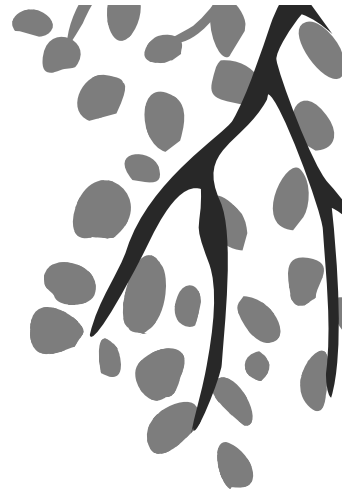


# Green Teaching

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# Green Teaching

NATURE PEDAGOGIES FOR  
CLIMATE CHANGE & SUSTAINABILITY

*Claire Warden*



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**For family X**



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# About the author

Claire Warden's approach to nature-based, child-led pedagogies has earned her international recognition as a pioneer in educational thinking. She is a multiple award-winning author with over 15 books to her credit. The sister book to this title called *Learning with Nature – Embedding Outdoor Practice* (Sage, 2015) is an essential text for understanding how to achieve quality in outdoor play and learning.

Claire has been recognised for her original contribution in the field of education, her thesis *The Creation and Theorisation of Nature Pedagogy*, and was awarded her PhD in 2019. Her inspirational research and approach to experiential learning has developed through a variety of experiences, including primary teaching, advisory work, lecturing in further education and development of the award winning Auchlone Nature Kindergarten in Scotland. She was awarded an international award of Exceptional Master Leader for her work on participatory planning through the Floorbooks® approach. The collaboration achieved through Floorbooks® places the voice of the child within the natural world. These two aspects are at the heart of planning, thus creating a respectful, inquiry-led relationship.

Claire works with governments and associations around the world to create high-quality, nature-based models of education, learning with nature inside, outside and beyond. Her philanthropic work includes international advisor to the Children and Nature Network, the World Forum Foundation and the International School Grounds Group, and she is the founder of Living Classrooms Community Interest Company (CIC), which runs the Virtual Nature School and the International Association of Nature Pedagogy.



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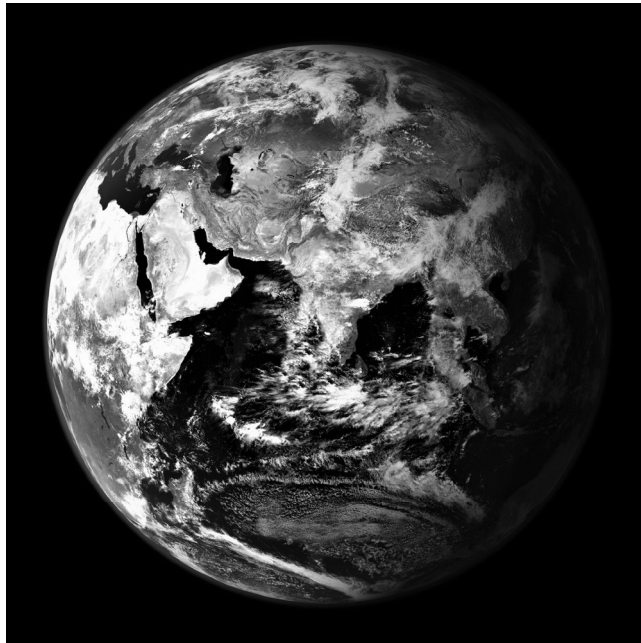
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# Introduction

Welcome to the world of nature pedagogy, a pedagogical approach that seeks to respect and support the rights of children and the planet with dual importance.

This book explores nature pedagogy and shows its impact on practice to share a transformation that offers an educational contribution to the increasingly urgent issues around the sustainability of humans and the needs of the planet we are on.



**Figure 0.1** Size and scale

The size and scale of the issues we face require radical innovation in all aspects of the way we live. This book focuses on creating a societal shift in our perception of the role of the natural world in the education of humans. It does not solve all aspects of global climate change and distribution of food and water, but offers a perspective that is within reach for every educator in the world, every day.

The title of this book, *Green Teaching: Nature Pedagogies for Climate Change & Sustainability*, describes the need for educational change or perhaps affirmation to those educators who already support ecocentric teaching methods. Teaching as discussed in this book is not didactic, but it represents a skill in how to engage, care and educate children.

The words that often come to mind when you mention nature-based thinking are around awe and wonder, but let us not over romanticise the *other than human* aspects of nature. It is not a panacea, a solution for every ailment, issue and condition that humans have; it is not always cuddly and protective. It can be harsh, unyielding and honest, which for many humans makes it a threat to be controlled.

When we go into nature, it has the potential to offer a form of solace and a sense of wellbeing; when we learn about it, we are often humbled by the complexity and variety; when we learn with nature, it offers us intellectual provocations and solutions to many situations, from pain relief to engineering ideas. It is hoped that through all these aspects we can begin to do things that benefit humans and the planet, or indeed just for the planet.

The Earth is constantly changing, and those loose objects we play with outside such as sticks and stones are all on a journey alongside us as human beings. The pebble that children hold was once part of a mountain or under the sea; it was rock, a stone, now it's a pebble, but it will become a fragment, a grain, particles and molecules, and as such, will be recombined in other biological and chemical processes. We are part of this constant journey where a human lifetime is nothing more than a speck of time and all the decisions we make need to be made with the benefit of future generations in mind.



**Figure 0.2** What kind of ancestor will you be?

As educators, teachers, pedagogues, parents, we need to ask the question: What kind of planet will we leave for our children? Will it be one where they will look back at the actions we take and feel proud of the wise choices of their ancestors?

This in turn asks us to consider what kind of children will we leave for the planet? How will we help them make wise choices in their lifetimes as they find themselves surrounded by an increasingly technological world?

It is also an interesting challenge to write a book that you have been thinking about your whole life, to know when to stop or indeed where to start, so I have started with a positive reminder of why what we do matters.

Each chapter provides imagery, stories and experiences in case studies and research to create a bridge from theory into practice. This process of thinking has created a framework of principles for a way of working, a pedagogical approach to care and education in the 21st century, built on a foundation of ancient ways of being. It includes visual mind maps that allow the reader to see the complexity of a curriculum and the interrelated nature of holistic learning with nature that arise when we plan for possibilities and not certainties.

In Chapter 1, we explore the reason why we need to consider exploring nature pedagogy rather than outdoor play in isolation.

Chapter 2 shares a definition to help understand the impact that we could have every day.

Chapter 3 pushes us to think more about the term *nature*. What do we mean and what impact does it then have on our day-to-day actions?

Chapter 4 investigates the idea of relationships, not just with humans but also with the rest of the natural world so we can reflect on how this changes our day-to-day choices.

Chapter 5 shares the principles of nature pedagogy and how they emerged from people who are fully immersed in the natural world every day, all day.

Chapter 6 offers a sustainable approach to care and education that places importance on the moments all of us have every day wherever we live and work.

Chapter 7 shares the implications for our practice so that everyone can do something to put the natural world at the heart of their pedagogy.

I hope this book supports you to place the needs of the natural world at the heart of the decisions that you make every day – from the environments you offer children to the style of planning for play and learning. It invites you to do what you can to create balance, and through that, achieve long-term sustainability.





# One

# Why do we need nature pedagogy?

## Chapter overview

In a world that is full of definitions, this chapter explores why we need to consider another way of approaching how we work with children (our pedagogy) so that it becomes nature- or ecocentric. The list of terms linked to this field are wide and varied. We hear about outdoor play, environmental education, education for sustainability, nature play, nature-based practice and now nature pedagogy. Where then do we place the pedagogical practices that support children who view nature as a challenge to survival, or children whose confidence in their identity is interwoven with it? The drive that sits around care and education is the need to do something, to make a difference, but how do we do that in a way that is not dominant to the culture of the child and family, that is respectful of the variety and complexity of all of us? This chapter shares the global educational context and considers why we need to embrace nature pedagogy and not outdoor play in isolation.

---

Moments or 'rifts' (Caputo, 1987) exist in our lived experiences that offer us the opportunity to make connections from inside ourselves, outside into a relational ontology within society and into the beyond, as we interrelate with observable and unobservable phenomena. The desire to embrace the rifts and accept discord is an integral part of researching our practice as it allows us to consider patterns that exist between humans and the rest of the natural world.

This pedagogy uses three contexts of inside, outside and beyond (Warden, 2015, 2018). One interpretation of these contexts is as spatial locations; as spaces inside buildings, outside in landscaped areas and beyond boundary fences to nature presented on its own terms. A second interpretation is spiritual and emotional; from inside ourselves in a relationship with the natural world, to how this is then shared outside in society as a manifestation of values, to beyond into an unobservable connection we all have as humans to everything else we share on the planet.



**Figure 1.1** Unobservable sense of connection

## **Sustainability as an approach to care and education**

We need to change the way we live, which includes our approach to education and work. The whole of the natural world, including humans, is affected by the decisions that we make every day. These decisions are explored in Chapter 6 and their collective impact considered. Sustainability is a key issue that is affecting the balance of the Earth's systems and has accelerated climate change to the point that adaptation through evolution is impossible for some of the species on the planet; resource depletion and waste disposal are pressing issues and we have irreversible damage to ecosystems (Friedman, 2008). This has led to

comments that this present period is the sixth major extinction period (Diamond, 1992) and is driving many people to take positive action.



**Figure 1.2** Understand the facts and fiction

The issue sits in a collective space that needs to be taken seriously by society because the same messages are coming from all over the world. The humans are struggling. We are trying to sever our link to the natural world, which is an unattainable task. The desire to lead a predominantly sedentary life inside, to focus on immersive indoor technology of gaming, is changing our perceptions so that we experience nature in a created, second-hand world. The rise of digital pets is a result of the desire to want companionship but not relationship.



**Figure 1.3** Entering the digital age

## Perceptions of the natural world

During 2020, in the global pandemic, whilst working with educators to mentor them to support children and families to be outdoors, a range of views emerged. What came from that anecdotal research was that people seemed to align with three camps. The first was that ‘nature’ was threatening and was the reason for the Covid-19 virus and therefore everything connected to nature was cleaned or rejected; the next was that nature was a place to find solace and comfort; and the last was that being outside was going to be integral to the new normal. The words they shared in Table 1.1 offer a sense of hope that people see and feel the value of being outside, under the sky.

**Table 1.1** The natural world as threat, solace and solution

Nature as a threat	Nature as solace	Nature as the solution
The cause of Covid-19	Peace	Future
Threat	Beauty	Joy
Disease	Solace	Sustainability
Virus	A new soundscape	Green
Attack	Escape	Provider
Death	Exercise	Care
Fear	Security	Protection
Hunger	Comfort	Balance
Harm	Reduced hazard	Hope
	Wellbeing	

Just as with the other animals we share the planet with, Kuo (2010) suggests that when we are put into environments that do not meet our physical, psychological and social needs, we will struggle to grow in a healthy way. The enforced lockdown in 2020 had a global impact, but has actually been happening more and more to the lives of children as their freedom to play outside in the local area has been reduced.

One way that we can make a difference is global awareness and understanding of the issues within education so that we can develop the skills we need to help the rest of the natural world and make wiser decisions for ourselves as a species. An area that offers a positive solution is pedagogy, as ecocentric interactions with children and families occur every day.

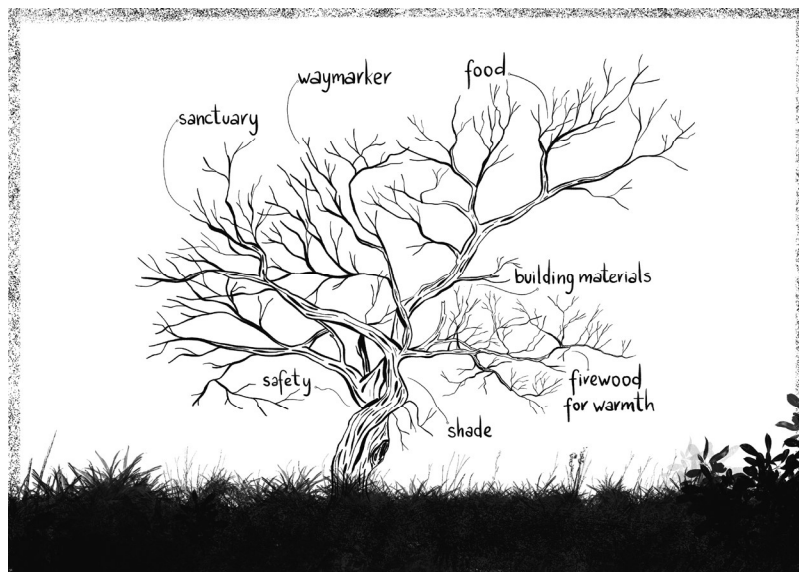
This book shares a nature pedagogy built on a history of environmental education and education for sustainability, but also respectfully acknowledges First Nation thinking. This suggests that the issue lies in a fundamental, deep-rooted belief of a human sense of privilege and power, and that we master the other

aspects of the natural world, which builds a sense that we sit aside from nature and beyond its impact.

The global pandemic in 2020 caused people internationally to stop and think. The virus affected everyone, including those with wealth. Everyone felt a degree of vulnerability and exposure. The hope is that the visceral sense of loss from not being able to go outside, or the emotional relief we get when we do, is enough to remind us to make decisions that support an interdependent biological community.

Embracing ecocentric values in nature pedagogy will influence the next generation. Through two years of research, nine aspects of practice emerged (Warden, 2018) in an early year's environment in Scotland. These reflected the changing perspective of learning about being with the natural world inside, outside and beyond, so that the setting put nature at the heart of its decisions. It went beyond the ecological practices of litter management, power use and ethically sourced materials to a place where it was a way of being with children that accepted the observable loose materials, such as leaves, sticks and stones, and the unobservable phenomena that occurs when we feel emotionally connected to a place. In Chapter 5, we share how these went on to influence the 13 core principles of this nature pedagogy.

Given that not everyone lives in a place that they are from or wish to be in, we need to consider the practical challenges of access to the natural world and the impact of poverty on accessibility. Trees are often presented as icons to symbolise the work of both hereditary, linear connections and the value of the



**Figure 1.4** Perspectives are affected by poverty



natural world. There are, however, different views on that symbolism. Linear relationships may be a Western concept, and as discussed in Chapter 3, constitute one of several perspectives. A tree is full of play affordance (Nicholson, 1977) – it provides loose parts such as leaves and sticks. However, poverty changes our view of the tree, and we need to ask ourselves whether all children in the world view the natural world as full of wonder, or rather view it as a means of survival.

In some models of early education, the development of skills such as lighting fires or foraging is integrated into the programme. Although enjoyable, they are rather tokenistic compared to those experiences of children in parts of the world who need them for survival.

Poverty doesn't reside in one country; it resides in some form in all of them. Consider the experiences of children in incarceration, not only within a prison system, but in outdoor spaces that are sterile and unstimulating. Spare a moment to adopt the view of a child in war-torn environments when going outside can be about life and death. Every child on the planet has the right to play outside in the natural world, and until that goal is met, we all need to be advocates of a relational way of working.

Although much research supports the increase in the benefits of being outside under the sky, just looking at the natural world in a vicarious way inside can also be of benefit. In a study, Brown et al. (2013) showed images of more plant- and animal-based nature and images of urban spaces, and found that by viewing nature scenes there was a positive effect on the recovery of automatic function following acute mental stress.

This pedagogy offers a way of caring and teaching that supports human flourishing and acknowledges our relationship with the rest of the natural world. It is suggested that ecological sustainability is caught as well as taught (Miller and Spoolman, 2013; Schmitz and Willott, 2002), but perhaps ecological sustainability is a re-awakening of our own thinking (rather than caught from someone else). This happens through the day-to-day moments that emerge from a settings ethos or culture, which needs to be a conscious decision.

Nature pedagogies need to be an element of the way forward to sustaining the human population into the 21st century. Understanding the interrelationship between humans and the planet has never been clearer than now; however, the development of a sense of agency, empowerment and activism can be diverted or even suppressed through how children are educated.

We can all make a difference in the small choices we make every day; we can all make wise, ecocentric choices. If we can combine a cultural shift with the support for strategic sustainability goals, there will be an impact on us and the planet on which we live. Including the care and education of children in the solution acknowledges that we can help children and families care for and





respect the other elements of the natural world. It can also go further than this in that it can create a culture of agency and activism to do something, to take action rather than embrace apathy.

Reframing our thinking through the transformation of education is within reach of all of us. We have learned *about* nature for centuries, studying it as if it sits aside from us as humans; we learn *in* it by going outside into it, but perhaps we need to really focus on making decisions *for* the natural world. In order to do that, I suggest that we need to learn *with* it so that we begin to understand our interrelationship. After all, how can we truly understand the melting of a glacier if we haven't felt the coldness of ice in our hands? When you feel the effect of heat on ice and see it melting away before your eyes, you have a deep-level awareness and understanding of your impact that you can build on in the future. Children exploring the elements of earth, fire, water and air provide myriad moments every day that will offer them the chance to know and love the natural world, and in turn, feel the agency to make a difference.

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## CONSIDER

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How are the aspects of your practice connected into a defined pedagogy?

What has influenced your thinking as a professional?

What are the ways that you could become more active in helping colleagues become aware of the need for ecocentric practices?

---

## Understanding the issues that we face as global professionals

The 2020 pandemic has made a difference to societies around the world, as people had a glimpse of what could be – large cities with no pollution, animals back in parkland and the value of our freedom to be outside with people we care for. An opportunity for transformation is possible through a societal shift, or what Caputo (1987) refers to as a rift in thinking. When we embrace times of disequilibrium and disharmony, they urge us to see formally unseen patterns, connections or aspects of our work that we are unaware of. This is an opportunity for rapid human change across the planet that has never been experienced before in history.

Education is situated and influenced by a number of factors such as law, politics, culture and economics (Warden, 2015). All of the work we do as advocates for children's rights is set within a period of time, so that we build on the work that has been done before and leave a legacy that can be built on



into the future. The direction we take in our pedagogy therefore has a multi-generational impact.

Within the context that we work, there are several aspects of success in relation to the national policy here in Scotland. The drive began over 30 years ago with individual campaigners, which then moved into starting up independent settings such as Auchlone Nature Kindergarten so that people could visit and feel a more immersive model in practice. Now, outdoor play and education for sustainability is embedded in national policy, the quality inspection process, and supports value-based models practice with children and families. It is acknowledged as important from government to educators. However, there is still a journey to take as we move away from the learning in and about the natural world to learning with and ultimately for it. There is always space to build up professional agency through skill development and knowledge of the natural world *and* how to be in it with children.

We have more visual awareness of the diversity of animals and plants on the Earth, but we appear to lack the foundational knowledge of their role in the ecosystem, their name or their requirements for habitat.

This media-driven awareness has brought together inspirational groups of young people who want to make a difference; however, the tension is that the knowledge we gather is not through direct experience or engagement in real world learning, 'this knowledge is rather rigid and full of erroneous interpretation and models' (Rickinson, 2001: 220). In early education, this means that we need to give time to understanding and acquiring knowledge of the natural world for ourselves, but also how to be sensitive to the invitations to engage that it affords children.

Having the responsibility of being the guide or facilitator, we carry both the role of holder of memories and also the person who makes the links and connections to the motivations of children. These are some of the skills within nature pedagogy. They are explored further in Chapter 7 in the implications for practice.

Western understanding and presentation of the issues have dominated the media and our perception of the issues. In an equitable world, everyone has a right to be heard and many conversations we have around sustainability would be more respectful and culturally sensitive if they were with Indigenous elders, researchers and authors.

As professionals across the world, we encounter the natural world in a wide variety of ways. In conversation with colleagues in the leadership team of the Nature Action Collaborative for Children (NACC) of the World Forum, we spoke of the bias of only having a single viewpoint, conveying a single story and how we can achieve so much more as a global collaborative.

Raed from Jordan writes:





We still face a lack of environmental education programs targeting children at an early age. I believe this work on nature pedagogy will highlight the practical experience for children connecting children with nature in parallel with the theoretical part of child development. It is important today to help the children learn with enjoyment and understand the value of nature wherever they are in the world.  
(Personal communication, 2021)

This is just one voice and perspective from millions around the world. Each has value and enriches our work so that we consider our professional collective impact.

This chapter is the foundation for this book through stating why we need to change the way we work with children from merely being outside to developing our skills and knowledge in the field of nature pedagogy. The rest of the book will take a series of key points in turn and explore them in more detail to give practical advice on how to develop nature pedagogy and use it every day. The next chapter starts this process by exploring a definition of nature pedagogy and explores how this pedagogy creates a value-based framework for the way that we live and work with young children.



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## SUMMARY

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- There is an urgent need to create balance between human need and the rest of the planet.
  - Human perception of the natural world can be affected by their current and past experiences.
  - A sustainable approach to education and care needs to include *how* we integrate nature into our pedagogy.
  - Everyone can make a difference - small everyday choices and national strategic goals will both have an impact.
- 

