

# Nature Connection in Schools



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# 1. Introduction

Children today are growing up in a rapidly changing world—one marked by a warming climate and declining wildlife. These environmental shifts reflect a failing relationship between people and nature. In the United Kingdom, this disconnect is particularly pronounced compared to other countries. Rather than a nation of nature lovers, we are now one of the least nature-connected nations on the planet. To reverse this trend, we must take steps to rebuild our relationship with nature and inspire children to develop a deeper connection with the natural world.

## With this in mind, this guide has been written for:

Teachers, School Leaders & Governors  
People who work with young children

## And is designed to offer you:

- An accessible summary of what nature connection is and why it matters.
- Steps to help children at school or nursery improve their connection with nature.
- Examples of activities and initiatives that support and develop nature connection in children.
- Insights from the UK's first biophilic school.





## 2. Nature connection: what it is and why it matters

### What it is

Nature connection is about our relationship with nature – how we think about, feel about, and experience nature. When we feel very close to nature, we recognise ourselves as part of the natural world, and value our relationship with it. We notice nature, seek it out, and feel happy when we are in it.

### Our connection to nature can be strengthened

Connecting with nature is much more than just being in nature, it is how we interact with it that is most important. Our focus in this handbook is on psychological nature connection – how we relate to nature in our minds and through our emotions. It is based on a rapidly growing body of research that shows that the strength of a person's connection to nature is linked to their wellbeing and environmental behaviour. The science of nature connectedness focuses on the psychology of the human-nature relationship. It studies how people think and feel about nature and their relationship with it.

Research is based on scientific measurements of people's nature connectedness – the strength of their emotional and psychological connections to the rest of the natural world. The nature connection guidance in this book is based on this research, and what we have found out about what causes people to have stronger or weaker relationships, how the strength of their relationship impacts their wellbeing and environmental behaviour, and – most importantly – how to help people grow stronger relationships with nature.



## Why it Matters

In 2024, the Children's Commissioner, Dame Rachel de Souza, highlighted a "shocking" rise in childhood mental health disorders, a concerning trend unfolding amidst an overwhelmed and under-resourced system. Recent NHS data (2025) suggests that approximately 5% of two- to four-year-olds struggle with anxiety, behavioural disorders, and neurodevelopmental conditions. For older children and adolescents, the figures are even more alarming, with nearly one in five children aged 8–16 experiencing a probable mental health disorder. Many young people are living with chronic stress, panic attacks, self-harm, eating disorders, and school refusal. While children often report satisfaction with their home, health, and family life, a growing number say they are deeply unhappy with themselves (The Good Childhood Report, 2023). These patterns point not only to individual suffering but to wider systemic issues that demand urgent, creative, and compassionate responses. Within this context, reconnecting children with the natural world offers an evidence-based pathway to support mental health, build resilience, and foster a more positive sense of self – while boosting pro-environmental behaviours too.

Secondly, there's global recognition that the environmental crises of climate change and biodiversity loss are the result of a disconnect with nature. And the UK is one of the most nature disconnected nations on the planet. Improving nature connection is recommended by UN bodies as a route to transformative change.

Improving nature connectedness during childhood therefore benefits both the individual and the planet.

## Understanding the Roots of the Mental Health Crisis

Children's mental health is shaped by a complex mix of influences, but one area gaining increasing attention is the impact of Adverse Childhood Experiences (ACEs). These include experiences such as abuse, neglect, family breakdown, and poverty. According to the World Health Organization (2021), ACEs can significantly disrupt a child's emotional and psychological development, often leading to long-term difficulties such as anxiety, depression, and challenges with emotional regulation.

In particular, childhood poverty has been shown to hinder physical health, cognitive



growth, language development, and social-emotional skills – all of which are essential for learning and thriving in school. As a result, the child's educational progress and future opportunities can be adversely affected.

Educators and practitioners understand the importance of creating nurturing, inclusive environments where children feel safe and supported. While not a cure-all, connection to nature offers meaningful benefits—especially for children living in urban and disadvantaged environments who generally have more limited access to natural spaces. Providing an enabling environment that includes meaningful experiences in nature can offer opportunities for:

- **Holistic development**
- **Appropriate and managed risk**
- **Developing resilience**
- **Emotional regulation**
- **Peace and restitution**

We explore these in more detail in the next section.

## The Need for Change

The rise in childhood mental health disorders is a pressing concern that requires immediate attention. However, fostering a connection with nature offers a promising avenue for improving children's holistic development and emotional wellbeing. By providing opportunities for nature engagement, especially in urban environments, we can help mitigate some of the adverse effects of socioeconomic deprivation and support healthier, happier children.

# 3 The Benefits of Connecting with Nature during Childhood

Amid the challenges we have already noted, a growing body of evidence indicates that regular engagement with nature can significantly enhance children's holistic development and emotional well-being.

Studies have shown that children who spend time in natural environments are generally healthier. Outdoor activities boost physical activity, aiding cardiac, respiratory, muscular, and skeletal development. They also enhance physiological functions such as metabolism, gut health, and microbiota, and reduce physiological stress in preschoolers.

Psychologically, nature exposure increases positive emotions like happiness and strengthens pro-social behaviours. Enjoyment of nature can reduce anger, distress, and hyperactivity. Engagement in forest school has shown measurable improvements in preschoolers' social, language, and communication skills.

While exposure to nature is vital for children's wellbeing, the benefits are even greater when children connect with nature in emotional and meaningful ways.



## Nature and Self-Regulation: Supporting Emotional Balance with Nature

Emerging research continues to affirm what many educators observe first hand: natural environments can play a powerful role in helping children manage their emotions and behaviour. Even something as simple as having greenery around a school building has been linked to improved self-regulation in children.

More immersive experiences, such as outdoor learning days, gardening clubs or visits to nature schools, can have even greater impact. In one study, a single four-hour field trip led to noticeable improvements in children's mood, prosocial behaviour, and their connection to the natural world. Children reported feeling happier, more cooperative, and more motivated to care for the environment.

These findings highlight the value of weaving nature into the rhythm of the school day—not just for academic enrichment, but as a vital support for emotional wellbeing and social development.



## From Contact to Connection: Why Feeling Close to Nature Matters

Spending time in nature is beneficial—but forming a meaningful, emotional bond with the natural world brings even greater rewards. A growing body of research shows that people who feel deeply connected to nature tend to experience higher levels of wellbeing. In fact, one large-scale survey found that a person's sense of connection to nature was four times more influential than their socio-economic background in predicting how worthwhile they felt their life was.

This connection is especially important for children. A Canadian study involving nearly 30,000 young people found that those who believed nature was important to them had 25% fewer symptoms of mental ill-health.

The encouraging news? Building this connection doesn't require grand

adventures. Simply noticing and appreciating small moments in nature each day—like birdsong, dappled shade, a breeze, or the shape of a leaf—can lead to lasting improvements in mental health.

### Nature connection unites people and nature's wellbeing.

As well as being good for people, improving nature connection is good for nature too. Having a strong sense of nature connection has an impact on how we treat nature. When people have a closer relationship with nature, they are more inclined to want to help nature and take action to protect it. Dozens of studies have shown a clear and causal relationship

between nature connection and carbon-cutting pro-environmental behaviours. The same link has been found for pro-nature conservation behaviours—those which aim to protect wildlife and fight against decreasing biodiversity. The science of nature connection shows us that we can unite the wellbeing of people and nature. By helping people to connect with nature, you can bring about real change to their lives and the future of the environment.

### Why this Matters

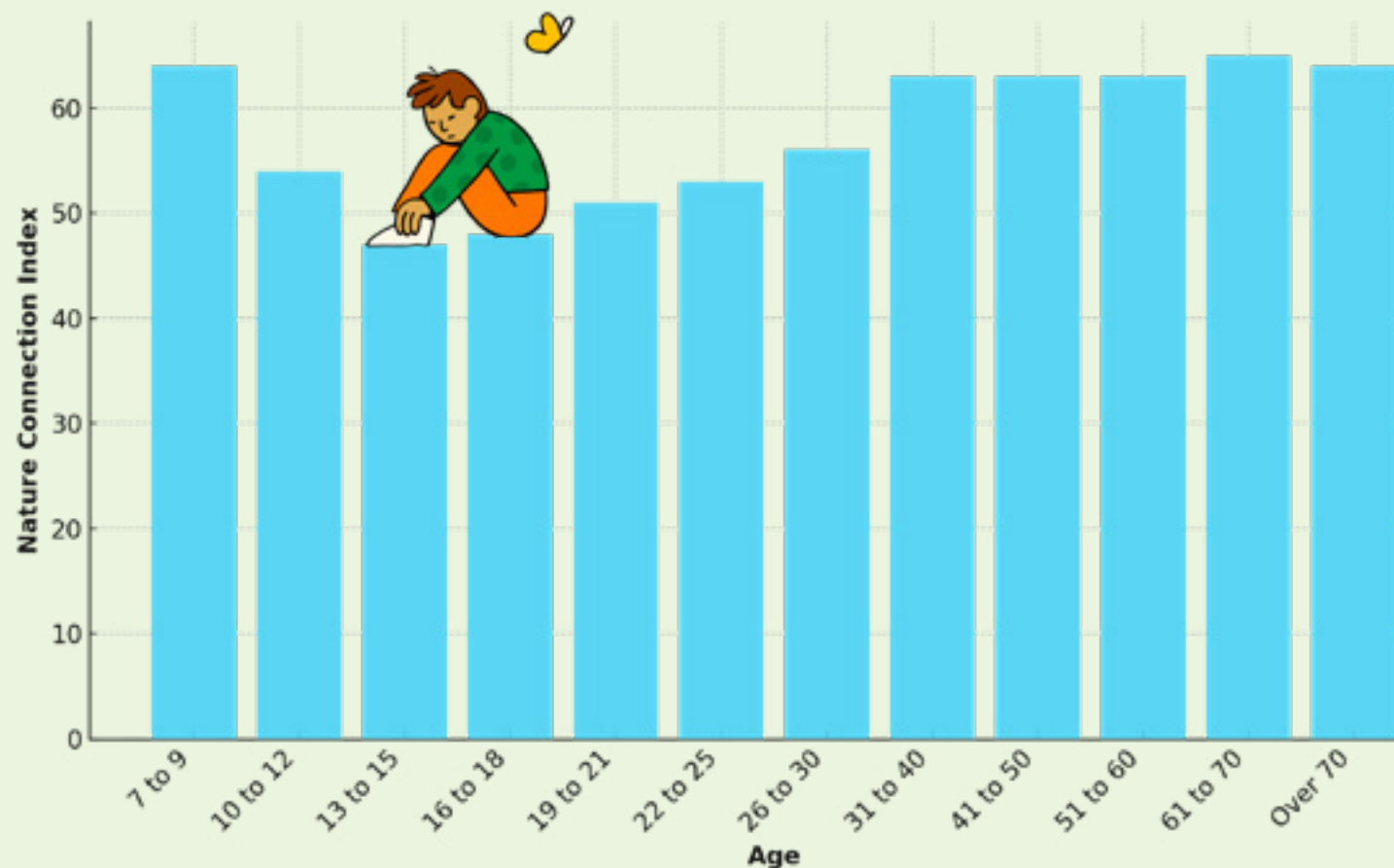
The body of research underscores the critical role of nature in children's development. In summary, fostering a connection to nature in childhood is important for physiological, psychological, and social development. Parents and educators play a crucial role in nurturing this connection, creating meaningful moments that contribute to children's overall well-being. By fostering a strong connection to nature early in life, we can promote emotional well-being, prosocial behaviour, and long-term environmental stewardship. Although addressing the barriers to nature connectedness, such as the reduction in green spaces caused by urbanisation and socioeconomic deprivation, remain essential in order to ensure that all children can benefit from the natural world.



## Understanding Individual Differences in Nature Connectedness

Not all children experience nature in the same way. Research shows that factors like age, gender, and socioeconomic background can influence how connected a child feels to the natural world. For example, girls often report stronger connections to nature than boys, though both tend to experience a decline in this connection during early adolescence. The trend begins around age 7 but starts to recover in the late teens.

This “teenage dip” in nature connectedness, shown in the chart, is especially concerning because of the strong bond we have already discussed between nature connectedness and mental health.



## Nature Connectedness Across the Lifespan

Interestingly, while many adolescents say their favourite places are natural spaces, their favourite activities—such as sports, arts, fitness, and gaming—are usually not nature-based. This

suggests that although young people appreciate nature, they may not feel emotionally connected to it or engage with it in meaningful ways.

When asked about barriers to spending time in nature, most adolescents said nothing was stopping them. Those who reported

barriers were most likely to say the weather, followed by health, school or work commitments, and safety concerns.

To help children and teens build a deeper, lasting relationship with nature, we need to move beyond occasional visits to green spaces. Instead, we can encourage active,

hands-on engagement—from nature-based play and exploration to creative and reflective activities outdoors. This shift from seeing nature as a “special place” to a space for everyday connection and interaction can help foster wellbeing and pro-nature behaviours.



## 4 How to grow nature connection in schools

So, if nature connection can boost children's well-being and social skills, (which have been found to benefit learning), what's the best way to improve it? Firstly, it's not just about getting outside; it's about meaningful, hands-on, and reflective experiences that spark a love for the environment.





**“Research shows that noticing nature is more important than simply spending time in green places”**

### Connection is about moments, not minutes

Being out in nature is good for us. But what we do in nature matters more than how long we spend in it. Research shows that noticing nature is more important than simply spending time in green places. People who watch wildlife, listen to birdsong, or take photos of nature feel closer to nature than those who don't do these things. Nature connection and engaging with nature through simple activities explains psychological wellbeing better than time spent in nature. Furthermore, those who feel closer to nature gain more benefits from the time they spend in it

### Connection is about feeling, not knowledge

We often hear that it's important to teach children about nature so they learn to protect it. But the challenge is that facts and information only influence about 2 to 3% of our behaviour. It's helpful to remember that there are two kinds of knowledge. One comes from learning facts and information. The other comes from building a relationship with something. For example, we know a parent through our relationship with them, not just by knowing facts about them.

Children are naturally curious and want to explore the world around them. Today, we often think of learning as collecting facts about things. In this view, the child

and the object are separate. In school, for example, a child might learn about a flower by labelling its parts. This is learning through information.

But toddlers learn differently. They get to know something by interacting with it—by seeing how it reacts and how they feel during the interaction. This is learning through a relationship.

It's important to keep giving children chances to connect with nature in this way—to build a close, personal relationship with it, instead of losing that connection through formal education. Research shows that children feel more connected to nature when they actively engage with it and enjoy it—especially through creative activities like art. Too much focus on facts can actually reduce this connection.

## Design your own nature connection activities with...

### The Pathways to Nature Connectedness

The pathways to nature connectedness—senses, emotion, beauty, meaning, and compassion—provide a research-informed framework for designing or adapting activities that foster deep nature connections. Developed through a three-year research project at the University of Derby, they are used in programmes like Generation Green, the National Trust's "50 Things to Do Before You're 11¾" and the National Education Nature Park programmes commissioned by the Department for Education and delivered by the Natural History Museum, Royal Horticultural Society and other partners.

**Senses** Provide opportunities and prompts to notice and actively engage with nature through the senses. Simply listening to birdsong, smelling wildflowers, or watching the breeze in the trees.

**Emotion** Provide opportunities and prompts to engage emotionally with nature. Spaces to notice and reflect on the good things in nature, to experience the joy and calm nature can bring. Provide opportunities to express and share feelings about nature with others.

**Beauty** Provide opportunities and prompts to find beauty in the natural world. Create spaces and moments to appreciate beauty in nature and to engage with it through art, music or in words.

**Meaning** Provide places to use and explore how nature brings meaning to life.

How nature appears in songs and stories, poems and art. Provide spaces to celebrate nature.

**Compassion** Provide opportunities and prompts to care for nature. Spaces to take action for nature, such as creating homes for nature or planting insect friendly plants.





## Evidence-based principles for fostering nature connectedness

This handbook provides evidence-based recommendations for fostering nature connectedness in schools. There have been many studies into how to improve nature connection in children. The principles below are grounded in two comprehensive reviews of these studies, conducted across diverse settings over the past decade or two. They highlight how nature connection activities can benefit learning in several ways, for instance, through improving social skills. These are followed by practical tips for primary and secondary school settings

Here are some key evidence-based principles themed by the pathways:



### Senses

#### 1. Engage the Senses:

Encourage students to use their senses—sight,

sound, touch, smell—to connect deeply with nature. Activities like listening to birdsong, feeling tree bark, or smelling wildflowers make experiences vivid and personal, fostering a lasting bond with the environment.

#### 2. Encourage Hands-On Interaction:

Let students touch, explore, and manipulate natural materials. Planting seeds, building with sticks, or observing insects up close creates tactile connections, helping students feel actively involved in the natural world.



### Meaning

#### 3. Promote Reflection and Awareness:

Guide students to

pause, notice, and reflect on their surroundings or emotions in nature. Activities like journaling about a

tree or discussing feelings during a walk build mindfulness, deepening their sense of connection to the environment.

#### 4. Incorporate Creativity:

Use art, storytelling, or music to express connections to nature. Crafting stories about animals or painting landscapes allows students to process experiences creatively, making nature personally meaningful.



### Emotion

#### 5. Joy and Calm:

Explain how nature helps manage our moods,

guide students to seek out the joy and calm nature brings.

#### 6. Personifying Nature:

Help students relate to nature by giving plants or animals names or imagining their perspectives.



### Beauty

#### 6. Inspire Appreciation of Nature's Beauty:

Encourage students

to observe and create art inspired by nature's aesthetic qualities. Activities like sketching landscapes, arranging leaves into patterns, or photographing natural scenes help students see beauty in their surroundings, strengthening their emotional bond with nature.



### Compassion

#### 7. Cultivate Care for Living Things:

Provide opportunities

for students to care for nature through actions like planting trees, tending and watering school gardens, or feeding birds. These compassionate acts foster a sense of responsibility and stewardship, deepening their connection to the natural world.

**8. Foster Empathy:** Discussing a tree's "feelings" when cared for builds emotional ties and empathy.

## Role of Educators and Community Leaders

Research underscores the importance of significant adults in fostering children's connection to nature. While children can form their own connections, educators and community leaders are uniquely positioned to engage children in nature-based activities, and the pathways to nature connection provide a design framework, helping you to shape new and existing activities to benefit nature connection. As a general principle be clear about your intention to facilitate nature connection and differentiate between opportunities to be in nature and fostering connectedness. Remember that most children's favourite place is a natural place but, at the moment, it is the least likely site of activity as screens and structured activities have become the norm outside school.



## **Evidence Based Implementation Principles: Making It Work in Practice**

These principles help translate nature-connected values into practical, flexible action - no matter your setting or timetable.

### **Structure with Flexibility**

Use simple, guided frameworks to help children engage with outdoor activities - especially younger pupils or those unfamiliar with nature-based learning. Clarity builds confidence and safety.

### **Support Choice and Autonomy**

Let students take the lead where possible - planning, adapting, or guiding parts of the activity. A sense of ownership deepens motivation and connection. Adults can facilitate the activities by providing suitable clothes and tools, or materials for loose parts play.

### **Repeat and Return**

Revisiting the same natural place regularly helps children develop familiarity and emotional ties. It's not about going far but building familiarity and place attachment.

### **Work With What You Have**

Whether it's a school garden, a local park, or a windowsill with a plant, every setting can support nature connection. Urban schools can be just as powerful with creative use of small spaces.

### **Explore Other Cultures**

Tailor activities to reflect students' backgrounds, interests, and community context. Explore other cultures and ways of knowing that emphasise respect and interconnectedness with nature. Indigenous peoples often have a very different relationship with nature.

### **Build Community Around Nature**

Link with local organisations, involve families, and share what children are doing. Collective action strengthens the impact and helps embed nature connection into your school culture.

### **Moments, Not Minutes**

Connection is about quality of engagement rather than time spent. Research shows that short, meaningful encounters - done often - can have lasting effects, and are easier to fit into a busy school day.



# Suggested Activities

Here are some suggested activities. See the resources section for even more, including freely accessible case studies and activities from the Nature Park website:

<https://www.educationnaturepark.org.uk/resources>

## For Primary School Children: Sparking Wonder in Young Explorers

Primary-aged children (ages 5–11) are naturally curious and love hands-on, imaginative activities. The research highlights that sensory engagement, storytelling, and empathy-building are especially effective for young children. Here are some practical ideas to weave nature connectedness into your classroom or school grounds:

### 1. Sensory Nature Walks

**a. Objective:** Engage students' senses to build awareness and connection with nature.

**b. Activity:** Lead a 20-minute guided walk in a school field, garden, nearby park, or grassy area. Pause every 5 minutes to focus on one sense—listening for birds, touching tree bark, smelling flowers, or observing colours. Provide prompts like, “Close your eyes and count the sounds,” or “Find something soft.” Afterward, students share one observation and draw it in a nature journal.

**c. Materials:** Optional nature journals, pencils, or crayons.

**d. Outcome:** Sensory focus and reflection help students tune into nature's details, fostering a personal bond.

**e. Principles:** Engages senses and promotes reflection (sensory contact, meaning).

**f. Curriculum Links:** Science: Seasons, plants, animals, living things and their habitats; English: Speaking and listening, descriptive writing; PSHE: Mindfulness, emotional literacy.





## 2. Storytelling with Nature

**a.Objective:** Build empathy and meaning by animating nature through stories.

**b.Activity:** Read a nature-themed story (e.g., a wise tree or curious squirrel). Students name a plant or animal they've observed (e.g., "Sunny the Sunflower") and create a short story or drawing about its "feelings" (e.g., how it enjoys rain).

**c.Materials:** Storybook, paper, crayons.

**d.Outcome:** Creative storytelling makes nature relatable, enhancing emotional connections.

**e.Principles:** Fosters empathy, personising nature, and creativity (emotion, meaning).

**f.Curriculum Links:** English: Story structure, character development, imaginative writing; Art: Expressing ideas through drawing; PSHE: Empathy and perspective-taking



## 3. Nature Art Projects

**a.Objective:** Use creative expression to appreciate nature's beauty and deepen connection.

**b.Activity:** In the school grounds, students collect natural materials (leaves, sticks, stones) to create land art (e.g., patterns on the ground) or collages (e.g., gluing leaves to form animals). Discuss their choices, like "Why this smooth stone?" or "How does this leaf make you feel?" Display photos of creations in class.

**c.Materials:** Natural materials, glue, paper, camera.

**d.Outcome:** Hands-on creativity and aesthetic engagement strengthen students' bond with nature.

**e.Principles:** Inspires appreciation of beauty and encourages hands-on interaction (beauty, sensory contact).

**f.Curriculum Links:** Art and Design: Use of natural materials, pattern, texture; Science: Materials, plant identification; Maths: Shape, pattern, symmetry.



## 4. Growing Plants

**Objective:** Foster compassion and responsibility through caring for living things.

**Activity:** Each student grows a bean or sunflower in a pot, naming their plant (e.g., “Bob the Bud”). Weekly, they water it, draw its progress, and describe its “needs” (e.g., “My plant looks happy with more sun!”) in a class plant diary. Share updates during class discussions.

**Materials:** Pots, soil, seeds, watering cans, paper.

**Outcome:** Repeated care and empathy-building activities create a sense of stewardship.

**Principles:** Cultivates care and fosters empathy (compassion, emotion).

**Curriculum Links:** Science: Plants, life cycles, needs of living things; Maths: Measurement (growth tracking), data collection;

**PSHE:** Responsibility, empathy.



## 5. Eco-School Planning

**Objective:** Empower students to enhance their environment through autonomy and teamwork.

**Activity:** Students brainstorm and vote on a small environmental project, like building a bug hotel or bird feeder from twigs and cardboard. They research its ecological benefits (e.g., which insects it attracts), construct it together, and present their project to peers or the school.

**Materials:** Twigs, cardboard, string, research materials (books or tablets).

**Outcome:** Structured activities and autonomy make students feel like nature’s stewards, deepening connection.

**Principles:** Promotes autonomy and structured engagement (implementation, compassion).

**Curriculum Links:** Geography: Human impact on environments; Design & Technology: Planning, building with sustainable materials; **Citizenship/PSHE:** Community participation, teamwork.







## For Secondary School Students: Inspiring Reflection and Action

Secondary students (ages 11–18) are ready for more reflective, autonomous, and socially engaged activities. The research emphasises creative arts, guided reflection, and hands-on experiences for this age group. Here's how to bring nature connection into your secondary classroom:

### 1 Guided Forest Bathing

**Objective:** Promote sensory engagement and mindfulness to deepen nature connection.

**Activity:** Lead a 30-minute silent walk in a local park or wooded area, guiding students to notice smells (e.g., damp earth), sounds (e.g., rustling leaves), and textures (e.g., tree bark). Provide prompts like, “Focus on one sound for a minute.” Afterward, students journal about how the experience made them feel or what they noticed, sharing one insight if comfortable.

**Materials:** Journals, pens; access to a green space.

•Outcome: Sensory and reflective experiences foster a personal bond with nature, enhancing mindfulness.

**Principles:** Engages senses and promotes reflection (sensory contact, meaning).

•Curriculum Links: PSHE: Mindfulness, managing emotions; English: Reflective writing; Science (Biology): Human nervous system and stress



## 2 Nature Photography Project

**Objective:** Encourage emotional connection through creative expression and aesthetic appreciation.

**Activity:** Over a week, students use smartphones to photograph natural elements (e.g., a striking tree, a serene pond) that evoke strong emotions. In class, they present one photo, explaining its emotional impact (e.g., “This sunset felt peaceful”). Create a class gallery to display their work.

·Materials: Smartphones, presentation space or digital platform.

**Outcome:** Reflecting on emotions and aesthetics strengthens students’ emotional ties to nature.

**Principles:** Inspires appreciation of beauty and promotes reflection (beauty, meaning).

**Curriculum Links:** Art & Design: Photography, visual composition; Media Studies: Visual storytelling, interpretation; English: Personal expression through writing.



## 3 Eco-Art Workshops

**Objective:** Foster creativity and collaboration through hands-on nature-based art.

**Activity:** Collaborate with a local artist or use online tutorials to guide students in creating “artscaping” projects, like land art (e.g., stone spirals) or sunlight photography. Begin with a sensory activity (e.g., lying on the ground to notice sounds), then students create art and discuss their process in small groups, sharing how it connected them to the landscape.

**Materials:** Natural materials, camera, artist guidance or tutorials.

**Outcome:** Creative and sensory engagement deepens students’ connection to nature.

**Principles:** Inspires appreciation of beauty and encourages hands-on interaction (beauty, sensory contact).

**Curriculum Links:** Art and Design: Sculpture, natural materials, land art; Geography: Landscapes and the environment; PSHE: Group collaboration, emotional expression.



## 4 Reflective Nature Walks

**Objective:** Use nature to support personal reflection and emotional processing.

**Activity:** Organize a 30-minute walk in a park or green space, where students reflect on a personal goal or challenge using prompts like, “Think about something you’re working through as you walk.” Afterward, they write privately in journals or share insights optionally in small groups.

**Materials:** Journals, pens; access to a green space.

**Outcome:** Reflective experiences in nature help students process emotions, building a deeper connection.

**Principles:** Promotes reflection and fosters empathy (meaning, emotion).

**Curriculum Links:** English: Journaling, self-expression;

**PSHE:** Self-reflection, emotional regulation; RE: Connection with the natural world, spirituality, awe and wonder.

## 5 Student-Led Environmental Campaigns

**Objective:** Empower students to act as environmental stewards through autonomy and teamwork.

**Activity:** Students form groups to research a local environmental issue (e.g., declining pollinators), propose solutions (e.g., a wildflower garden or bug hotel), and vote on one idea to implement. They build the project (e.g., planting wildflowers, constructing a bird feeder) and present their campaign to the school, highlighting ecological benefits.

**Materials:** Research materials (books, tablets), gardening supplies, natural materials (twigs, cardboard).

**Outcome:** Autonomy and compassionate action enhance students’ sense of responsibility for nature.

**Principles:** Cultivates care and promotes autonomy (compassion, implementation).

**Curriculum Links:** Geography: Environmental issues, sustainability; Science (Biology): Ecosystems, biodiversity; Citizenship: Civic engagement, local action; Design & Technology: Project planning and creation



Teachers and Early Years Practitioners can have a key role in helping students build a lifelong love for nature! By weaving sensory, creative, and reflective activities into the daily routine, you can foster nature connectedness that not only enriches students’ lives but also supports their social skills, resilience, and academic growth. Activities might be adult-led

or initiated and driven by the pupils themselves. But whether it’s loose-parts play in nursery, a simple sensory walk for primary pupils or a student-led campaign for secondary students, these activities are low-cost, flexible, and impactful. So, grab your class, head outside, and let nature work its magic.

# Embedding nature connection into school life

Embedding nature connection into school life and existing policies and frameworks creates an environment for nature connection, thereby enhancing student and staff wellbeing.

All schools should have a designated sustainability lead to create a culture that prioritises sustainability. This role should be supported by senior decision makers, leadership teams and governors to drive and embed culture change and keep sustainability as an item on the agenda at key meetings.

Given that nature connection leads to more sustainable behaviours, school policy can include nature connection, embedding it in mission statements to promote environmental stewardship and mental health. Nature connection can be included in existing policies, for example:

## 1. Wellbeing and Safeguarding Policy

**How:** Incorporating nature connection activities as part of a whole-school approach to mental health and emotional safety.

**Why:** Nature connection supports emotional regulation, reduces stress, and improves mood—key factors in safeguarding children's wellbeing. Green spaces around schools can act as protective environments, helping children feel calmer and more secure.

## 2. Behaviour Policy

**How:** Use nature connection as a proactive strategy to support positive behaviour and self-regulation.

**Why:** Natural environments help reduce hyperactivity, anger, and distress while increasing cooperation and prosocial behaviour.



## 3. Attendance Policy

**How:** Incorporating outdoor learning and nature connection experiences into the school week can increase engagement.

**Why:** Children are more likely to attend school when they enjoy the learning environment. Nature-rich experiences can make school feel more meaningful and enjoyable, especially for those who struggle with traditional classroom settings.

Nature connection can also be embedded into school governance, daily practice, and culture in informal but powerful ways. Schools might adopt a “nature’s calendar,” using school bells to mark seasonal events like the arrival of swallows or the first frost. Outdoor assemblies to celebrate solstices or equinoxes can help students observe and emotionally connect with seasonal changes.

A nature representative on the school board can champion green initiatives. Partnerships with local nature reserves, parks, or wildlife trusts can support regular visits, deepening students’ sensory and emotional connection to the natural world.

In classrooms, indirect nature experiences—like using natural materials (wood, stone), displaying landscape imagery, or incorporating biophilic design elements (green tones, organic shapes)—can evoke nature and foster a sense of calm and focus.



## 5 Creating spaces and places for connecting with nature



Biophilic design is a building design concept used to increase occupant connectivity to the natural environment. Some interpretations and applications of Biophilic Design can focus on indirect experience of nature, such as the use of natural colours and materials. However, the original Biophilic Design principles are very much about meaningful and emotional engagement with nature:

- Biophilic design requires repeated and sustained engagement with nature.
- Biophilic design encourages an emotional attachment to particular settings and places.
- Biophilic design promotes positive interactions between people and nature that encourage an expanded sense of relationship and responsibility for the human and natural communities.

These principles are of great relevance to nature connectedness and overlap with some of the pathways to nature connectedness. Rather than design elements such as plants, wildlife and water, the pathways to nature connectedness outline the types of activity to prompt with those natural elements. In sum, biophilic design isn't just passive elements. The space and features must also facilitate and encourage engagement.

# Nature Connection in Action: St Mary's Biophilic School

St Mary's Catholic Voluntary Academy in Derby is recognised as the UK's first biophilic primary school, setting a new standard for sustainable and nature-connected education. The school was rebuilt after an arson attack destroyed their old building. Classrooms open directly onto courtyards and outdoor spaces. The grounds include trees, rain gardens, meadow grasses, and seasonal planting, all designed to foster sensory engagement. We've been monitoring the school since it opened in 2023, finding out what the children enjoy and the impact of the new school on various outcomes.

Through regular surveys and a participatory photovoice study, children have shared their evolving relationship with the school and its natural surroundings.

## Positive Shifts in Wellbeing and Connection

Survey data revealed a small but sustained increase in nature connectedness following the move to the new school. This was accompanied by a notable and lasting rise in life satisfaction, suggesting that the biophilic design has had a meaningful impact on emotional wellbeing. Encouragingly, children also showed a continued increase in pro-nature conservation behaviours and stronger environmental perceptions, indicating that the school environment is nurturing not only wellbeing but also a sense of responsibility toward the natural world.

## What the Children Told Us Through Photovoice

In their own words and images, children highlighted the features of the school that mattered most to them.

Children described feeling calm and

grounded when they could see and hear nature—birds, animals, and the rustling of trees. They valued having spaces to run, walk, or sit quietly, and many found comfort in the presence of the large trees that survived the fire which destroyed their old school.

When asked about the building design, pupils were drawn to the wood cladding, courtyards, and especially the planting and trees,



which they saw as living parts of their school community.

## Learning in Nature-Rich Spaces

Interestingly, when asked where they most enjoyed learning, children consistently chose outdoor spaces: the outdoor classroom, gardening club, Forest School, the amphitheatre, and even the old playground. Notably, few pupils selected their indoor classroom in response to this question, suggesting a strong preference for learning environments that are open, sensory, and nature connected.

## Finding Sanctuary

Children also identified places where they felt safe and reflective. These included the reflection area, near the trees, in the courtyards, and along the winding paths. These spaces offered moments of peace and personal connection, reinforcing the importance of quiet, natural areas within the school grounds.

## Mapping the Experience: Children's Favourite Spaces

Children were also invited to take part in a Mapping Task, placing stickers on a school map to indicate their favourite areas. This activity revealed both shared preferences and interesting variations across year groups and between boys and girls.

The areas that consistently drew the most positive responses were those rich in trees and greenery. These natural spaces were where children reported feeling most connected to nature, echoing findings from the photovoice study and wellbeing surveys.

These insights underline the importance of designing school environments that offer both active and quiet zones, and that prioritise nature-rich areas where children can feel calm, safe, and engaged.



## Inspiration from St Mary's: What Existing Schools Can Learn and Do

The transformation at St Mary's Catholic Voluntary Academy offers a compelling case for how nature-connected design can positively influence children's wellbeing, learning, and environmental attitudes. While not every school can be rebuilt from the ground up, the findings from St Mary's provide realistic, scalable ideas that can be adapted to existing school environments.

### 1. Prioritise Nature-Rich Spaces

#### What St Mary's Did:

Children consistently reported feeling most connected, calm, and happy in areas with trees, greenery, and natural features.

#### What Existing Schools Can Do:

- Enhance green areas with trees, native shrubs, and seasonal planting.
- Create mini-wildlife zones or sensory gardens in unused corners of the school grounds.
- Use planters, vertical gardens, or window boxes to bring greenery into paved or indoor areas.

### 2. Support Outdoor Learning

#### What St Mary's Did:

Children preferred learning in outdoor classrooms, Forest School, and garden spaces over indoor classrooms.

#### What Existing Schools Can Do:

- Establish a simple outdoor classroom using benches, logs, or a canopy.

- Integrate gardening activities into the curriculum or after-school clubs.
- Use existing greener spaces or courtyards for storytelling, science, or art lessons.

### 3. Create Quiet, Reflective Spaces

#### What St Mary's Did:

Children found sanctuary in courtyards, near trees, and along winding paths.

#### What Existing Schools Can Do:

- Designate a quiet zone with natural seating, shade, and calming visuals.
- Add wind chimes, bird feeders, or water features to enhance sensory engagement.
- Encourage mindfulness or reflection time outdoors.

### 4. Listen to Children's Voices

#### What St Mary's Did:

Photovoice and mapping tasks revealed what children valued most about their environment.

#### What Existing Schools Can Do:

- Run simple surveys or mapping activities to understand pupils' favourite spaces.
- Involve children in designing or improving outdoor areas.
- Use photography or drawing projects to explore how children experience nature.

### 5. Make Small Indoor Changes with Big Impact

#### What St Mary's Did:

Children appreciated natural light, fresh air, cork boards, and wood finishes.

#### What Existing Schools Can Do:

- Maximise natural light and ventilation where possible.
- Use natural materials (like cork, wood, or fabric) in displays and furnishings.
- Add indoor plants or nature-themed artwork to classrooms.

### 6. Encourage Active and Passive Nature Engagement

#### What St Mary's Did:

Children enjoyed both active play and quiet observation in nature.

#### What Existing Schools Can Do:

- Offer a mix of structured and unstructured outdoor time.
- Provide tools for exploration (e.g. magnifying glasses, bug viewers, sketchbooks).
- Celebrate seasonal changes through nature walks or themed activities.

### Final Thought:

#### Nature as a Daily Companion

The key lesson from St Mary's is that nature doesn't need to be a special trip—it can be part of everyday school life. Even small, thoughtful changes can help children feel more connected, calm, and curious. By embedding nature into the school day, educators can support not only academic outcomes but also emotional resilience and environmental stewardship.



## Creating spaces and places for connecting with nature

Here are some key principles and practical tips for designing environments:

### Places and spaces for Nature Connection

- Principle: Design spaces that include natural spatial features.
- Implementation: Incorporate open views, places for retreat and refuge, and clear pathways with natural waypoints. Create areas where children can pause and notice their surroundings. These spaces should be close to features that engage the senses, such as fragrant flowers, textured leaves, or the sound of water. Ensure these areas are aesthetically pleasing to evoke emotions and create meaningful experiences that children will want to share.

### Direct Experience of Nature

- Principle: Facilitate actual contact with a variety of natural elements, ones rich in wildlife and plant care opportunities.
- Implementation: Provide opportunities for children to interact directly with natural features. Include areas where children can observe and care for wildlife and plants. This could involve bird feeders, butterfly gardens, and vegetable patches. Encourage children to participate in planting, watering, and observing the growth and activities of different species.

### Practical Tips for Use

Once you have some places, spaces and opportunities incorporate them into planned activities:

- Organise Daily Nature Walks: Regularly take children on guided walks to explore different natural environments. Encourage them to observe and discuss what they see, hear, and feel.
- Incorporate Seasonal Activities: Plan activities that align with the seasons, such as planting in spring, harvesting in summer, leaf art in autumn, and bird feeding in winter.
- Use Storytelling and Art: Integrate nature-themed stories and art projects to deepen

children's connection to nature. Encourage them to draw, paint, or write about their experiences.

- Invisible Friends - make the invisible visible - plant-animal-microbe symbiosis - Bugs aren't bad!

By following these guidelines, teachers can create enriching environments that foster a deep and lasting connection between children and nature. This connection not only enhances their well-being but also instils a sense of responsibility towards the environment.



## Resources

### [National Education Nature Park](#)

A free programme for schools, nurseries and colleges. Part of the Department for Education (DfE)'s Sustainability and Climate Change Strategy, the Nature Park provides curriculum-linked resources and practical activities to engage children and young people with nature and enables them to act to improve their local environment. Through joining a network of thousands of other schools across the country, young people make a collective difference to nature and take part in real scientific research into nature recovery with Natural History Museum scientists. Participation in the Nature Park is a great way to bring nature connection into schools, and includes [a dedicated package of nature connection resources](#).

*This initiative is part of the Department for Education (DfE)'s Sustainability and Climate Change Strategy, originally launched in April 2022, that applies to the education and children's services systems in England.*

There are many programmes and resources to explore from organisations such as the WWF, RSPB, Wildlife Trusts and National Trust. Here's a selection of those we've worked with:

### [The OWL Collaboration](#)

### [Generation Wild WWT](#)

### [Council for Learning Outside the Classroom](#)

### [Generation Green](#)

### [Children and Nature Network](#)





# SIX C'S FOR CONNECTING CHILDREN WITH NATURE

**The Six C's framework**—**Contact, Contemplation, Care, Celebration, Creativity, and Culture**—synthesises our recommendations, offering teachers actionable, research-informed practices to embed nature connection into school life, enhancing student wellbeing and environmental stewardship.



## **Contact (Sensory & Hands-On)** **Connect Through the Senses:**

Invite students to engage their senses—sight, sound, touch, smell—to forge deep connections with nature. Activities like listening to birdsong, feeling tree bark, or smelling wildflowers create vivid, personal experiences that foster a lasting bond.

## **Create Through Doing:**

Encourage hands-on interaction with natural materials. Planting seeds, building with sticks, or observing insects builds tactile connections, making students feel involved in the natural world.



## **Contemplation (Reflection & Awareness)** **Consider and Reflect:**

Guide students to pause, notice, and reflect on their surroundings or emotions in nature. Journaling about a tree or discussing feelings during a walk cultivates mindfulness, deepening their environmental connection.

## **Craft Stories and Ideas:**

Use storytelling to process nature experiences. Crafting tales about animals or plants helps students find personal meaning, making nature a significant part of their lives.



## **Care (Care & Empathy)** **Care for the Living World:**

Provide opportunities to nurture nature, such as planting trees, tending gardens, or feeding birds. These compassionate acts foster responsibility and stewardship, strengthening ties to the natural world.

## **Connect Emotionally:**

Help students relate to nature by naming plants or imagining their perspectives, avoiding harmful anthropomorphizing (e.g., assuming worms need houses). Discussing a tree's "feelings" when cared for builds empathy.



## **Celebration (Meaning)** **Celebrate Nature's Rhythms:**

Mark ecological events like the first swallows or solstices with school activities, such as outdoor assemblies or nature-themed bells, to foster awareness and emotional bonds.

## **Honour Personal Connections:**

Encourage students to share stories or reflections about nature's significance, reinforcing a sense of meaning and shared appreciation for the environment.



## **Creativity (Beauty & Expression)** **Create Art from Nature:**

Inspire students to craft art inspired by nature's beauty, like sketching landscapes or arranging leaves into patterns. These activities highlight aesthetic qualities, deepening emotional bonds.

## **Express Through Imagination:**

Use music, drawing, or photography to capture nature's essence, allowing students to process experiences creatively and strengthen their connection.



## **Culture (Nature-Positive Culture)** **Embed Nature in School Values:**

Integrate nature connection into mission statements, routines, and events, fostering a shared identity rooted in care for the Earth.

## **Showcase Nature's Presence:**

Use classroom displays with natural materials, biophilic colours (e.g., green, blue), and organic shapes to evoke nature, creating a culture of environmental stewardship.



## References

Bakir-Demir, T., Berument, S. K., & Sahin-Acar, B. (2019). The relationship between greenery and self-regulation of children: The mediation role of nature connectedness. *Journal of Environmental Psychology*, 65, 101327.

Dopko, R. L., Capaldi, C. A., & Zelenski, J. M. (2019). The psychological and social benefits of a nature experience for children: A preliminary investigation. *Journal of Environmental Psychology*, 63, 134-138.

Harris, N. M., Hartwell, B., Thomas, L., & Grace, M. (2025). How can nature connectedness and behaviours for learning be deliberately developed in children, adolescents and young adults? A systematic literature review. *Child and Adolescent Mental Health*.

Lumber, R., Richardson, M., & Sheffield, D. (2017). Beyond knowing nature: Contact, emotion, compassion, meaning, and beauty are pathways to nature connection. *PloS one*, 12(5), e0177186.

Otto, S., & Pensini, P. (2017). Nature-based environmental education of children: Environmental knowledge and connectedness to nature, together, are related to ecological behaviour. *Global environmental change*, 47, 88-94.

Mackay, C. M., & Schmitt, M. T. (2019). Do people who feel connected to nature do more to protect it? A meta-analysis. *Journal of Environmental Psychology*, 65, 101323.

Martin, L., White, M. P., Hunt, A., Richardson, M., Pahl, S., & Burt, J. (2020). Nature contact, nature connectedness and associations with health, wellbeing and pro-environmental behaviours. *Journal of environmental psychology*, 68, 101389.

Passmore, H. A., Martin, L., Richardson, M., White, M., Hunt, A., & Pahl, S. (2021). Parental/guardians' connection to nature better predicts children's nature connectedness than visits or area-level characteristics. *Ecopsychology*, 13(2), 103-113.

Pritchard, A., Richardson, M., Sheffield, D., & McEwan, K. (2019). The relationship between nature connectedness and eudaimonic well-being: A meta-analysis. *Journal of happiness studies*.

Piccininni, C., Michaelson, V., Janssen, I., & Pickett, W. (2018). Outdoor play and nature connectedness as potential correlates of internalized mental health symptoms among Canadian adolescents. *Preventive Medicine*, 112, 168-175.

Price, E., Maguire, S., Firth, C., Lumber, R., Richardson, M., & Young, R. *Current Research in Ecological and Social Psychology*.

Richardson, M., Hunt, A., Hinds, J., Bragg, R., Fido, D., Petronzi, D., ... & White, M. (2019). A measure of nature connectedness for children and adults: Validation, performance, and insights. *Sustainability*, 11(12), 3250.

Richardson, M., Hamlin, I., Butler, C. W., Thomas, R., & Hunt, A. (2022). Actively noticing nature (not just time in nature) helps promote nature connectedness. *Ecopsychology*, 14(1), 8-16.

Richardson, M., Passmore, H. A., Lumber, R., Thomas, R., & Hunt, A. (2021). Moments, not minutes: The nature-wellbeing relationship. *International journal of wellbeing*, 11(1).

Richardson, M., Hamlin, I., Elliott, L. R., & White, M. P. (2022). Country-level factors in a failing relationship with nature: Nature connectedness as a key metric for a sustainable future. *Ambio*, 51(11), 2201-2213.

Salmi, I., Halme, M., Salo, P., Seeve, M., & Mäkelä, V. (2024). Educational Environments and Practices Associated with Enhancement of Children's Nature Connectedness in Early Childhood Education: A Scoping Review. *International Journal of Early Childhood Environmental Education*, 12(1), 4-24.

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