

October 2025

NATURE-BASED EDUCATION

- Nature-based Education is a pedagogical approach that embeds nature at the core of learning experiences, incorporating environmental education and experiential learning, among other teaching strategies
- Nature-based Education fosters environmental stewardship and enhances student engagement while promoting human health and well-being
- Challenges in implementation include limited access to green spaces, insufficient teacher capacity, difficulties in adapting school curricula and financial constraints in educational institutions
- Governments, institutions and communities must integrate Nature-based Education into education frameworks, promote cross-sectoral collaboration and invest in greener learning spaces, teacher training and policy support to accelerate Nature-based Education implementation at scale

What is it?

Nature-based Education is a pedagogical approach that integrates nature into learning experiences, fostering a deep connection between humans and the natural world. It is a blend of teaching strategies that incorporates environmental education, Indigenous knowledge systems, experiential learning and a holistic approach to address global environmental challenges.

Nature-based Education promotes curriculum development that brings learners as close as possible to natural environments such as forests, coastal areas, wetlands, parks and nature centres. It also creates and restores natural settings as places for learning, such as green school grounds, gardens and parks, while integrating natural elements into built environments to enable nature-themed learning experiences. Nature-based Education can inform education across all geographies and levels, including early childhood care, primary and secondary schooling, higher education, professional development, leadership training and continuing education programmes.

The traditional education system often reinforces a separation between humans and nature, which has

contributed to environmental degradation and societal disconnection from the natural world. Nature-based Education aims to reverse this trend by embedding nature at the core of educational systems.

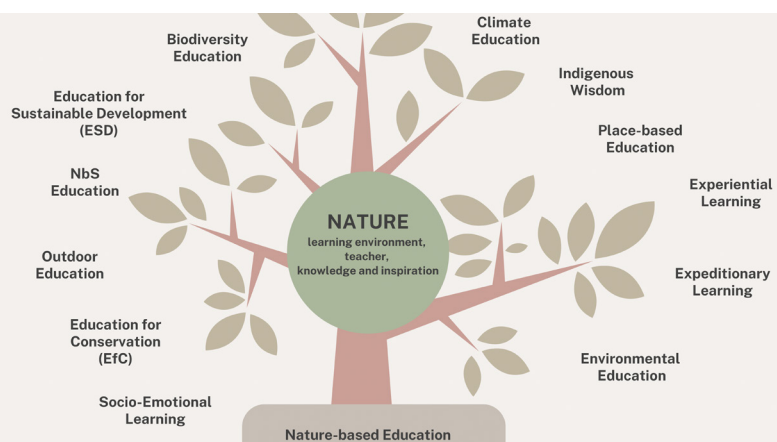
What are the benefits?

By increasing learners' direct experiences of nature and allowing active exploration and discovery, Nature-based Education brings a range of environmental, social, educational and health benefits.

The world is facing an unprecedented triple crisis: climate change, biodiversity loss and pollution, all of which threaten planetary health and human well-being. Nature-based Education enables learners to understand human impacts on the environment, ensuring that the interdependencies between human and natural systems are made tangible in curricula, learning outcomes and pedagogy. By fostering a deeper connection with nature, it nurtures a conservation ethic and equips learners with the knowledge, skills and values necessary to take informed and responsible actions for environmental integrity (IUCN, 2023).

Learning in nature enhances student engagement, inquiry skills and critical thinking. Programmes like the [Green Schools Initiative](#) and [Forest Schools](#) demonstrate that Nature-based Education fosters collaboration, empathy and community building (Giusti et al., 2018). Through place-based education – a pedagogical approach that uses the local community and environment as starting points for teaching and learning, Nature-based Education deepens learners' understanding of local ecological systems and cultural heritage, strengthening community resilience (Sobel, 2004).

When it comes to human health and well-being, research highlights that Nature-based Education improves cognitive function, emotional resilience and physical health (Camargo et al., 2023). Exposure to nature enhances problem-solving skills, creativity and a sense of interconnectedness,



Nature-based Education integrates a variety of teaching strategies and educational fields. Credit: Luis Camargo/IUCN CEC

contributing to individual and collective well-being. Studies indicate that green learning environments lower stress levels, reduce anxiety and promote active lifestyles (UNESCO, 2022).

Nature-based Education supports the goals of Education for Sustainable Development outlined in the United Nations' Sustainable Development Goals (SDGs) (UNESCO, 2020) and aligns with IUCN's commitment to environmental education and conservation through policies such as [Resolution 5.101](#) on children's right to connect with nature.

What are the challenges?

Institutions implementing Nature-based Education might face a variety of challenges, such as limited access to green spaces; lack of administrator support; insufficient teacher preparedness, experience and capacity; difficulties in adapting school curricula; lack of awareness of the many outstanding curricular resources and training opportunities that are available to support Nature-based Education; and unfamiliarity with protocols for assessing programme effectiveness.

Additional barriers include limited awareness of the evidence-based benefits to both students and the environment as a result of these approaches as well as political and regulatory obstacles, financial limitations and the need for coordination among involved stakeholders. All of these challenges are surmountable, with positive results.

What's next?

Several measures can help overcome challenges to implementing Nature-based Education:

Policy and funding support

Governments should enact policies that recognise Nature-based Education as a critical component of education and environmental strategy. Allocating funding for relevant initiatives, supporting research and establishing partnerships between educational institutions and environmental organisations will accelerate Nature-based Education implementation at scale (Tubaishat, 2021).

Enhancing educational frameworks

Governments and educational institutions should incorporate Nature-based Education principles into curricula by embedding nature-based outdoor learning, experiential activities and sustainability education. Revising formal education frameworks to include systems thinking and interdisciplinary approaches can bridge the gap between humans and nature (IUCN, 2021).

Greening learning spaces

Schools and universities should transform their infrastructures to integrate green spaces, outdoor classrooms and nature-based learning environments. Initiatives such as [Singapore's "green schools"](#) and the



Children exploring nature in Mongolia. Photo: GIZ

[Paris Oasis Programme](#) exemplify effective greening strategies that enhance biodiversity and resilience (Kessler, 2025).

Training educators

Professional development programmes should equip teachers with the skills and confidence to implement Nature-based Education strategies effectively. Training should include outdoor education methodologies, risk management and socio-emotional learning components to foster holistic teaching practices (Kwauk & Casey, 2023).

Leveraging technology

While direct interaction with nature is essential, technology can complement Nature-based Education through virtual field experiences, digital biodiversity tracking and AI-enhanced environmental education. Programs like [iNaturalist](#) and citizen science initiatives demonstrate the potential of technology in fostering ecological awareness (Bonney et al., 2016).

Conclusion

Nature-based Education is a crucial strategy for addressing the environmental and societal crises of the 21st century. By fostering a deep connection between learners and the natural world, it cultivates environmental stewardship, enhances well-being and prepares individuals to contribute to a sustainable and resilient future. Given the severity of the triple planetary crisis, scaling up Nature-based Education initiatives must be a global priority. Coordinated efforts among policymakers, educators, communities and organisations are needed to ensure equitable access and lasting impact. Nature-based Education is not just an educational reform; it is a necessary shift toward a healthy planet and a just, sustainable future for all.

Where can I get more information?

- [UNESCO Education for Sustainable Development](#)
- [NatureForAll Initiative](#)