SCHOOLS FOR NATURE

Lead Author: Melissa McKinlay, The Education Company

Contributing Authors: Jon Turner, WWF-UK, Rosalind Mist, WWF-UK

Advice and Review: Caroline Howkins, Martyn Foster, Suzanne Welch, Vicki Allan, Rachael Albon, Jenny Hackland, Megan Collier

Editing and Design: Serge Garcia (mrgrafitto).

EXECUTIVE SUMMARY

For too many of us, life in the 21st century feels at odds with our natural environment. As our lives are increasingly driven by technology and 'virtual' experiences, connecting with nature matters more than ever. School hours are often the only time in the week where young people might connect with nature.

Our research showed that daily opportunities for pupils to connect with nature are scarce in most schools. Our research reveals that **only 27% of schools surveyed have integrated outdoor learning into their curriculum for all pupils,** and over a third exclude it entirely. This means that a significant portion of pupils**—35% of schools in our survey—miss out on the enriching experience of outdoor learning.** For 11-16 year olds there is an even greater impact, with **over half of secondary schools (56%) offering no outdoor learning opportunities to their pupils.**

Young people can pay a high price for a lack of connection with nature. Research is clear that a dislocation between ourselves and nature affects our wellbeing, and young people are more likely to struggle with their mental health than any previous generation.

Furthermore, there is a growing body of evidence which indicates that nature-based learning also has a positive impact on young people's education outcomes. High quality learning outside the classroom leads to greater levels of engagement, and deeper, more memorable learning. Pupils who learn through and in nature, have an advantage over their peers whose learning is solely classroom based.

Our research showed that access to nature varied by a range of factors that inadvertently create an imbalance, disadvantaging children from less affluent homes and urban environments. Children in institutions with a low percentage of Free School Meals, in smaller settings, or situated in rural areas are disproportionately more likely to establish daily connections with nature.

The type of nature-related learning matters, as not all activities have the same benefits for all pupils. Although activities like school trips, food-growing initiatives, and extra-curricular clubs do offer some exposure to nature in most schools, these opportunities tend to be limited to a small number of pupils and occur infrequently.

This report not only presents survey findings, but also shares experiences of schools successfully incorporating high-quality nature experiences into their curricula. We aim to spark a broader discussion on the role of charities and schools in ensuring that every pupil has equal opportunities to experience nature. Reflecting on the outcomes, we need to see a fundamental shift in learners experience during their school years. Charities, communities, teachers, parents/carers and the education system must enable every school to integrate regular connection with nature into their curriculum.

INTRODUCTION

Why does nature in education matter?

As environmental charities, we are privileged to work with passionate educators across the country who embed learning in and about nature in their pupils' educational experiences. We know that this is beneficial to children's physical and mental health, and that there is growing evidence which indicates that nature-based learning has a positive impact on education outcomes.

Schools have a vital and unique role to play in supporting young people to build stronger connections with nature, and equipping all learners with the skills they need to thrive, and which the planet needs to survive. Leaving this to chance, based on the passionate commitment of individual teachers doing their best isn't enough.

About this report

Our staff regularly see that pupils' engagement with nature at school varies considerably, but we were unsure which young people this affected and how many pupils experience regular connection with nature.

Understanding this situation would help our organisations, and the environment sector more widely, to focus our resources effectively. In 2022, we commissioned a survey to help us understand the baseline of what schools offer.

In this report, we:

- share the findings from the Schools for Nature national survey
- review the research-based evidence which shows why nature connections at school matter
- explore the challenges which schools face when embedding learning in, through and for nature, and share case studies from schools which have overcome these
- reflect on the future for nature in schools and learning in nature.

© Into The Dark / WWF-UK

THE BENEFITS OF A NATURE-RICH CURRICULUM

When we feel connected with nature, we care about nature. And to feel connected with nature, we need to spend time in our natural world. Being in nature also delivers immediate, tangible personal benefits to each one of us. The evidence is compelling: spending time in nature is good for us.

The evidence shows that when children and young people connect with nature through learning, we see a wide range of positive outcomes. Spending time in nature makes learners happier, healthier and more successful members of society. As well as being good for pupils, it's also good for nature: having more people wanting and being equipped to take action for nature, helps protect and restore our landscapes.

© Into The Dark / WWF-UK

Outdoor learning can have a positive impact on pupils' mental health and wellbeing

It is well documented that children and young people's mental wellbeing has worsened over recent years[1], with mental health experts referring to a 'tsunami' of mental health issues after lockdown. The situation isn't improving rapidly post-lockdown, with a 2022 NHS survey[2] showing 18% of children aged 7 to 16 years and 22% of young people aged 17 to 24 years had a probable mental disorder. That's around one in five young people struggling with their mental health.

We know that nature helps improve the mental health of young people. Research[3] published in 2017 summarised the findings from twelve studies investigating the link between access to green space, and children's mental wellbeing and concluded 'access to green space was associated with improved mental well-being, overall health and cognitive development'. Being in nature, according to a government survey in 2022 makes over 4 in 5 children and young people very happy.[4]

Learning outside whilst at school is also beneficial for young people's mental health. Recent reports by Natural England[5] found that children show greater resilience, improved self-esteem, and increased self-efficacy, when engaged in outdoor learning.

Outdoor learning can improve education attainment and outcomes

Learning outside leads to children being happier, more resilient and enjoying their learning. There is also evidence that it leads to higher educational attainment.

A 2019 review[6] of fifty studies concludes that the evidence that "nature-based instruction outperforms traditional instruction" is particularly strong, based on a range of studies including those drawing on observational, self-reported and measurable data such as standardised test scores.

Their findings relate to the research on mental health. Pupils are more motivated, less stressed, and more positive when learning in a natural setting. Nature-rich learning settings encourage a greater sense of calm, and teachers report a reduction in disruptive behaviour. Children are better able to focus on their learning. This benefits all learners, and especially those who

© Richard Stonehouse / WWF-UK

struggle in traditional classroom-based settings. The article also references both the type of learning that immersion in nature provides, and the benefit of a 'green' school site, concluding that both lead to improved education outcomes.

Being in nature also reduces stress and increases wellbeing amongst teachers

Schools are facing ever greater challenges in recruiting and retaining staff across all phases and job roles. Recent research by the Gatsby Foundation[7] shows that year on year, it's getting harder to fill vacancies and nearly 60% of survey respondents didn't expect to be teaching in three years' time. This is partly demographics, but the problem is compounded by endemic issues within the profession which negatively impact on teachers' wellbeing.

While the benefit of nature-based learning on pupils is exemplified across a wide and growing body of research evidence, there is less research into the impact on teachers. The largest outdoor-based learning project commissioned in the UK, National Connections Demonstration Project[8], found that 72% of project schools reported positive impacts on teachers' own health and wellbeing. The majority of teachers involved in the study said they saw positive effects on their teaching practice and professional development, accompanied by a rise in their job satisfaction. Teachers also reported feeling less stressed as a result of spending time outside the classroom, engaging with nature.

Young people and schools impact on nature

Schools in England alone have a physical footprint of 626 km^2, an area roughly twice the size of Birmingham[9], this compares with 12,600 km^2 of land in England's national parks, the smallest of which is 303 km^2. Schools clearly cover a significant amount of land, well distributed in urban and rural areas, and young people could be critical in helping this land and neighbouring areas become more biodiverse.

There are many citizen science projects that enable young people in schools to practically contribute to the body of knowledge about biodiversity. These include the Open Air Laboratories project, hosted by Imperial College London, the RSPB's Big Garden Bird Watch and there are many other, smaller scale projects detailed in the Rapid Evidence Review carried out by the Natural History Museum.

With around 10 million full or part-time pupils in over 32,000 UK schools, and around 625,000 teachers[10], no one organisation is ever going to be able to support all of them to connect with nature. We hope that this research will help many organisations identify how they can help increase nature connection for everyone in UK schools.

© Into The Dark / WWF-UK

© Abbie Trayler-Smith / WWF-UK

HOW CAN WE HELP
MORE PUPILS TO CREATE LASTING CONNECTIONS WITH NATURE?

A young person gaining a strong, lasting and beneficial connection with nature isn't a result of them having a one-off experience in nature, nor is it the result of learning about nature within their school curriculum. Having regular contact with nature, engaging with nature emotionally and consciously reflecting on the personal value of that engagement are all linked to increases in nature connection[11].

To sustain and deepen nature connection, education needs to provide a reinforcing and repeating cycle of activities that provide nature experiences and provide opportunities to take action. The more times young people and their educators travel around this cycle, the deeper their connection to nature becomes and their individual agency to take action for nature increases. This model of learning and behaviour change informs WWF's approach to school engagement.

	Experiencing nature	Acting for nature
What is the role of the educator?	To spark or further an 'interest' in nature, which might happen by learning in or through nature.	To provide opportunities to 'take action' for nature.
Why is this important?	Building emotional connection, happens through being in nature. Learning becomes more powerful and meaningful when it is active and experiential.	Experiencing the impact of taking action for nature leads to young people and teachers being more likely to commit to finding solutions for the future . Seeing the impact of action reinforces that nature is resilient and that change can happen. This helps pupils anxious about the consequences of man-made climate change and biodiversity loss.
What does this look like?	Learning in natural spaces where the purpose of the activity might be to learn about nature or natural processes. Natural spaces could be the backdrop for reading aloud, or a place to learn life skills, such as problem solving, communication, teamwork or resilience. Hands-on engagement with nature take place in classrooms or outdoors. This learning is practical or informed by observation. The purpose of the lesson could be to acquire or consolidate skills in other subjects such as maths, science, art or design.	Taking action for nature in school or a local community often as part of larger initiatives. This can include pupil initiated and led projects, citizen science, school grounds projects and advocating for change. These activities build or reinforce skills being developed in many parts of the curriculum.

THE NATIONAL PICTURE:
THE SCHOOLS FOR NATURE RESEARCH

The research process

In January 2023, teachers working in UK schools were invited to tell us how pupils at their school engage with nature. 1,086 primary school respondents, and 1,008 secondary school respondents took part. This represents a total of 1,885 schools across the UK, once multiple responses had been removed, providing a detailed picture of what 'nature engagement' looks like across UK schools.

Our study focused on understanding the cycle of experiencing nature and taking action for nature. We did not look at the extent to which learning about the natural world is embedded in school curricula.


© Richard Stonehouse / WWF-UK

To track and measure 'pupils' engagement with nature' levels, and 'action for nature' initiatives, each school's response was scored across a range of areas, and a tiering system devised based on scoring between 0 (no activity taken) to 75 (maximum activity and engagement across all areas). For more detail on how the tiering was created, and the breakdown between primary and secondary schools see the Appendix.

Experiencing nature

Daily access to nature

Nature connection deepens when people have regular, meaningful experiences in nature. One measure of this is whether schools provide daily connection with nature. Spending time in nature on a daily basis increasingly matters in our digital age. Outside school, many children and young people will be indoors, looking at a screen[12]. Outdoor spaces at school provide a safe place for children to let off steam, spend time with their friends, decompress, and connect with the natural environment. To benefit from nature and feel a sense of connection, experiencing nature needs to be a routine part – nearly daily part of pupils' routines.

We found that while 67% of all schools that we surveyed provide daily 'nature' experiences for at least a minority of pupils, three quarters (75%) of schools did not provide daily 'nature' experiences for all their pupils. As pupils progress from primary to secondary school, the likelihood of experiencing nature on a daily basis at school diminishes substantially. While 3 in 10 (30%) of primary school respondents said that children in their schools experience nature every day, only 12% of secondary schools represented in this sample are providing daily experiences in nature for all children.

Three quarters of schools that we surveyed did not provide daily 'nature' experiences for all their pupils.

Even more worryingly, the data reveals a wealth disparity. While 52% of pupils with a low percentage of free school meals are given daily opportunities to experience nature, only 18% attending schools with a high percentage of free school meals do so. This means that children from wealthier homes are more likely to experience nature than their less affluent peers.

Nature should be a benefit for all. Instead, pupils in less affluent areas are less likely to experience the benefits of spending time in nature. This has consequences for their physical health, mental wellbeing and quality of education.

Learning in nature as part of the curriculum

While there may be an element of personal choice over whether pupils choose to spend breaktimes outdoors, embedding outdoor learning into the school curriculum hardwires nature into pupils' learning provision. It means that teachers are planning when, how, and what to teach outside the classroom.

Only 27% of schools represented in this research say that outdoor learning is embedded into their curriculum for all pupils. Over a third said it is simply not part of the curriculum at all. This means that in 35% of the schools we surveyed, pupils will not experience any outdoor learning as part of their education experience.

Again, the prevalence of this varies considerably by the affluence of the type of school and the catchment area. In our sample, we found that 24% of schools in areas of high deprivation[13] are embedding outdoor learning into their curriculum for all, compared with 35% in more affluent areas. This suggests that pupils from more affluent homes are more likely to benefit from outdoor learning. Pupils are also less likely to be taught outdoors as they progress from primary to secondary: while 35% of primary school respondents say that outdoor learning is embedded into their curriculum for all pupils, under 10% of secondary school respondents reported this as an entitlement for every learner. Over half of secondary school respondents (56%) said they don't offer any outdoor learning to any pupils.

56% of secondary school respondents said they don't offer any outdoor learning to any pupils.

Schemes like Forest Schools potentially make it easier for primary schools to embed some aspects of the connection with nature cycle into the curriculum. Just over half of the sample's primary schools (52%) offer a Forest School programme run by a qualified practitioner for some or all children. However, we note that this doesn't mean it's available for all pupils as only 28% of primary schools reported that they offer this scheme for all or nearly all pupils.

Which nature engagement opportunities are schools most likely to provide?

Overall, our survey indicates that the most common practice when it comes to access to and engagement with nature is through school trips and extra-curricular activities and clubs. While enjoyable, these are almost always optional, meaning the benefits are experienced by a small number of children and young people. In our research sample, 25% said school trips to natural environments take place annually for all/nearly all pupils, while 20% said they are offered to around half their pupils annually.

Relying on school trips to provide 'nature connections' is problematic. School trips don't build a sustained and ongoing connection with nature. Schools in less affluent areas are most likely to be impacted by rising costs[14], this again means that poorer pupils will have fewer opportunities to benefit.

Secondary schools often offer awards such as Duke of Edinburgh, John Muir or Junior Forester. Just under 70% of secondary participants said pupils were involved in awards in which pupils spent time outdoors in nature. Again, the most prevalent situation is for awards to be taken up by a minority of pupils. 30% of respondents working in secondary schools said their school didn't offer any of these awards.

Awards and other voluntary activities are likely to attract pupils who are already engaged with, or interested in, nature. Rather than addressing the inequalities based on education phase and socio-economic factors, optional activities may actually reinforce and exacerbate existing disparities.

There is also a risk that offering optional activities gives the reassuring sense that the 'outdoor experience' box has been ticked. This means that, instead of experiencing nature being embedded into the school vision, culture and ethos, it's a 'nice to have' extra. It's an enrichment activity for pupils and staff who are interested in getting involved, not an inclusive opportunity which benefits all members of the school community.

Taking action for nature

In our survey, we asked schools about a range of activities that could offer young people ways of taking action for nature. These could be activities for all pupils, but very often they might be extra-curricular activities. Often led by a 'passionate' teacher, school clubs are a fantastic way for pupils to become involved in projects which boost biodiversity, reduce the school's carbon footprint and offer 'hands on' opportunities to engage with nature.

Projects carried out by clubs are often pupil-led, giving learners an important sense of 'agency' over improving their school grounds and taking action for nature. Examples include school wildlife gardens, installing bee hives, creating ponds, leading on initiatives to reduce carbon emissions, improving air quality, and reducing litter and waste.

Extra-curricular activities can reach a significant proportion of pupils, and 21% of respondents reported half or more of their pupils were involved in extra-curricular activities. But in the majority of schools, they reach a minority: 42% of our sample said a minority were involved.

Over a third of schools (34%) do not have an eco-club or extra-curricular eco-project initiative at all.

For both primary and secondary schools, growing food was the most common nature-related activity they offered. Over three quarters of respondents in primary schools say that children are involved in growing food at school. This drops to just over 40% at secondary school, where it was still the most common activity. Food production has a significant impact on biodiversity loss, so activities that involve growing food in ways that have positive impacts on the environment are an excellent way to take action.

Citizen science projects, such as the Big Butterfly Count (Butterfly Conservation), Big Schools' Birdwatch (RSPB) or UK Pollinator Monitoring Scheme (UK PoMS) are another way pupils can take action for nature. We found that 42% of primary schools, and 19% of secondary schools said pupils are involved in these activities, typically a minority. As well as increasing our understanding of UK nature, these activities also enable pupils to apply maths and science skills.

© Into The Dark / WWF-UK

Do schools provide a reinforcing cycle of engagement that will lead to nature connection?

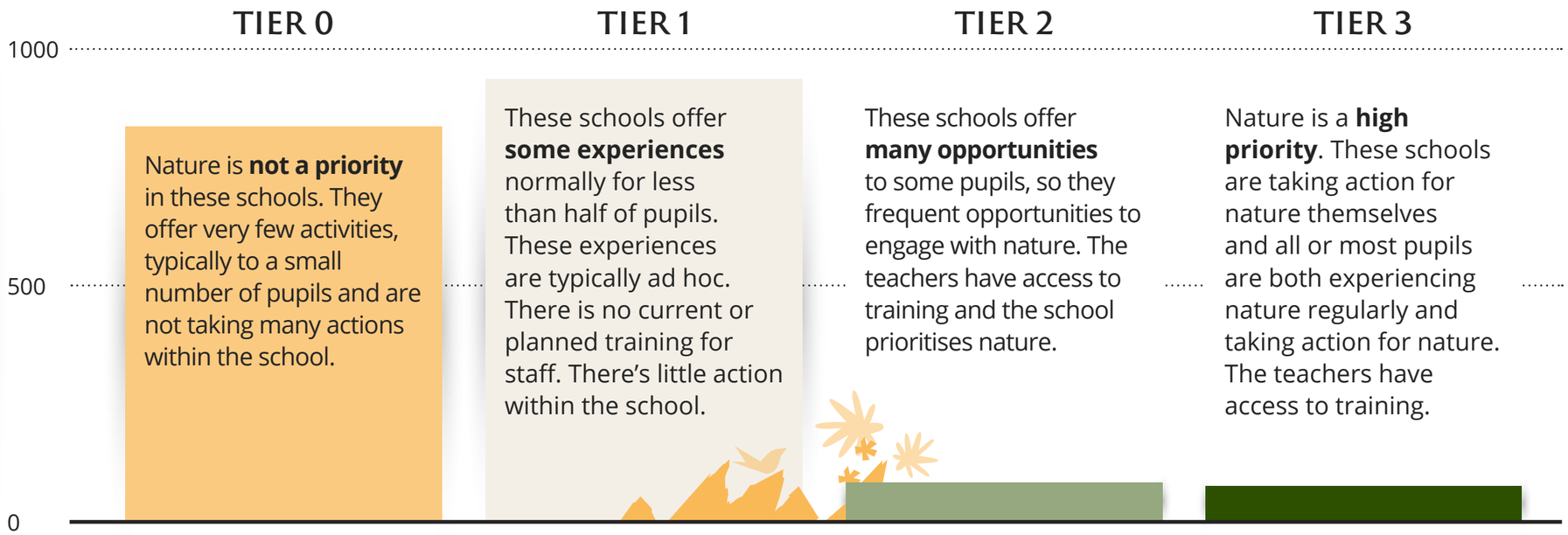
Schools often offer more than one type of nature related activity, both within and beyond the curriculum. We wanted to explore the extent to which nature experiences and actions are embedded in schools. This will help our organisations, and we hope others, understand where to focus our resources.

We grouped collections of activity together, to establish four tiers of engagement with nature. We categorised the schools' level of activity in three types and assigned scores to each type:

- **Pupil engagement with nature:** the range of opportunities for pupils to engage with nature and how many pupils these reach
- **School or pupil action for nature:** the activities where schools are taking action for nature, usually within the school grounds
- **Pupil involvement in action for nature:** opportunities for young people to be involved with or lead nature action projects.

We also asked about teacher training in learning outside the classroom, as this helps address teacher confidence. Further details of the tiering model are in the Appendix.

After assigning scores to each area, schools were assigned a tier.



Across the sample in our survey, we found that very few schools have embedded nature experiences for more than half of their pupils, with most schools either ranked tier one (48%) or tier 0 (43%). Primary schools were most likely to be categorised as 'Tier 1'. Secondary schools were most likely to fall into 'Tier 0'. This provides a baseline 'snapshot' of current engagement against which to measure changes over time.

One focus for our and similar organisations is to help schools, particularly secondary schools, to move from Tier 0 to Tier 1. This means providing simple engagement activities that are easy to access and embed into school life, as well as supporting schools to take their first steps in taking action for nature. Activities are likely to be repeatable and annual that embed into geography, science, PSHE or other curriculum subjects. Activities may support young people's mental health, as well as nature. The DfE National Education Nature Park may also support schools to move from Tier 0 to Tier 1.

The second focus for our organisations and others should be to help schools, especially primary schools, to move from Tier 1 to Tier 2. This means helping schools widen access to existing engagement activities to the majority of pupils by tackling the barriers identified in the next chapter. Providing teacher training opportunities will be essential, as well as developing practical support for senior leaders and school governors about the school estate. We hope that the DfE National Education Nature Park will make a significant contribution to increasing the proportion of schools in Tier 2.

WHAT ARE THE BARRIERS AND SOLUTIONS TO CONNECTING WITH NATURE IN SCHOOLS?

Our research

Qualitative research carried out by WWF in 2021/22 with primary and secondary school teachers across the UK identified a series of challenges associated with taking learning outdoors and engaging with the natural environment. In this section, we take a closer look at each of the barriers and consider possible solutions.

Support from school leaders

With school budgets and workforce under acute pressure, many leaders are forced to make tough choices. Too often, focusing on sustainability and outdoor learning simply isn't a priority, despite the best intentions and efforts of individual members of staff.

Environmental initiatives in schools are often taken on by passionate individuals wanting to make a difference or outsourced to external agencies or charities. While admirable, too often these initiatives are ad hoc, isolated and short-lived, and without the support of school leadership teams, it's almost impossible to make cultural, systemic changes.

If nature and the environment are to become central to the school vision, a whole-school approach is essential, with the leadership team setting out the strategy and a clear vision for their school.

Case Study:

LEADING FROM THE TOP – WHITEHALL PRIMARY SCHOOL

Whitehall Primary School is located in Chingford, London on the edge of Hatch Forest and near Epping Forest. The outdoor environment is integral to the school's curriculum, which is firmly rooted in the United Nations Sustainable Development Goals and UNICEF Rights Respecting articles.

The school's vision, ethos and education offering relies on the commitment of every member of staff, and that simply wouldn't be possible without an SLT-led, holistic approach. Head teacher Zakia Khatun doesn't just believe in the importance of the UN's Sustainable Development Goals: this informs how the school is run, the values it develops in its pupils, and their approach to teaching and learning.Across the school, Whitehall Primary practices what it preaches.

Every aspect of the school uses systems that are informed by sustainable principles, underpinned by staff training, sustainable policies and environmentally-friendly processes. Information is disseminated digitally via emails, letters uploaded to the website and text / social media platforms. Staff are consumption-conscious and encourage this as part of their classroom ethos. Additionally, the school's infrastructure has been retrofitted to be more environmentally compliant: switching to LED lights and embarking on a partial solar energy switch have been key changes. When organising educational visits, staff consider the environmental impact of travel arrangements, opting for public transport services or walking when feasible.

Practical tips

- **Recognition fosters the culture:** Whitehall Primary School has been awarded the Platinum award in the 'Green Tree Schools Award,' a program organised by the Woodland Trust for their commitment to fostering outdoor learning and nurturing a love for the natural environment.
- **Provide opportunities to connect:** From beehives to chickens, children have opportunities to get close to nature, develop the necessary skills for wildlife protection and conservation and develop an empathy for the natural world. The resident chickens, Courage, Curiosity and Collaboration, are much-loved members of the school community.
- **Work with the community:** The whole-school approach has also fostered closer links with the local community: the school orchard, planted by the community, for the community, is continually growing and allows children the opportunities to get involved in biodiversity-boosting and carbon off-setting practices.
- **Partnership helps:** The school has also cultivated relationships with local organisations, such as its partnership with The Hive in Waltham Forest which offers outdoor educational activities for schools and the wider public. It shares its extensive knowledge and experience with other schools, recently leading a teacher workshop designed to build knowledge and confidence in leading environmental and outdoor education experiences.

Funding

Teachers and senior leaders can perceive funding as a barrier to learning in nature and taking action for nature. Funding of schools remains challenging, with rising fuel and food costs, as well as staff costs. Research published by the National Foundation for Educational Research in 2023[15] reveals that, prompted by the cost of living crisis, half the schools surveyed are reducing spend in other areas in order to provide additional support to pupils and families from low income households. As the report points out, while schools aren't required to provide this, pupils whose basic needs for food and clothes aren't being met will not attend school or engage with their learning.

With schools being stretched to meet needs beyond the school gate, finding funding for nature-based projects or learning can seem to be a challenge. However, embedding nature-based learning within school curricula needn't cost more. School grounds – whether urban or rural – are accessible places to learn in using existing resources. They are places to listen, observe and assess. Sustainability projects can reduce school running costs as well as positively impacting on the environment. Citizen science projects cost nothing, and other nature restoration projects don't need to cost much at all if they use recycled or donated materials.

Case Study:

NATURE IN THE CURRICULUM – WEYDON SCHOOL

Weydon School was recently graded 'Outstanding' by Ofsted for their quality of education and students' personal development. Excellence sits at the heart of the school, summed up in their vision: *"Believe, Belong, Care. Promoting respect for ourselves, each other, the environment and the community."*

In an interview with Jacqui Sellers, science teacher and mental health lead, she explained how student voice had been the inspiration for putting nature at the heart of their learning, both in and out of the curriculum.

Nature in the curriculum

At Weydon School, the wellbeing garden provides a calm, contemplative outdoor space for students to spend time in, connecting with nature and taking time for reflection. This is set aside for supporting students' mental wellbeing, and they can choose to visit it during break and lunchtime. The school also runs wellbeing walks in the summer term, during which students are encouraged to be active, connect with nature, spend time with friends, and reflect on the impact this has on them.

The Wildlife Garden is also used for outdoor learning, within the Geography and Science programmes of study. The garden includes a pond, heather and small gorse area reflecting the heathland habitats around the school. It was inspired by local RSPB volunteers who talked to the students about the importance of this habitat. Here, students can observe the importance of these plants and learn first hand through investigating, recording and monitoring. This means higher levels of engagement, and deeper learning and understanding. Students also learn about microclimates around the school, by observing wildlife in the pond and plant growth patterns in the garden and around the school site.

© Abbie Trayler-Smith / WWF-UK

© Abbie Trayler-Smith / WWF-UK

Technology plays its role, too: Jacqui encourages students to identify insects, birds, plants and other wildlife using free apps like Seek (downloadable from INaturalist) and Merlin (developed by Cornell University). Not only does this empower students to 'own' their learning, but it also means that the teacher doesn't always need to be the expert. Using technology is inclusive, too. Jacqui recounts the experience of a student with a visual impairment who was able to take part in the RSPB Big Schools' Birdwatch by using birdsong to identify the birds.

For teachers who are concerned about behaviour management and keeping students 'on task' when learning outdoors, Jacqui says:

> *"Whatever you do outdoors, you'd do indoors with regards to behaviour management so when you're using the outdoor space as an outdoor classroom, the same rules and techniques apply. In science, you give your safety briefing beforehand as you always do. The difference is that when you go outdoors you get the 'wow' factor, the inspiration for that love of learning that we're all driven to want in our classrooms."*

This is not only what makes learning memorable: it's the start of a lifelong passion for nature. These are the children who want to share their knowledge and experiences with their families, and who will keep on learning beyond the school gate.

Microprojects, such as bug houses, bee hotels, bird or butterfly feeders are low or no cost and are creative learning opportunities for younger learners. WWF and other environmental charities list a wide range of ideas and resources on their websites.

Practical tips

- **Harness parent power:** creating the wellbeing and wildlife gardens took time and money. Because parents understood the benefits the wellbeing garden offered to children's mental health and wellbeing, they were keen to help where they could. One allowed the school to use a small digger. Other parents donated trees, and others, their own time.
- **Work in partnership with charities and local organisations.** For example, in return for logging their activity in the garden, RHS offers support and advice.
- **Use social media:** Students relay what they're doing to promote and support nature, for example through clothes recycling schemes to raise money. This is pushed out through the school's facebook and instagram feed and Eco group MEGA Instagram feed. Another channel for student voice. Reminders of annual events such as WWF Earth hour and the RSPB's Big Schools' Birdwatch are logged in the school calendar.
- **Finally, do something!** The motto for the school's eco club MEGA (Make Earth Green Again) is "do what you can, when you can, with what you have, who is in?"

Charities, like the Woodland Trust, give free trees to schools to help the UK reach its 2050 carbon net-zero target.

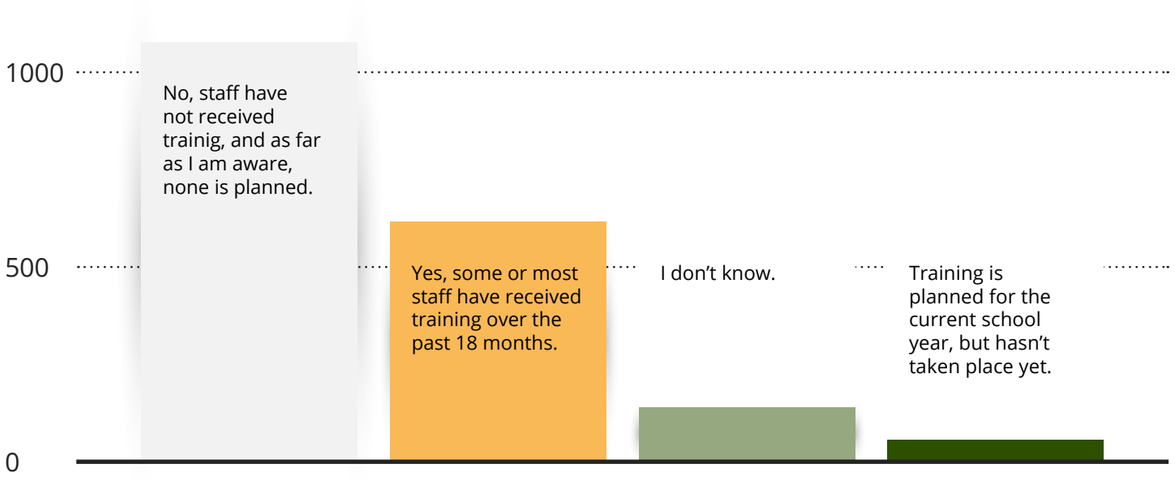
Lack of confidence

For outdoor learning to be effective, it requires teachers to adapt the skills and approaches they might use in a classroom. Without training, this means that many teachers don't feel confident about planning and delivering high quality learning outside the classroom. Many would rather leave this to the 'outdoor learning experts'. For teachers who themselves haven't spent time in nature as part of their own life experiences, the perceived risk of learning outdoors is likely to be even higher.

The Schools For Nature study reveals the majority of teachers have not received training in delivering learning outside the classroom, and as far as they are aware, none is planned. This is the case for 57% of schools in the sample.

Secondary school practitioners are far less likely than their primary counterparts to have received training: while 48% of primary respondents had been or were going to be trained, only 12% of secondary respondents had training or were going to take part in training.

Many environmental organisations offer – or could offer – free or low cost teacher training. The environmental sector could work together to provide a coordinated and coherent offer, reaching more teachers by working together.



Case Study:
CONFIDENTLY MANAGING BEHAVIOUR – ARK TINDAL PRIMARY SCHOOL

> ***"As our curriculum intent at Ark Tindal is to have pupils leave the school with a relentless curiosity of the world around them, we knew we needed to build confidence and a positive attitude about outdoor learning within our teaching staff"***

says Shannon Kingston, Y1 teacher and Science Lead.

When Shannon was appointed as the school's science lead, she realised that teachers in Key Stage 1 and 2 were making far less use of outdoor learning opportunities compared with EYFS colleagues. This, she realised, was because the outdoor space was seen as an 'uncontrolled environment', in which lessons could be disrupted due to off-task behaviour. Staff believed that children associate being outdoors with PE, after-school clubs or drop-down days.

Improving teacher confidence

The school had recently received funding through a Millennium Point Trust Grant to create a Science Garden on the grounds, which provided an ideal space for teaching the science curriculum. With the support of the school's leadership team, Shannon applied for a place on RSPB's Curriculum for Nature training course.

On the first day of training, Shannon was struck by the scale and extent of the outdoor learning opportunities available to them. *"I could see the real value the outdoor classroom could have not only to our scientific learning but beyond."*

Allowing children to respond to nature in their writing was a joyful experience for her, as a teacher, showing connecting with nature can make teaching more rewarding too.

The training gave Shannon the confidence to encourage colleagues at the school to choose and use a Wild Challenges activity with their pupils. The success of these has given colleagues the confidence to try other activities too.

Further plans to do more for nature and learning are underway, as success inspires confidence, and confidence means success. *"Ark Tindal will continue to experience and value nature so that pupils can deepen their understanding of the world around them."*

Lack of time in the curriculum to learn in and about nature

One of the most frequently cited challenges to learning in and for nature is the amount of content that needs to be taught and assessed. With schools under pressure to maximise pupil grades, many teachers simply feel they can't afford time out of the classroom. Alongside this, there is an implicit belief that while biology and geography might require field studies work, other subjects like English are best taught inside a classroom. The research we highlighted on page four counters this. Learning about and in nature is beneficial for pupils' health and their educational outcomes.

Case Study:

NATURE IN THE CURRICULUM - HARTFORD MANOR PRIMARY SCHOOL

"As these children grow up how can they be expected to care for something they haven't experienced? As a teacher, I see the vast potential the outdoors and nature has to offer in a broad and balanced curriculum... I am a full-time teacher, and nothing I have done took too much time or was additional work."

These are the words of Mr Bedford, a Key Stage 2 class teacher, whose class took part in a series of RSPB Wild Challenge activities on their journey to achieving a gold Wild Challenge Award.

Whole class action for nature

To complete their Wild Challenge Award, Mr Bedford's class chose a project aimed at boosting biodiversity in the natural spaces on their school ground. They wondered whether leaving areas unmown would have an impact on the number of species in the designated areas. Realising that they needed evidence to support their argument, pupils surveyed both the cut and uncut areas of grass. Using the Wild Challenge activity, Plant Safari, the children found only 6 species of plant in the cut areas but an impressive 50+ species in the uncut grass. A similar finding emerged when they counted the minibeasts: three were found in the mown area, and 41 in the unmown area.

Curriculum linking

- Pupils applied their knowledge and skills from science and maths lessons to map and measure the areas under investigation, and to propose the sites for the new 'no mow' areas.
- They used their communication skills to present their case to the school's Head, in which they set out the evidence from their investigation.
- They worked together to carry out the mapping and measuring, drawing on their collaboration and problem-solving skills.

The impact on pupils, the teacher, school and nature

Mr Bedford found that applying the skills they'd learned in a real-life context made the learning more meaningful and memorable. Because the project was led by the children, it gave them a sense of agency over the changes they implemented as a result of the project. In addition, joining an existing programme meant that Mr Bedford could use tried and tested learning resources provided, and didn't need to spend hours planning the lessons and coming up with ideas.

This project has also boosted the natural environment at the school. Not only are the grounds providing a far richer home to plant and animal species, but the wild areas have helped to manage flooding from rainwater runoff from the playground.

Belief that school site doesn't offer opportunities

Not all schools are on green sites. According to self-reported data from a survey carried out by WWF in 2023, 24% of 433 primary school respondents, and 27% of 645 secondary school respondents said half or more of their grounds were covered with tarmac or astroturf, and around one in eight respondents across both phases said access to outdoor space was very limited.

While this lack of truly green space isn't ideal for pupils or nature, it doesn't rule out learning about, through and even in nature. You can learn about and bring nature into urban sites:

- The recycling area is a great resource for finding containers that can be used as planters for windowsills, teaching children about the lifecycle of plants.
- Old barrels, tin baths, or even buckets can be used to create a container pond.
- One of the simplest ways to encourage bugs includes letting a patch grow wild: leaving grass and weeds to grow unchecked and allowing leaves to accumulate.
- Special habitats such as insect hotels, bee houses, butterfly barns and ladybird houses can find homes on walls. Drilling holes into a log and leaving it in a sunny location works well for encouraging solitary bees. In a shady area it will encourage moisture loving minibeasts.
- Both stone and log piles will provide food and shelter for a range of insects and small mammals.
- If the school or immediate community can relinquish an unused area, this could become a rewilding project, showing children how quickly nature regenerates given the opportunity.

Teacher workload

Excessive workload in the teaching profession is widely acknowledged to have a major impact on teachers' wellbeing and job satisfaction. Senior leaders are understandably reluctant to implement new initiatives which might add to staff workload, even if based on sound pedagogical and research-based evidence.

Outdoor lessons could be part of a solution. Active learning involving the application of skills often means evidencing learning differently. Unlike desk-based learning, which generates written work that needs marking, outdoor learning can be evidenced through photos, discussions, and tangible outcomes.

CONCLUSION

Providing opportunities for all young people to experience and take action for nature is good for their educational outcomes, physical and mental health, and it's good for nature.

Across the UK, opportunities for pupils to learn in, through, about and for nature are determined by the school they attend. With 43% of schools not yet offering any outdoor learning opportunities, and 48% providing a limited number of opportunities to some pupils.

WWF wants to see regular, weekly, nature experiences part of every pupil's educational entitlement. This should not be dependent on school phase, type, location or the passion of individual members of staff. In this report, we've shown that the benefits to learners, learning outcomes and to teachers are widely evidenced through research.

We believe the evidence of these benefits is strong enough that every school should be enabled to provide at least, weekly access to nature for all pupils.

Our intention is to monitor engagement with, and action for, nature in schools. We want to see more schools in Tier 3 and Tier 2 leading the way and working with schools in Tier 0 and Tier 1. We have shared the stories of some of the schools that are demonstrating our vision is possible.

WWF and many other environmental charities offer a wealth of free information, guidance, resources and toolkits for teachers across all phases and subjects, but this is not enough to make the difference. Alongside curriculum guidance, governments, charities and others need to provide teacher training programmes, commit to the continuation of the National Education Nature Park, update inspection frameworks, develop curriculum materials and provide financial support. We will work with partners and others to bring our vision to life, supporting schools to overcome the barriers set out in this report.

© Abbie Trayler-Smith / WWF-UK

APPENDIX:

TIERING MODEL FOR 'SCHOOLS FOR NATURE' SURVEY

In order to track and measure nature in schools for both 'pupil engagement' levels, and 'action for nature' initiatives, each school's response was scored across the following areas.

Nature engagement, which was broken down into the following:

- Across the school there are daily opportunities to 'experience' nature
- School trips to nature/nature-rich environments take place annually
- Pupils have the opportunity to participate in food-growing activities in school time
- The school offers a range of awards
- The school provides a Forest School programme
- The school takes part in annual national biodiversity campaigns
- The schools' extra-curricular/eco club offering, supports a range of projects or initiatives
- Outdoor learning is embedded into curriculum delivery
- Breaktime/free play is in a nature-rich environment.

For each area, respondents scaled the extent of engagement at their school, from none to (nearly) all pupils. The maximum a school could score here was 27.

Action for nature:

This was then combined with feedback on the following twelve ways in which schools could take 'action for nature', regardless of pupil engagement. The maximum a school could score across the areas below was 36.

1. Areas of the school grounds are left wild for nature.
2. Biodiversity is monitored through activities such as nature surveys.
3. Changes have been made to allow the school grounds to function as a green corridor.
4. Planting is directed towards improving biodiversity/increasing food or habitats for wildlife.
5. The grounds support a variety of habitats and/or micro habitats.
6. The school is involved in campaigning for change in the community.
7. Verges and/or hedges are left untrimmed to provide habitat throughout Spring and Summer.
8. The school uses organic (not chemical) fertilizers and/or pesticides.
9. The school is collaborating with other schools on nature action projects or initiatives.
10. The school is engaging with their local community on nature action projects or initiatives.
11. The school is partnering with other organisations such as a university or a charity on a biodiversity project.
12. The school has planted trees to 'regreen' the site and offset carbon emissions.

Respondents were also asked whether staff had received **training in delivering learning outside the classroom** (or whether any was planned).

The final question invited respondents to comment on **pupil involvement in 'nature action' projects on the school site**, with a maximum score of 12 across the areas below.

- Getting involved in nature action projects or initiatives.
- Planning projects aimed at prioritising nature or increasing biodiversity on the school site.
- Monitoring biodiversity on the school site.
- Engaging with local decision makers on environmental issues.

A tiering system, based on scoring between 0 (no activity taken) to 75 (maximum activity and engagement across all areas) was devised, as follows:

Tier 0 = total score across all areas is between 0-15. Nature is a low priority.

Tier 1 = total score is above 16 but staff have not been trained, and there is no intention to do so. There may be pockets of activity, but generally only accessible to the minority. Without staff training taking place, this is likely to remain ad hoc.

Tier 2 = total score is at least 33 across all areas and, within each area, a minimum threshold has been reached. Additionally, staff have been trained or training is planned. The school's nature strategy is well established, and nature is prioritised. Pupils have frequent opportunities to engage with nature at school.

Tier 3 = total score is at least 46 across all areas, and within each area, a minimum threshold has been reached. Staff have been trained or training is planned. Nature is a high priority, and all/most pupils have regular, frequent opportunities to engage with nature, take action for nature, and influence nature-based initiatives at school.

© Abbie Trayler-Smith / WWF-UK

REFERENCES

[1] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1134596/State_of_the_nation_2022_-_children_and_young_people_s_wellbeing.pdf

[2] Mental Health of Children and Young People in England 2022

[3] https://www.pediatricnursing.org/article/S0882-5963(17)30185-9/fulltext

[4] The Children's People and Nature Survey for England: 2022 update

[5] https://www.lotc.org.uk/wp-content/uploads/2023/02/Summary-of-Evidence-LOtC-in-Natural-Environments-Nov-2022.pdf

[6] https://www.frontiersin.org/articles/10.3389/fpsyg.2019.00305/full

[7] https://www.gatsby.org.uk/education/latest/teacher-recruitment-and-retention-in-2023

[8] https://link.springer.com/chapter/10.1007/978-3-031-04108-2_18#Abs1

[9] Rapid Evidence Review: National Education Nature Park and Climate Leaders Award, Natural History Museum 2022.

[10] https://www.besa.org.uk/key-uk-education-statistics/

[11] Lumbar, R., M. Richardson and D. Sheffield, (2017), Beyond knowing nature: Contact, emotion, compassion, meaning, and beauty are pathways to nature connection, PLoS One, 12(5)

[12] Children and Parents: Media Use and Attitudes 2023

[13] Measured using Free School Meals

[14] School trip numbers cut research by English Heritage says have increased by more than 60% over the past 3 years.

[15] https://www.nfer.ac.uk/media/j1qbbzwk/cost_of_living_impact_on_schools_school_provision.pdf

THANK YOU

About Schools For Nature:

Schools For Nature is part of the Save Our Wild Isles campaign from WWF, the RSPB and the National Trust, which calls on all parts of society, including young people, to take urgent action to protect and restore UK nature.

In summer 2023, the three charities launched a 'Schools For Nature Week', which saw schools across the UK open their gates to their local community to share how they had made their grounds a safe haven for wildlife under threat.

About WWF:

WWF (World Wide Fund for Nature) is a global environmental charity, and we're bringing our world back to life. With nature in freefall, we're urgently tackling the underlying causes that are driving the decline – especially the food system and climate change. And we're finding solutions so future generations have a world with thriving habitats and wildlife.

It's a huge challenge, but there is hope. We're working globally with governments, companies, communities and others who have the will to act and the power to transform our world. We're using our ground-breaking scientific research, our global influence, and the backing of our many supporters to make sure the natural world's vital signs are recovering by 2030.

WWF. Bringing our world back to life.

Find out more about our work, past and present at wwf.org.uk

About The Education Company:

Founded in 1988, The Education Company (EdCo) operates as a comprehensive digital agency, boasting a dedicated team exceeding 50 professionals across our offices in Kent and London.

EdCo collaborates closely with organisations seeking to showcase products, services, and pioneering research initiatives to educational institutions worldwide. Home | The Education Company

© Richard Stonehouse / WWF-UK