



Research Insights Cards

Nature Engagement

A summary of evidence from
Froebel Trust funded projects
By Dr Verity Downing



About the Research Insights

This series aims to draw together evidence from projects funded by the Froebel Trust. It summarises key insights for anyone with an interest in early childhood education and care.

Each insight has been developed using a common approach:

- A search for relevant research and practice development projects funded by the Froebel Trust
- Review and analysis of all projects' outputs using a quasi-systematic approach by an independent researcher (based on [Gill, 2011](#))
- Synthesis of evidence and presentation of key insights.

This is an interactive document

How to get the most from these cards:



A **companion report**, which includes a more detailed summary of the research reviewed, is also available.

You can find out which pages of the report relate to each of the cards by looking at the report's executive summary.

Look in the 'Find out more' section on the reverse of each card. You'll see the names of the researchers whose work has informed insights on the card. Search the report or **click the bold name** to be taken directly to the link.

1. Learning from children

Froebelian research shows how young children can draw adults into experiencing nature through their play. This highlights the potential reciprocity of interactions between children, adults and natural environments.

“Adult nature connection is currently understood as influential on children, but perhaps within current conditions there can be an appreciation of the equal significance of children’s influence on adults.”

(Watts, 2022, p.97)



Look at the photo. What can we learn from this child’s nature interaction?



Learning from children

What the research tells us

Observing children's embodied engagement with nature can change the way adults engage with and perceive nature themselves ^(1,2,3).

- Spending time outdoors with their young children can enable parents to reconnect with nature in a wondrous "childlike" manner. Reflecting on an outdoor experience with her child, one parent noted: *"You just get all kiddy out there"* ⁽¹⁾.
- Young children can 'teach' adults; parents were observed spontaneously building on their child's engrossment in nature. Following their child's lead 'taught' parents to look beyond the superficial and spend time observing the natural world themselves ⁽²⁾.

- Findings from an Australian project demonstrate the potential for children to become 'teachers for each other and to their parents' ⁽³⁾. In this project the aboriginal children's understanding of and deep connections with nature supported reciprocal, experience based learning.

Find out more:

1. [Watts \(2021b\)](#)
2. [Watts \(2022\)](#)
3. [Jackson-Barrett & Lee-Hammond \(2018\)](#)



Recognising and valuing young children's individuality and their connections to the natural world can support a process of mutual learning.



2. Challenging inequalities

Experiences of nature are socially and culturally specific, and often unequal within and between countries. Early childhood settings have a particular role to play in ensuring that all children have regular opportunities to engage with nature.

“The outdoors is [...] a socially stratified space in which socio-economic status, class, ethnicity, and (dis)ability intersect in ways that can either include or marginalise even from before birth.”

(Kemp, Josephidou & Bolshaw, 2025, p.232)



Look at the photo. Think about how the educator is supporting this interaction.



Challenging inequalities

What the research tells us

Froebelian research evidences the significant inequalities in nature engagement within and between countries.

- Academics from a range of international contexts explored how nature engagement reflects wider societal norms, expectations, and cultural practices. Despite a shared commitment in principle, significant variations emerged in policy and practice between countries ⁽¹⁾.
- Early childhood settings can act as disrupters to, and rectifiers of, the inequitable access to nature experienced by some young children and their families ^(2,3).
- Educators in predominately urban areas of England were acutely

aware of their responsibility “to fill a perceived gap in the children’s outdoor experience” by providing opportunities for nature engagement ⁽⁴⁾.

- This requires knowledgeable nurturing educators who can sensitively navigate the perspectives and cultural expectations of children, parents and families. Direct nature-engaging experiences, and space to reflect on these, supported Irish student educators in making connections between themselves, the wider context and their practice ⁽⁵⁾.

Find out more:

1. Benson McMullen & Powell (2025)
2. Watts (2021a)
3. Kemp, Josephidou & Bolshaw (2025)
4. Merrick et al., (2022)
5. Moore & Towler (2024)

Download our **Access to nature guide for educators** on the Froebel Trust website.



Froebelian research demonstrates the importance of socially and culturally aware and responsive nature-based pedagogies.



3. Managing risk

The outdoors is often associated with increased health and safety concerns by educators and parents, with natural features seen as intrinsically risky. Concerns about risk can limit opportunities for nature engagement, particularly for the youngest children.

“[Educators] reported that they serve various roles simultaneously including facilitator, safety supervisor, supporter, and observer...many of them pointed out a safety supervisor as their prioritised role.”

(Oh. 2025, p.8)



Look at the photo. Think about what is happening in this interaction and the associated risks and benefits.



Managing risk

What the research tells us

An adult-centric preoccupation with risk often leads educators to adopt a surveillance stance, removing or limiting access to natural elements ^(1,4).

- Professional development about the benefits of nature engagement with opportunities to reflect can help educators rethink their role and start to balance risk and benefit in their practice ^(1,2).

“Adults can play a critical role in limiting the experiences of babies and toddlers outdoors, both directly through their behaviours (removing access) and indirectly (transmitting values and beliefs)”.

(Kemp, Josephidou & Bolshaw, 2025, p.229)

- A small-scale study of English settings highlighted the different perspectives of children (average age of three), their parents and educators, concluding that outdoor spaces may reflect adult needs for safety and supervision rather than what young children want and need ⁽³⁾.
- Leaders and managers can play a critical role in helping to defend and promote nature-engaging pedagogy and practice and managing safety concerns. One manager demonstrated how she had resisted the removal of natural elements from the outdoor space without causing harm to children ⁽²⁾.

Find out more:

1. [Oh \(2025\)](#)
2. [Kemp & Josephidou \(2023b\)](#)
3. [Merrick et al. \(2022\)](#)
4. [Kemp, Josephidou & Bolshaw \(2025\)](#)



A Froebelian approach to nature engagement starts with the child and their intrinsic interests.



4. Supporting wellbeing

The wellbeing of children, educators and the environment can be enhanced by Froebelian-informed practice that is slow, intentional, and multisensory. This is encapsulated in the Froebelian inspired Nature Engaging and Nature Enhancing (NENE) pedagogy ⁽¹⁾.

“The particular value of NENE is in the way it begins from an understanding of connectedness and unity...it calls both adults and children to engage with what [the natural environment] offers and be attentive to what can be given back.”

(Kemp, Josephidou & Watts, 2022, p.20)



Look at the photo. Think about the words you would use to describe this interaction.



Supporting wellbeing

What the research tells us

Froebel's original writing about nature engagement calls for adults to be attentive and nurturing of young children's relations with the natural world ⁽¹⁾. This aligns closely with 'slow' pedagogies that focus on being "*attentive to the rhythm of the children, and adults and materials*" ⁽²⁾.

- The BREEZE Forest School project found regular forest school sessions supported young children in developing the emotional and behavioural skills necessary to learn, and improved their overall wellbeing ^(3,4).

- Nature engagement experiences also support the wellbeing of educators. In one study both educators and managers reported the importance of spending regular time outdoors for their own wellbeing. The study also highlighted the value of experiential, nature-based Continuing Professional Development (CPD) in supporting and inspiring educators ⁽⁵⁾.
- In one Australian study, the introduction of pedagogical approaches that start with the child, their culture and country were found to enhance young children's wellbeing.

Find out more:

1. **Kemp, Josephidou & Watts (2022)**
2. Clark (2023) 3. **Tiplady & Menter (2021)**
4. **Menter & Tiplady (2022)** 5. **Kemp et al (2025d)** 6. **Jackson-Barrett & Lee-Hammond (2018)**



Thinking about humans and the natural world as being in a close, interdependent relationship can encourage an ethic of mutual care.



5. Developing relationships

Relationships with both people and places can be strengthened through a Froebelian approach to nature engagement.

“Children enjoyed playing with ... friends ... Just being outside ... looking after the plants ... [and] growing things”

(Russell, 2023, p.22)



Look at the photo. Think about the different ways relationships are being developed through this gardening interaction.



Developing relationships

What the research tells us

Positioning early childhood settings as part of a community opens up possibilities for sustainable relations to develop. This can be supported by the reciprocal sharing of knowledge, resources and experience ^(1,2).

- One Jamaican primary school situated in an area of high poverty and unemployment developed a Froebelian-inspired kitchen garden and rainwater harvesting system to improve local food and water supplies. Community involvement strengthened relationships, boosted children's interpersonal skills, sparked their interest in sustainable practices, and benefited their overall health ⁽¹⁾.

- Hands-on, Froebelian-inspired training provided educators at one school in Scotland with the confidence and skills to become a nature engagement hub, sharing expertise with families and other educators ⁽²⁾.

Find out more:

1. **Burke (2023)** 2. **Russell (2023)**



Nature engagement experiences can offer an effective focus for developing stronger community relationships.



6. Starting with babies: babyNENE

Froebelian research makes a particular knowledge contribution to sector understanding about nature-based pedagogy for babies and toddlers.

“NENE in babyNENE stands for Nature Engaging and Nature Enhancing, which we think sums up an attitude of mutual care and responsibility towards babies and the natural world.”

(Kemp, Josephidou & Bolshaw, 2026)



Look at the photo. Think about the experience from the baby's perspective and what they might be feeling.



Starting with babies: babyNENE

What the research tells us

Even in challenging urban environments, it is possible to develop nature-based pedagogies for babies and toddlers ⁽²⁾.

- The Froebelian-inspired concepts of being attentive, responsive, nurturing and questioning can help educators think about how to develop their nature-based practice with babies and toddlers, moving the focus from 'doing' activities to 'being' with the children.

- Small, incremental, manageable changes can result in considerable improvements in babies' access and enjoyment of nature-based experiences. For example, aspects of daily routines such as sleeping and eating can be incorporated into outdoor pedagogy.
- Both 'visible' changes (such as adding more natural features) and 'invisible' changes (such as re-thinking how time is spent) can make a meaningful difference.



Small changes can have a big impact. Introducing nature-based pedagogies in baby rooms can have a 'butterfly effect' within settings and beyond.

Find out more:

1. **Kemp, Josephidou & Bolshaw (2026) babiesoutdoors.co.uk**

A free toolkit for educators is available **on this website**.

Explore the project page **on the Froebel Trust website**.

2. **Kemp & Josephidou (2025) 'A Froebelian inspired nature pedagogy in urban babyrooms'**



Implications for educators

Engaging with research can help educators articulate why a Froebelian approach to nature engagement matters.

Discovering the wellbeing benefits of nature engagement (for adults, children, and the environment) through first-hand experience can be transformational.

Questioning who gets to spend time outdoors at the setting (and who doesn't) can help identify nature engagement 'blindspots' for example, babies.

Understanding each child's unique socio-cultural context creates a strong foundation for developing relevant and inclusive nature engaging pedagogies.

Slowing down creates more opportunities for adults and children to learn together, from each other, and from the natural world.

Sharing nature-based knowledge and experiences can support settings in becoming hubs for their communities.

Find out more by downloading the following publications on the Froebel Trust website:

- **An introduction to Froebel, children and nature**
- **Re-engaging with nature**
- **Outdoor play and exploration**



Policy implications

For policy makers, leaders and advisors

- Growing concerns about planetary health and the effects of climate change mean that early childhood settings now have a responsibility to develop sustainable practices.
- Settings want to know how they can enhance the naturalness of their outdoor spaces. There are opportunities to develop closer relationships between early childhood education settings and specialist environmental organisations such as the Wildlife Trusts.

Find out more by downloading the report **'Developing an ECEC response to the global environmental crisis'** from the Froebel Trust website.



Implications for researchers

- Educator-based research is valuable and empowering. Practice-based research enables educators to develop their practice and confidently convey this to relevant stakeholders.
- There is a need to understand more about the nature-based perspectives and experiences of young children and their families from diverse social and cultural contexts within the UK.
- There is a gap in knowledge about what a Froebelian approach to nature engagement looks like in early childhood contexts beyond the UK.
- Further research that employs child-led/child-centred and relational data collection to capture young children's first-hand experiences in natural environments would be valuable.





***“The child should experience nature
‘in all its aspects –form, energy,
substance, sound and colour”***

Friedrich Froebel in Lilley (1967) Friedrich Froebel :
a selection from his writings. Cambridge:
Cambridge University Press.

About the author

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About the Froebel Trust

The Froebel Trust funds research into
children’s learning from birth to eight years
and champions early childhood education.

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