sustainability education. They can help children to envision different futures and social transitions by drawing on creative thinking and imagination, for example in art and design and drama. Music can nurture empathy and nature connection through 'earwitnessing' [1]. There is evidence that providing children with arts-in-nature practice through the curriculum promotes fundamental changes in children's mental health, autonomy, self-esteem, calmness, and nature connectedness [2]. After experiencing an arts-in-nature programme, children were found to feel happier with their life and being outdoors and were more optimistic about what the future holds for them [3].
- Evidence suggests that secondary students are less likely to have opportunities to learn outside the classroom than their primary aged peers [4]. Furthermore, in a survey of 11–14-year-olds [5], students from disadvantaged socio-economic backgrounds reported being less likely to learn outdoors at school (25% reported doing so compared with 40% of more advantaged students) which could indicate an inequity of provision across schools. 73% of the 2,429 respondents wanted to spend more time outdoors in nature while at school, and 56% said that they would like to learn more about nature and wildlife at school [6]. In order for all students to have more equitable access to nature and learning outdoors, these opportunities need to be integrated into the revised curriculum.
- The current, knowledge-rich emphasis in the curriculum has led to climate change and sustainability education being restricted to learning about the facts of climate change; this narrows the scope to predominantly school science. In a national survey, teachers articulated shared practices which empower students, including equipping them with the knowledge and capabilities to act for the climate and the environment now and in the future [7]. For all young people to access such practice, climate change and sustainability needs to be explicitly embedded across all school subjects across the secondary curriculum.
- Many UK-based subject associations and learned societies agree that climate change and sustainability education should become part of all subject's identities and can point to examples of how this could be achieved [8]. [Teach the Future](#), working with academics and practitioners in England, has articulated where climate change and sustainability can be integrated into the curriculum, demonstrating that this integration need not amount to significant increase of content [9].
- Importantly, however, to embed climate change and sustainability across the curriculum in ways that avoid repetition and enables students to see inter-connections, the curriculum needs to be viewed holistically. Examples of cross-curricula approaches at key stage three have been modelled by UCL's *Living Cities* professional development module [10], developed in partnership with Westminster Academy, which invites teachers of history and geography to collaborate and explore the past, present and future of sustainable urban living. This module illustrates the benefits of a flexible curriculum that leaves teachers with the space to innovate.

References:

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40. What more can we do to ensure that: a) the assessment requirements for GCSEs capture and support the development of knowledge and skills of every young person; and b) young people's wellbeing is effectively considered when assessments are developed, giving pupils the best chance to show what they can do to support their progression?

There are examples of good practice in terms of embedding climate change and sustainability at key stage four, but these approaches need to be embedded in GCSE specifications in order to ensure that issues of climate change and sustainability are fully embedded across all subjects.

Evidence:

- Opportunities to embed climate change and sustainability across all subjects at GCSE without significantly increasing content are signposted by UCL [1], RMeTS [2], Teach the Future [3] and AQA [4]. In many cases this involves reframing existing content in order to raise our awareness of how we are part of, and depend on, the natural world, and what alternative, more sustainable futures are available to us. Making this a required element of GCSE specifications across all subjects does not have to be onerous and would ensure that the curriculum at key stage four is providing young people with the knowledge and skills they urgently need.

References:

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41. Are there particular GCSE subjects where changes could be made to the qualification content and/or assessment that would be beneficial for pupils' learning?

Changes need to be made in the science and geography curriculum to ensure that young people have an adequate, up-to-date understanding of the climate and nature crisis. These inter-disciplinary issues also need to be embedded across **all** GCSE subjects in order to provide young people with multi-disciplinary perspectives alongside skills and values such as critical thinking, adaptability, empathy and compassion.

Evidence:

- In a survey of school leavers in England in 2022, 46% did not remember having been taught about climate change in their GCSE years [1].
- Uncertainty about anthropogenic climate change is implied in the only two direct curriculum references to climate change up to key stage four (both in science). For example: '... uncertainties in evidence, for additional anthropogenic causes of climate change' (Chemistry, KS4) [2]. This emphasis on uncertainty must be removed given the acknowledge by the Intergovernmental Panel on Climate Change in 2023 of a consensus that 'Human activities, principally through emissions of greenhouse gases, have unequivocally caused global warming, with global surface temperature reaching 1.1°C above 1850-1900 in 2011-2020.' [3].
- An analysis of geography and science exam specifications [4] observed variation across the exam boards' responses to environmental education and noted a tendency towards learning about the environment and an emphasis on technical improvements, rather than learning for the environment by enabling advocacy or action.
- Opportunities to embed climate change and sustainability across all subjects at GCSE without significantly increasing content are signposted by UCL [5], RMetS [6], Teach the Future [7] and AQA [8]. In many cases this involves reframing existing content in order to raise our awareness of how we are part of and depend on the natural world and what alternative, more sustainable futures are available to us. Making this a required element of GCSE specifications across all subjects would not be onerous and would ensure that the curriculum at key stage four is providing young people with the knowledge and skills they urgently need.

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- [8] <https://www.aqa.org.uk/climate-change>

44. To what extent, and in what ways, does the accountability system influence curriculum and assessment decisions in schools and colleges?

The current accountability system does not encourage school leaders and teachers to integrate climate change and sustainability education into their school curriculum.

Evidence:

- Evidence indicates that some headteachers feel they can only prioritise those things for which they are formally accountable. In research into school leadership in secondary schools, one headteacher said ‘The reality is you don’t get a league table in how green your school is’ and another said ‘it would be great if there is some sort of value system [to measure environmental and sustainable education] that makes it more valuable for schools to do it.’. Some school leaders do not feel they have ‘permission’ to make climate change and sustainability education an integral part of their school culture because of its absence in accountability measures [1]. While some school leaders are able to make climate change and sustainability education more of a priority, this is perhaps more likely in schools are highly rated by Ofsted or which are located in rural or semi-urban contexts [2].
- It is therefore not surprising that only 28% of respondents to [UCL’s national survey of teachers](#) stated that they are often or very often encouraged by school leaders to discuss climate change and sustainability in classrooms [3].

References:

- [1] Higham, R., Kitson, A. & Sharp, S. (forthcoming). ‘What do I do? Save the environment or let children go hungry?’ Leading English schools at a time of climate crisis.’ See also Higham, R. & Kitson, A. (2024). *Leading in Partnership: The need for shared leadership for Climate Change and Sustainability Education in English Schools*. Available at: www.researchgate.net/publication/385556201_Leading_in_Partnership_The_need_for_shared_leadership_for_Climate_Change_and_Sustainability_Education_in_English_Schools.
- [2] Rushton, E.A.C., Walshe, N., Kitson, A. (2024) Leading whole school spaces of agency for climate change and sustainability education. A case study of four schools from England. *Journal of Professional Capital and Community*. <https://www.emerald.com/insight/content/doi/10.1108/JPC-06-2024-0093/full/html>.
- [3] Greer, K., Sheldrake, R., Rushton, E., Kitson, A., Hargreaves, E., Walshe, N. (2023). *Teaching climate change and sustainability: A survey of teachers in England*. University College London. London, UK. Available at: www.ucl.ac.uk/ioe/departments-and-centres/ucl-centre-climate-change-and-sustainability-education/research/teaching-climate-change-and-sustainability-survey-teachers-england

45. How well does the current accountability system support and recognise progress for all pupils and learners? What works well and what could be improved?

The influence of Ofsted on what school leaders choose to prioritise should be harnessed to make climate change and sustainability education a bigger priority in schools.

Evidence:

- There is no mention of climate change and sustainability education in the current school inspection framework [1]. Headteachers have articulated their concern about Ofsted inspectors not necessarily recognising the value of climate change and sustainability through their curriculum which limits innovation in this area [2].
- Including climate change and sustainability as a potential focus of a deep dive (or equivalent) in an Ofsted inspection would give headteachers ‘permission’ [3, 4] to make it a school priority, including if climate change and sustainability were made a cross curricular theme.
- At an event with Minister Morgan, young people aged 13-21 suggested that the Ofsted inspection framework should be adapted to ensure schools are held to account for embedding climate change and sustainability education across the curriculum [5].

References:

- [1] <https://www.gov.uk/government/publications/education-inspection-framework>

- [2] Rushton, E.A.C., Walshe, N., & Kitson (2024) Leading whole school spaces of agency for climate change and sustainability education. A case study of four schools from England. *Journal of Professional Capital and Community*. Available at: <https://www.emerald.com/insight/content/doi/10.1108/JPC-06-2024-0093/full/html>
- [3] Higham, R. & Kitson, A. (2024) *Leading in Partnership: The need for shared leadership for Climate Change and Sustainability Education in English Schools*. Available at: www.researchgate.net/publication/385556201_Leading_in_Partnership_The_need_for_shared_leadership_for_Climate_Change_and_Sustainability_Education_in_English_Schools
- [4] Higham, R., Kitson, A. & Sharp, S. (forthcoming) "What do I do? Save the environment or let children go hungry?" Leading English schools at a time of climate crisis.'
- [5] University College London. (2024). *A conversation with young people about climate change and sustainability education in England: Ministerial policy briefing*. Available at: www.ucl.ac.uk/ioe/departments-and-centres/ucl-centre-climate-change-and-sustainability-education

54. Do you have any further views on anything else associated with the Curriculum and Assessment Review not covered in the questions throughout the call for evidence?

Professional development for teachers and school leaders to support the integration of climate change and sustainability across the curriculum is urgently needed.

Evidence:

- We are living at a time of unequivocal human-caused climate change with rapid changes in the atmosphere, ocean, cryosphere and biosphere. Widespread adverse impacts are being experienced by humans and non-human species, and vulnerable communities that have historically contributed the least to the causes of climate change are being disproportionately affected. In this context, all education – including primary and secondary education – should enable children and young people to learn for the environment, and to address inequalities which are shaping, and being shaped by, the environmental crises that we are facing [1]. Critically, these issues need to be incorporated into professional development for teachers and school leaders.
- A 2022 survey of teachers in England [2] found that there is a cohort of teachers in England who recognise the importance of incorporating climate change and sustainability into their teaching. However, 70.5% of respondents - the majority of whom were teaching geography or science - reported that they have to teach themselves how to incorporate climate change and/or sustainability into their lessons. This means that, currently, students in England are largely dependent upon teachers generating their own related professional learning.
- At an event with Minister Morgan, young people aged 13-21 identified teacher expertise as a key challenge for the government in relation to climate change and sustainability education, articulating a need for “professional training and upskilling” to support teachers of all subjects [3].
- Building climate change and sustainability into professional frameworks throughout teachers’ careers will provide a guarantee that all teachers and school leaders will engage in professional development related to climate change and sustainability. Only 12.6% of teachers who participated in the 2022 teachers’ survey recalled climate change and sustainability as being included in their Initial Teaching Training [4]. Climate change and sustainability education urgently needs to be embedded within the Core Content Framework (CCF) and Early Career Framework (ECF), ensuring that all teachers are properly prepared to teach these issues, regardless of their discipline or place of education. Similarly, the National Professional Qualifications for school leaders should highlight climate change and sustainability education as a key priority and help them understand what approaches they can take. This could be through sharing examples of good practice and exploring how they can enhance the agency of the teachers in their schools [5].
- ‘Teaching for Sustainable Futures’ is a programme of professional development for teachers, tailored by subject and age phase and developed by UCL’s Centre for Climate Change and Sustainability Education [6]. The response of teachers to this work has been exceptionally positive. The next challenge is to reach those teachers who are yet to engage with climate change and sustainability education in their own age phase and subject specialism. Embedding climate change and sustainability education into the curriculum and ensuring a suite of relevant professional

development opportunities are mutually dependent; inclusion in the curriculum will require all teachers to engage in these issues while professional development will support them to implement curriculum requirements well.

- Finally, the curriculum and assessment regimes do not alone determine what happens in education and what is valued in education. Climate change and sustainability education are governed by a suite of policy texts and by multiple ministries. Reform is needed across the policy landscape so that pro-environmental ambition is foregrounded, consistently and coherently, in future-focused policy [7].

References:

- [1] CCCSE (2023), 'UCL Centre for Climate Change and Sustainability Education – Written evidence (EDU0065)'. *Education for 11-16 Year Olds Inquiry*. UK Parliament. Available at: <https://committees.parliament.uk/writtenevidence/120848/pdf/>
- [2] Greer, K., Sheldrake, R., Rushton, E., Kitson, A., Hargreaves, E., & Walshe, N. (2023). *Teaching climate change and sustainability: A survey of teachers in England*. University College London. London, UK. Available at: www.ucl.ac.uk/ioe/departments-and-centres/ucl-centre-climate-change-and-sustainability-education/research/teaching-climate-change-and-sustainability-survey-teachers-england
- [3] University College London. (2024) *A conversation with young people about climate change and sustainability education in England: Ministerial policy briefing*. Available at: www.ucl.ac.uk/ioe/departments-and-centres/ucl-centre-climate-change-and-sustainability-education
- [4] Greer, K., Sheldrake, R., Rushton, E., Kitson, A., Hargreaves, E., & Walshe, N. (2023). *Teaching climate change and sustainability: A survey of teachers in England*. University College London. London, UK. Available at: www.ucl.ac.uk/ioe/departments-and-centres/ucl-centre-climate-change-and-sustainability-education/research/teaching-climate-change-and-sustainability-survey-teachers-england
- [5] Rushton, E.A.C., Walshe, N., & Kitson (2024) Leading whole school spaces of agency for climate change and sustainability education. A case study of four schools from England. *Journal of Professional Capital and Community*. <https://www.emerald.com/insight/content/doi/10.1108/JPC-06-2024-0093/full/html>.
- [6] www.ucl.ac.uk/ioe/departments-and-centres/ucl-centre-climate-change-and-sustainability-education/teaching-sustainable-futures
- [7] Greer, K., King, H., & Glackin, M. (2021). The 'web of conditions' governing England's climate change education policy landscape. *Journal of Education Policy*, 38(1), 69–92. <https://doi-org.libproxy.ucl.ac.uk/10.1080/02680939.2021.1967454>



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