Seven principles for engaging schools with nature: pooling the expertise of teachers and nature educators

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Nature connection in schools can address several issues faced in both environmental and educational fields. However, guidance is limited and many aspects can feel daunting or risky for schools under multiple other constraints. As a group of researchers, schoolteachers, and nature educators, we have co-produced seven guiding principles for integrating nature within UK schooling, particularly in secondary education where current nature education shortfalls leave opportunities for impactful improvements: (1) experience nature first-hand, (2) address key school issues, (3) work close to school, (4) diversify views of nature, (5) embrace co-learning, (6) mediate with care, and (7) work together and celebrate difference. These principles can be adapted to curricula and collaborative learning models, promote pupil and staff wellbeing, and offer actionable, flexible guidance for transformative, educational nature engagement. Nature's interconnectivity and variety can accommodate many learners and their many paths while improving attainment and wellbeing outcomes for schools, staff, and pupils.

Keywords: outdoor learning, nature, co-production, wellbeing, co-learning, green schools

Introduction

Transformative change in human-nature relationships is needed throughout society to address the biodiversity and climate crises and uphold quality of life globally. This is especially pertinent in education where formative experiences and ideas can shape future generations. Schools provide the perfect opportunity to build and reflect on human-nature relationships in constructive ways, supporting the needs of institutions, educators, and pupils, with potentially community-wide and lifelong benefits. At the same time, educators face many challenges, including funding, pupil engagement, attendance, staff retention, and deteriorating mental health and wellbeing (MHWB) of staff and pupils (Brady & Wilson, 2021; White, 2020; Woolhouse et al., 2025). Our collective experience shows us that nature engagement can address some of these key issues for schools and for wider society (Kuo et al., 2018; Mackay & Schmitt, 2019; Martin et al., 2020; Price, 2015)..

Connection to nature can fulfil and support pupils and staff in many ways and be a turning point for individual and collective pro-environmental change (Beery et al., 2023; Martin et al., 2020). Though 91% of young people report being ‘very happy’ in nature (Natural England, 2024), and despite decades of initiatives and varied educational movements, young people are often not supported to engage with nature within their educational experience. These lost interactions with nature can lead to diminished nature connection in childhood and the ‘extinction of experience’ (Soga & Gaston, 2016). Environmental education promotes connectedness to nature, but the effects of infrequent or irregular activities may be short-lived; sustained engagement, across multiple subjects, has been shown to be the most effective approach (Liefländer et al., 2013).

While nature holds a varying degree of priority among UK nations’ curricula, one-third of UK primary schools and most secondary schools, have no outdoor learning,

despite clear benefits for pupils and staff (McKinlay et al., 2024). Some connection remains but inequalities among communities persist across geographic and socioeconomic gradients, as well as a notable 'adolescent dip' as nature engagement is more encouraged among younger children (Price et al., 2022). We see integrating nature learning within schooling, particularly at secondary-level, as key to re-connecting young people with nature consistently and improving individual, collective, institutional, and environmental wellbeing (Maloney et al., in review).

Schools, particularly secondary, face many barriers to integrating nature in education, including time, scheduling, culture, funding, staff knowledge or experience, prioritisation, equipment, number-driven assessments, and prescriptive curricula, all while meeting accessibility needs (McKinlay et al., 2024; Ray & Jakubec, 2018; Walker et al., 2021; Woolhouse et al., 2025). In this paper, we aim to develop a set of guiding principles that will support educators navigate these barriers. While our primary focus is on schools, we believe these principles will be equally relevant to home education, non-curricular outdoor learning, and broader social contexts, extending from households to communities.

Methods

We are a varied group of teachers, researchers, and nature educators based in Oxfordshire, England. These principles come from our reflections on nature engagement across schools, learning support, NGOs, universities, nature reserves, local and national governance, the NHS, youth and community organisations, and public bodies.

To capture this breadth of experience in our focal area of Oxfordshire and allow space for emergent themes as connections, we adopted a co-production methodology (Troiano et al., 2024; Wright-Arora et al., 2024) to explore how human–nature

relationships can be strengthened through education. Situating our study in Oxfordshire, UK, allowed us to reflect on a shared context to support the co-production, though our collective experiences span the UK and further afield with learnings brought in from many contexts where applicable.

From February 2024 – February 2025 we conducted a series of focus groups, writing workshops, and online asynchronous work (Figure 1). Early sessions gathered a broad range of perspectives on nature education and current challenges for schools. Later sessions focused on collectively developing and refining themes, with participants engaging in iterative discussions and synthesis.

Data from these activities included transcripts of focus group discussions and written contributions from workshops and online exchanges. These materials were collaboratively reviewed and condensed through deliberation, with key ideas emerging as shared principles.

[Figure 1: A schematic of the workflow showing each part of the project.]

Results

We took these views and condensed them into some key principles, ending up with seven, which we found was the fewest which cover the points raised without losing important nuance. Quotes without a citation are direct from our focus groups.

Here, we outline seven principles for educators, researchers, and policymakers to engage UK schools with nature, co-produced through the focus groups and workshop discussions (Fig. 2). We found seven to be the fewest principles which cover the points raised throughout our process without losing important nuance. Please note that the numbering of these principles reflects a logical flow for introducing them rather than priority or importance. These principles are presented in Table 1, along with the reasoning behind each and examples of how they may be implemented in schools. Our

principles are both process- and objective-oriented, suited to curriculum goals and adaptive to open-ended or collaborative approaches, while supporting pupil and staff MHWB.

Table 1: Co-produced principles, reasoning, and examples of how to apply them for nature engagement in schools.

Principle	**Reasoning**	**How to apply these in school**
1. Experience nature first-hand	• Multi-sensory, physical experience aids wellbeing, learning, and connecting. • Students who struggle in classrooms may thrive outdoors. • Can be transformative for people without much prior experience.	• Encourage students to use (or create) nature-friendly spaces. • Take lessons outside whenever possible. • Bring nature into the classroom, e.g., plants to look after. • Use nature to inspire art or poetry, e.g., in class or for a school competition.
2. Address key issues for schools	• Aligning nature activities with school priorities and limitations aids implementation. • Wellbeing benefits can support attendance, learning, attainment. • Relationships within the whole school community can be enhanced through shared purpose and enjoyment of time in nature.	• Use outdoor spaces to support students who struggle to access school. • Private, calming outdoor space for meetings with students / parents / staff. • Take student "reset" walks outside. • Run outdoor revision sessions or wellness breaks.
3. Work close to school	• Using school grounds and local green spaces can be quicker and cheaper than going further afield. • Short repeat visits develop familiarity, seeing changes over time, greater relaxation for more effective learning. • Familiarity and understanding of local nature-rich spaces, develops a sense of place, pride, and desire to protect their local environment. • Developing a network of local experts supports teachers and inspires students.	• Contact local wildlife organisations to find support for your school. • Work with classes, families, volunteers to develop a space, however small and unpromising. • Build/install bug hotels, bird baths, and butterfly feeders in easy to see locations. • Set up small growing beds around school, e.g., sunflowers and nasturtiums.
4. Diversify views of natures	• There are many different ways to view nature and explore human culture and heritage through human engagement with the natural world. • Consider nature from perspectives of different species, or that of a river or an individual tree. • Consider how relationships with nature shape societies and history.	• A scientific, taxonomic approach can be contrasted with an artistic response. • Contrast cultures with symbiotic relationships with the natural world with later more colonial and extractive approaches. • Critically engage with personal views of nature. • Pristine nature can be contrasted with 'messy' nature co-existing with humans. • Nature can be used to explore different types of knowledge, and ways of knowing. • Consider how different languages frame and engage with nature. • Nature can be used to reflect human dilemmas such as gender, queerness, empathy.
5. Embrace co-learning	• Teachers don't need to be experts about nature. The teaching skill to embrace is modelling curiosity, enquiry, problem solving and enthusiasm.	• Use apps such as Seek, iNaturalist and Merlin.

	• Helping students to learn experientially, and using their senses, is a powerful tool. • There are many guides and apps to help with identification and understanding. • Students, families, colleagues, community members, environmental organisations all have useful knowledge; embrace sourcing and pooling it.	• The Field Studies Council produces laminated guides e.g., playing field plants. • Involvement with citizen science projects such as the Big Schools Bird Watch and the City Nature Challenge gives support and goals to assist learning.
6. Mediate with care	• Involving students in risk identification and mitigation actions empowers them to keep safe. • Preparing students carefully minimises nervousness. • Allowing students to share their fears and concerns anonymously helps everyone. • Positive first experiences are best – finding bugs before litter picking. • Connection and reaction is a great way to start learning. Names can come later. • The key to learning is enjoyment and agency.	• Discuss your risk assessment and mitigation options with students before going outdoors. • Explain what isn't dangerous. • Account for students' backgrounds in how they engage with nature. • Model appropriate kit to wear and bring, and have spares available. • Save shouting for emergencies. Use hands up or soft whistles to attract attention and keep cortisol levels low. Plan for relaxed transitions between activities. • Have games ready for those who are racing ahead.
7. Work together and celebrate difference	• All curriculum subjects intersect with the natural world. • People engage with the natural world in different ways, and can inspire each other. • A natural environment gives opportunities to develop new skills such as resilience, empathy, creativity, and scientific literacy: essential for the future economy and society. • Students who may struggle sitting still in classes all day may thrive outside with different boundaries and stimuli. • As biodiversity is lost, nature literacy is vital for citizens, voters, and decision makers. • Working together on a shared, positive project, and talking while occupied, can improve human relationships. • Lenses such as justice, colonialism, offer a cross-cutting understanding of humanity.	• Use tree measurements for geometry classes. • Read or perform plays under the trees. • Build bird boxes. • Take art classes outside, or bring natural materials indoors. • Do loud music outside. • Draw inspiration from nature, including photos and recordings.

[Figure 2: An ash leaf illustration to demonstrate how the seven principles (leaflets) combine to produce a full leaf, supporting schools, staff, and pupils.]

Discussion

While we embraced a variety of views during the workshops and focus groups, we converged on many ideas and quickly reached saturation. The overlap among participants indicated shared experiences and perspectives across a variety of professions and sectors, reflecting common challenges and opportunities in integrating human–nature relationships into education.

Although our study focuses on our experiences in Oxfordshire, UK, the challenges and opportunities identified through our workshops and focus groups are not unique to this region. Similar barriers to integrating human–nature relationships into education arise in many regions both within and beyond the UK. By distilling these insights into a set of guiding principles, we hope to contribute knowledge that is transferable across diverse educational contexts. Our intention is not to present Oxfordshire as a singular case, but as a common site of experience for our group through which relevant approaches to nature–human education can be discussed, developed, tested, shared, and adapted.

Building on this shared foundation, we examine each principle in detail, outlining the rationale for its inclusion and the ways in which participants envisioned it being realised in practice. To illustrate these perspectives, we include verbatim excerpts from the workshops and focus groups, which provide additional insight into participants' experiences and reasoning.

1. Experience nature first-hand

Experiencing nature is fundamental to engagement; without this multi-sensory and individual connection, it can be difficult for pupils to understand and relate to nature (Martin et al., 2020). Field trips provide opportunities for schools to connect with nature educators, institutions, as well as networks of practice and learning resources.

Many students and teachers have limited exposure to nature, placing more importance on opportunities organised through school, particularly for teenagers, who may benefit most from experiential learning (Jose et al., 2017). Actively learning about nature is important, but simply experiencing nature and developing staff and pupils' comfort outdoors is also crucial (Williams & Scott, 2019).

> "There are opportunities around teaching about nature that make most sense outdoors. There are also ways to teach subjects outdoors not necessarily directly related to nature, like adapting maths or English lessons."

Activities in nature do not have to be complicated, expensive, or far away. Reducing barriers to experiencing nature is important, particularly for people with limited access outside school. Logistics (including site safety and availability), financing, and equipment may limit engagement, but many activities can be done near or in school. Cultivating a sense of belonging and comfort to overcome fear and aversion (especially for bugs, mud, etc.) is fundamental. Encouraging self-led, unstructured, or co-design activities outside can also build confidence (Boyle & Copley, 2022; Boyle et al., in review).

> "I find the simplest things work best [for initial nature experiences]. Sitting around a fire, cooking on the flames, gentle strolls among trees, good conversation with opportunities to share feelings, it's fantastic.".

2. Address key issues for schools

Promoting student and staff MHWB is fundamental to schools' effectiveness as places of work and learning, underpinning all activities (Jerrim, 2025; Woolhouse et al., 2025). Evidence is growing that nature engagement can address key issues in education and support schools' needs, including MHWB for all students and staff, attendance, and pupil engagement (McKinlay et al., 2024; Price, 2015; Williams & Scott, 2019).

Experiences with nature can support personal development, wellbeing, concentration, and academic learning across subjects for all students (Kuo et al., 2018, 2022). Students' MHWB is rightly a priority for schools across the UK, particularly since the COVID-19 pandemic and its associated lockdowns (Bevilacqua et al., 2023). Interacting with nature shows promise in supporting all young people's MHWB, especially emotional wellbeing, and for pupils with special educational needs and disabilities (SEND) (Fan et al., 2023; Tillmann et al., 2018). Eco-anxiety (distress around environmental harm) is increasingly concerning educators but can be mitigated through collective action and nature connection (Baudon & Jachens, 2021). Nature engagement can support students' broader MHWB (Woolhouse et al., 2025) and help counter emotionally based school avoidance (EBSA). However, benefits may only apply to subjects utilising outdoor or nature experiences (Price, 2015), emphasising the importance of learning with nature across curricula.

Calming spaces like gardens can support MHWB, particularly when students help create these spaces, and may help EBSA pupils return (Halligan & Cryer, 2022). Quiet outdoor places to play and learn, with noise-absorbing plants, can further support students with SEND, EBSA, or sensory issues to engage with school (Halligan & Cryer, 2022; Hussein, 2010). Outdoor activities also help develop gut microbiota and associated wellbeing (Sobko et al., 2020), with movement supporting learning and focus (Ucci et al., 2015). Green initiatives on- or off-site are often very popular, though require greater support, recognition, or reward from various stakeholders (students, parents and carers, teachers, senior management, board, OFSTED) among the competing priorities of schools as sites of learning, community, and care. Supporting and engaging with parents and carers may compound benefits, helping pupils further connect with nature and garnering support (expertise, time, funding etc.) for school

activities. Beyond MHWB, improving school greenspaces to support nature, including pupil co-design, can benefit sustainability initiatives, community-building, grounds management, flood resilience, budgets, and publicity.

> "Students tell and show me how connecting with nature can quiet the mind, support focus and open space for better learning."

3. Work close to school

Engaging pupils with nature close to or in school allows more frequent engagement than distant trips (Walker et al., 2021), which remain beneficial but have high associated logistics, time, and transport barriers. Local activities deepen pupils' engagement with local spaces, knowledge accumulation, community-building, and sense of place (Ardoin, 2006). Local advice, knowledge, and context are key to understanding ecologies and their links to human communities (Dolan, 2016). The UK has over 1500 Local or National Nature Reserves, many offering educational programmes and seeking connections with schools. Relationships with local practitioners and reserves support learning and could lead to specific advice or collaboration, including nature professionals learning how to better support schools. Even if less spectacular than nationally renowned sites, observing local ecosystems can be deeply engaging and relevant.

Creating, observing, and working with nature-friendly spaces may be easier in school. Connection to nature can compel pro-environmental action (Mackay & Schmitt, 2019), benefitting wellbeing, skills, and learning. Hands-on activities exercise pupils' creativity in multi-sensory projects with real-world impact (Robinson & Aronica, 2016), particularly where these activities are collaborative or create therapeutic landscapes (Bell et al., 2018, 2023; Woolhouse et al., 2025). Learning outside serves a wider range of pupils than classroom learning alone, and conservation actions can cultivate

resilience and pride in achievement, bringing students' ideas to life in their own environment. Activities like gardening and foraging support wider learning through nutrition and health, while long-term, multi-season local observations tie into science curricula and support planning and focus skills. Nature-friendly school spaces can support MHWB by offering different social and ecological environments in school, or 'hybrid' institutional spaces (Wilhelm et al., 2026). Pupil-designed projects, outdoor learning, staff breaks, and outdoor parent-teacher meetings are among the different uses we have seen for nature-friendly school spaces: ecological systems contain complexities which may lead to unforeseen benefits (Wu et al., 2025). Place-based action fosters connection to nature and may soften eco-anxiety through 'constructive hope' (Ojala, 2012).

> "Impactful work close to school encourages a sense of place in the world and that small can make a valuable difference."

4. Diversify views of natures

'Nature' means many things to many people, and working with varied perspectives allows for deeper and wider engagement (McDermott et al., 2026). 'Learning with nature' can span many disciplines through direct curriculum links and opportunities for integration across subjects (Warden, 2019), such as nature-inspired arts, biomimicry in physics and design, Fibonacci and other nature sequences in maths, or biogenic drugs in chemistry and biology. Nature-friendly spaces in or near school support repeat engagement through multiple approaches: ecological surveys in biology, sound recording for music, and foraging or growing for cooking and nutrition all demonstrate different views and values of nature. Reflection on different human-nature relationships and worldviews, including nature journaling (Tsevreni, 2021), cuts across philosophy, religious studies, and the arts (Boyle & Randhawa, 2024; Boyle & Gentili, 2025).

Languages contain different worldviews and in a UK context Welsh, Irish, and Gaelic reflect different nature relationships than English, and are languages of instruction within the UK with great potential for place-based nature engagement. We see further scope for work on nature with languages learnt in schools as subjects or embracing immigrant languages, including reflections on species whose ranges and migrations overlap with areas where these languages are spoken.

Non-extractive, queer ecology, gender-aware, or decolonial approaches on nature can support learning in history, the arts, social studies, and biology. For example, critically reflecting on species naming — Europe is the continent with the fewest birds named for European surnames (Trisos et al., 2021) — or letting pupils give species their own names, sharing their impressions and building connections (Boyle & Copley, 2022). Reconsidering nature also encompasses the hugely varied things ecosystems do for people, and how we can support ecosystems to continue providing for all life on Earth. Do trees affect temperature? Which animals eat pests? What are the links between human wellbeing and wider natural systems? These questions and many others can be interesting starting points for investigations in-school.

Considering people as part of nature is an important step in engaging pupils. Appreciating humans and ecosystems shaping each other over time bridges natural and cultural heritage, ties together multiple curriculum areas, and may help bring nature into longstanding relationships and established school trips. Heritage centres often bring ecology and history together, revealing biodiversity in spaces with long human histories. Urban ecologies challenge assumptions of nature as remote and ‘unspoilt’, sometimes having higher species diversity than rural areas (Gandy, 2022) while being closer to most schools and many pupils’ wider experience. Non-native species (Barua, 2022) and brownfield sites’ impressive ecologies (Cox & Rodway-Dyer, 2023) invite

reflection on topics from history and migration to counter-intuitive science and the importance of surprises. Overlooked ecological characters can open entire worlds through activities like bug safaris, pavement botany, or indoor ecology, and even small engagements with often-ignored plants or invertebrates support deep learning (Jose et al., 2019).

5. Embrace co-learning

Taking pupils outside, especially out of the school grounds, can feel difficult for teachers. Managing behaviour and a lack of confidence in one's own knowledge are common concerns (Williams & Scott, 2019). Embracing learning alongside students can help navigate new approaches and uncover topics, such as nature, where so much is unknown and place-specific. Supporting staff is key, such as embedding co-learning within CPD and management structures, and lets educators reflect on their new experiences.

Partnerships with experienced nature educators can help generate confidence and provide examples of current practice. Working with pupils to design activities together (co-design) is a different kind of co-learning (Boyle & Copley, 2022) which helps to tie activities to pupils' interests and their unique perspectives on nature and place (Kraftl et al., 2014). Technical aspects such as species identification can also be distracting; focus on connection and developing relationships instead.

Citizen science (public contribution to scientific research) offers structured frameworks to explore nature locally, develop skills, and contribute tangibly to larger projects. Apps like iNaturalist, Seek, or Merlin help identify species, and events like Big Schools Birdwatch or City Nature Challenge can be focal points in the year. Citizen science generates large, often public-access, databases which enhance ecological knowledge and could be used for curriculum-linked projects. Citizen science initiatives

improve scientific literacy and build confidence toward school-led approaches which centre learning more directly (Gray et al., 2012). Data collection through experiments, cameras, or traps can promote direct learning and discovery.

> "I found through my own outreach work that allowing young people to create their own research questions and giving them the tools to investigate and present their findings is extremely effective."

Ultimately, to sustain a culture of co-learning beyond individual activities, schools can embed these approaches into ongoing professional development and staff induction. Partnering with experienced nature educators for mentorship or co-facilitation can help build long-term confidence and capacity. Developing simple ways to reflect on or assess co-learning outcomes—such as pupil feedback, reflective journals, or linking to existing school priorities—can also strengthen the case for wider support and help demonstrate the educational value of these approaches.

> "I think a positive attitude about nature and creating a willingness to learn counts for more than the specifics".

6. Mediate with care

While nature engagement offers so much for schools and pupils, there are some steps to consider to make the most of the opportunity. Safety and comfort are fundamental and managing them offers a real opportunity for collaborative risk identification. Keeping people safe and happy by working together (e.g. planning routes, designing activities, sourcing and sharing kit) builds confidence and comfort among staff and pupils, reinforcing responsibility and reciprocity. Opportunities for more student-adult conversations can also lead to safeguarding concerns and disclosure, which requires suitable preparation, training, and supervision for attending leaders.

Children engage with and perceive nature in diverse ways, influenced by factors such as gender, ethnicity, disability, and others (Dodd & Hesketh, 2024; Sheldrake & Reiss, 2022). Socialisation often reinforces specific gender roles, which subsequently shape their likelihood of engaging with nature (Dodd & Hesketh, 2024; Natural England, 2022). By paying attention to these patterns and gaining insights into how pupils in various classrooms interact with and feel in nature, e.g., through playtime, outdoor classes, and other activities, teachers can help tackle existing inequalities and foster more equitable engagement in the long term.

First experiences in nature are really important. Getting cold, stung, or hungry can put people off outside experiences. Experienced outdoor educators take small steps to bring pupils just beyond their comfort zone, always with a backup plan. Time in nature does not necessarily lead to desired educational outcomes (Ernst & Theimer, 2011), intention is key: well-planned activities can create a lasting positive impact, but it is worth considering that some activities like litter picking or invasive species removal can shape early experiences negatively. We suggest focusing on enjoying and celebrating nature first.

> “It is possible to be 'in nature' and not connect with it”.

7. Work together and celebrate difference

Nature engagement and learning is a broad topic with something for everyone, and we can all take steps to make positive impacts for nature. Practical activities offer variety to match peoples’ strengths and preferences: some like birds, some like mud, some like campaigning, some like running around. Strengths and weaknesses in classrooms do not directly translate outdoors. Nature cuts across curricula, subjects, and skills, allowing cognitive, experiential, and emotional connection to nature (head, hands, heart) (Beery et al., 2023; Warden, 2019). Holistic, intersectional approaches help frame complex

topics (climate change, environmental justice, colonial histories), including through play-based learning and arts-in-nature approaches.

Through experiences and understanding, nature engagement equips school pupils for their futures; particularly creative, scientific, and interdisciplinary roles, vital for supporting nature. Nature literacy is becoming more important for citizenship literacy as climate and ecosystems are increasingly disrupted; interest in climate change is a huge opportunity to connect young people with nature. UN Sustainable Development Goals are already part of many schools' programming, drawing useful links between nature and human wellbeing, including intersectional climate justice and political ecology. Diverse nature role models now exist for conventionally underrepresented groups, often linking social justice and environmental causes which further broadens the appeal of nature learning. We see a brighter future than ever for UK nature education, and hope young people will be gifted the sense of wonder and agency to make an impact and support their environment.

> "Nature's interconnectivity and variety can hold many learners and their many paths."

How to integrate these principles in schools

Encouragement and support to experiment is key to integrating these approaches with schools' existing demands and budgets. Support from outside school, including collaboration with local partners through to national organisations helps. It is not necessary to change the curriculum or visit a National Park to get started, local actions and experiences are amazing but not always immediately obvious. Simple things like hosting parent meetings outdoors, as one co-author's school does, can be effective in bringing nature into everyday school operations.

Biodiversity week or other schemes, including national schemes (e.g., Big Schools Bird Watch), can help generate excitement, though maintaining engagement can be difficult. Mentoring from older pupils or past participants can help sustain this momentum while supporting soft skill development and peer support.

> "Creating sustainable, regular, and progressive nature learning opportunities is essential to embed these values more deeply."

Nature depletion is an ongoing crisis and key knowledge area for today's young people towards future study and employment (Rahmaningtyas et al., 2023). Recognising the links across the curriculum and beyond can help garner broad support to integrate nature across school activities. Outdoor learning can be seen as distracting from assessment, particularly for secondary-age pupils, but can instead be complementary: wellbeing and connections to key topics are crucial and well-cultivated by nature engagement (Kuo et al., 2022). Opportunities for teachers to assess pupils differently (and generate less written work for marking) may even reduce teachers' workloads. The much-anticipated Natural History GCSE provides a more direct link.

Many existing school activities can bring nature in more deliberately. Regular field trips can have nature components added, such as visits to cultural heritage sites. Volunteering schemes, like the Duke of Edinburgh Award, also have huge potential for engaged conservation work, as seen by some of our co-authors who have observed growing interest in students who then applied for environmental university courses. Climate action plans and school improvement plans can also bring nature in more explicitly, particularly where it helps address multiple concerns.

Conclusions

We hope that the principles outlined here can help guide educators, policymakers, and researchers in engaging schools with nature. Nature engagement can address some key issues for UK schools, particularly if done through first-hand, local experiences. Embracing a co-learning approach with a broad view of what 'nature' means helps to bring nature in throughout the curriculum. Practically speaking, careful mediation and teamwork which celebrates different learners' and educators' strengths can help staff and pupils get the most from these experiences while mitigating the sometimes daunting risks. Nature's interconnectivity and variety can hold many learners and their many paths. We believe that with brave leadership, nature can be used to meet some key challenges facing schools, improving wellbeing outcomes for pupils (attainment and attendance), staff, and the environment.

More broadly, nature engagement may offer a gentle challenge to the rigidities of the current education system—inviting schools to reflect on how learning could be shaped less by assessment pressure and more by connection, creativity, and care. While this paper stays grounded in the practical, we invite readers to consider the deeper, systemic possibilities these approaches might unlock.

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