

When Learning Comes Naturally

A Guide for Parents and Teachers



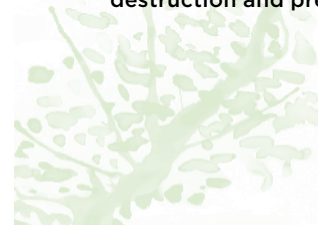


WHEN DOES LEARNING COME NATURALLY?

Learning comes naturally when children are thoroughly engaged in the process, and there is nothing more engaging for children than outdoor places. Just as most infants and toddlers need to be given only space, exposure, and opportunity to master basic skills like walking and talking, so too older children supply their own motivation to learn when conditions are right. In the outdoors, children's natural curiosity is activated. Each sense is stimulated, and living things, processes of change, and mysteries to be solved are all around. As a result, learning of many kinds unfolds with ease in the moment, and with a spontaneous excitement about creative exploration that can resonate for a lifetime.

Meaningful Engagement

Children learn best when what they are learning has relevance to their own interests and concerns. Although what fascinates a preschooler is quite different from what fascinates an eighth grader, outdoor places retain young people's interest throughout childhood. For younger children, experiential learning through direct contact with situations and things is a primary mode of inquiry. The natural world—filled with plants, animals, mud, dirt, sand, trees, leaves, and rocks that children can handle and use—offers unending opportunity for just the kinds of hands-on exploration that are most meaningful. Over time, children become increasingly ready to complement experiential learning with more abstract ideas. At these later stages, they move beyond the natural world directly in front of them and explore more distant phenomena such as global warming, renewable energy, or destruction and preservation of natural habitats.



A Sense of Place

Think back to when you were a child. Did you have a favorite outdoor spot to play—a tree, a stream, a rocky crevice, a vacant lot? Did you have a special place to hide, where you could watch without being seen and let your imagination run free? Our own childhood experiences



remind us how important it is for all children in all environments—urban, suburban, and rural—to create an intimate connection with the physical places in which their lives unfold. Nature programs on television are no substitute for regularly spending time

enjoying, playing in, and investigating the multidimensional environment surrounding one's own home or school. As one natural historian, Gary Paul Nabhan, has said, "... A few intimate places mean more to ... children, and to others, than all the glorious panoramas I could ever show them." By getting to know a single place well, children begin to truly experience the natural world and thus to develop an affection for it, and, eventually, a sense of responsibility for it.

From Apprehension to Fascination

Although children are drawn to the natural world, some will be fearful or squeamish, at first, about close contact with unfamiliar smells, sights, sounds, or textures. Sustained and repeated exposure, along with gentle encouragement, is all that most children need to work beyond this "biophobia" so they can experience the excitement and variety of nature first hand. A second grader first experimenting with dirt in her school garden might be frightened by the earthworm she finds there, but with careful adult support her apprehension may soon melt into fascination as she decides to hold the worm, examine it closely, and assign her new friend its very own name. Her ability to take this step offers her opportunities for scientific discovery, a whole new set of tactile experiences, the satisfaction of overcoming her own fear, and a gateway to association with other species who share the biosphere of which she is a part and for which she can become a devoted steward.



What Counts as "Natural"?

We most readily envision nature as a vast forest, a virgin stream, a majestic mountain, or a long stretch of desert. Indeed, certain kinds of learning and transformative experience do derive specifically from time spent in these areas of true wilderness. However, children are good at reminding us that nature is fully present anywhere that there is growth, life, and just a bit of disorder. The natural world can thus be found in the appealing chaos of a vacant lot as well as in a forest glade, in a modest urban garden or park as well as in an open prairie. Understood this way, the natural world is close to home and available to all children regardless of geographic location or socioeconomic status.

Time to Think and Dream

Certainly the outdoors is a place for discovery and excitement, but it also invites contemplation and reflection. Children often need quiet and a bit of solitude to integrate the jumble of experiences everyday life presents. In the expansiveness of the outdoors, they can find their own special places to think and to dream. And in the process of observing the many kinds of life around them—birds, animals, insects, plants, fish—they can find a meditative counter balance both to their own intense activity and to the passivity of their relation to most forms of electronic media. Neuroscience has demonstrated that the human brain requires periods of quiet relaxation to function optimally, and that creativity flowers when attention is turned inward and intentional cognitive function is at rest.



An Invitation to Explore

Indoors or outdoors, the more varied an environment is, the more possibilities it will hold for children. A small patch of woods in the neighborhood or near the school building, with its nooks, crannies, and accumulated detritus of dead and living things, is more inviting for the young adventurer than the flat expanse of a manicured field. A stream, river, canyon, ocean, gully, hillside, or mesa awakens children's inventiveness more thoroughly than a concrete schoolyard. An "adventure playground," "wild zone," or vacant lot, full



of things with which to build and with constantly changing elements, inspires children to discover, experiment, and—in the words of one third grader—find endless "areas you can have a secret club in or something." These open-ended characteristics of the natural world excite very rich kinds of play, and invite children to use their own ingenuity in ways that are an important alternative to playing with manufactured toys that require them only to push buttons or follow pre-set rules. The natural world also offers room to run, irresistible opportunities to climb, and uneven terrain to be negotiated. Most children need no coaxing or coaching to spend time outside; all they need is time, playmates, and permission from adults to explore what their bodies can do.

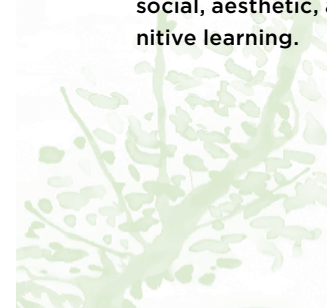
AT SCHOOL WITH NATURE

Schools and teachers play a critical role in connecting children with their environments. When there is enthusiasm from teachers and support from school administrators, environmental education is a classic "win-win" proposition. Children are motivated, joyful learners when outdoors, or when engaged indoors with plants, animals, or natural artifacts. At the same time, the natural world offers endless opportunities for curricular innovation, cross-disciplinary learning, and sustained inquiry. Children's enthusiastic discoveries on school grounds, or during field trips to forest, river, or desert, quickly become fodder for a wide range of classroom lessons: on the life cycle, the classification of objects, the use of metaphors in poetry, the history of local land use decisions.

Building on Outdoor Experiences

Experiential learning comes naturally to children as they use their senses to explore outdoors and use their imaginations to create stories about and explanations for what they have seen, heard, touched, manipulated, and examined. Teachers can help transform children's outdoor experiences from a transitory moment in their lives to a bedrock of knowledge and an inspiration for lifelong inquiry. Ways to do this include:

- Inviting children to share their experiences outdoors with others—both by engaging in group exploration and by discussing with other people what happened and what was discovered.
- Giving children the opportunity to reflect on their own about experiences they have had outside. Allow them time to think about what just happened to them and to process and record it in a developmentally appropriate way—perhaps in a drawing, poem, essay, science experiment, or piece of creative writing. Representing something is an important way of coming to know it, of preserving it for oneself, and of communicating about it with others.
- Asking children to connect environmental experiences to one another, in order to begin seeing a larger whole. Mapmaking is a wonderful method of linking together disparate pieces and understanding how they relate. When children map, they order their experiences, link the real world to an abstract representation, and prepare for understanding other kinds of pictorial symbols such as graphs. Because maps of well-known places such as one's own street, yard, or favorite park really matter to children, creating them can powerfully integrate emotional, social, aesthetic, and cognitive learning.





Children as Teachers

In the open-ended environment of the natural world, many questions have no single correct answer. When children observe or investigate outdoors, what they discover is often a delightful surprise not just to themselves, but also to their teachers. Children's closer proximity to the ground, their ability to squeeze into small spaces, and their physical agility afford them unique vantage points. Their freedom from assumptions about what they might see or hear often leads them to creative hypotheses and fresh insights. Outdoors, classroom roles can more easily be reversed, and children can become the teachers for a little while. As one first/second grade teacher exclaimed, out in the garden "the children see things I would never see." By observing and listening to children, teachers, too, make new discoveries in the natural world. By following the interest children show in the world around them, whether in a set of animal footprints outside, the kinds of fish found in a nearby river, or development plans for a nearby plot of untamed land, teachers can also flexibly design ongoing curricular experiences that follow students' curiosity, passion, and commitment.

Suggestions for Teachers: Fold Environmental Education into the Curriculum

Plant a School Garden: Fertile Soil for Children

Gardens are relatively easy to create in almost any setting. Plants can be grown in indoor pots and containers of all kinds as well as in outdoor plots on school grounds or in the community. Children of all ages can participate in gardening activities, and lessons from the garden can extend not only into the science curriculum, but also into (to name just a few) an understanding of math concepts; discussions about human health and food; investigation of the historical use of local land for crops; drawing plants or using them to create dyes or collages; and close readings of stories and books about gardens. Gardening with children also contextualizes for them how things change over time, and thus teaches them about life cycles, purpose beyond the moment, and the valuable skill of planning ahead.



Arrange for Field Trips: Beyond School Grounds

When you take children off school grounds, consider exposing them to features of the natural world nearby. Most communities have a nature center, garden, park area, sandy stretch, or other bit of nature in close proximity. Find out what is near your school, and take your class into the field. Tap into local community institutions and learn what they might have to offer you and your students.

Engage Parents: *Your Child Spends Recess with a Tree*

Parents may need some help from you to understand why their children are spending time outdoors while at school and what is valuable about these experiences. Try incorporating discussion of children's relationship with nature into parent-teacher conferences. Let parents know if their child connects with trees, school pets, or other living things that populate the school community, and talk about how their child's relationships with plants and animals relates to other parts of his or her learning and participation at school. Talk about the importance of environmental education at back-to-school night, and carefully explain the developmental and cognitive benefits it provides.



Walk the Walk: *Sustainability Practices and Curriculum*

Get your class involved in greening practices such as regular clean-ups around the school environs, composting, or recycling. Children are powerfully influenced by what is modeled around them, and strongly motivated to take part in communal action when teachers effectively convey the message that their participation is vital and valued. As environmental educator David Sobel notes: "... We've been spending way too much time focusing on conveying environmental knowledge and way too little time on developing environmental behaviors. In addition, in most schools, we've got a situation of 'Do as we say, not as we do.' We disseminate knowledge about how environmental systems work but we don't design schools to be models of sustainable systems. And as we know, actions speak louder than words."

AT HOME WITH NATURE

School is by no means the only setting where children can experience the natural world. With imagination, commitment, and courage, parents and caregivers can facilitate children's connection with the environment in myriad ways—often facilitating stronger adult/child relationships in the process.

Giving Children Time

In contemporary society, children's lives often become as highly scheduled as the lives of hard-working adults. But adults can create pauses in that fast pace and give children what may be the greatest of all gifts: unstructured time outside. As Sobel notes, it is imperative that we allow children "... moments of unscheduled outdoor time when unexpected bits of life can unfold."

Letting Them Go Out on a Limb

Children's safety is of paramount importance to adults, as well it should be. But in our increasingly safety-conscious society, it can be easy to forget that bold experiments and physical limit-testing are healthy, normal, and necessary aspects of child development. When children jump off a tree stump, they are learning how to land safely and what "height" really means. When they walk the length of a fallen branch, one foot carefully placed just in front of the other, they are testing their balance. When they climb to a semi-hidden space in the underbrush, they are learning how much space they occupy and what it means to be alone. We need to trust children's desire to move and explore, while simultaneously safeguarding them from serious harm.





Suggestions for Parents: **Nurture Children's Connection to Nature**

Turn Families Inside Out

Children should have time to play and explore outside every day, if possible. Allow and encourage children to use your street, courtyard, yard, or nearby park creatively and often. Children will benefit greatly from time outdoors alone, or with siblings and friends. They will also benefit from time spent in the natural world with caring adults—so be sure to accompany even older children on outdoor adventures from time to time.

Grow Together

Children can grow a wide array of plants, including both flowers and vegetables, at home as well as at school. If you live in an urban environment, use a few seeds and a pot to get started, right on your windowsill or fire escape. Share with your child the work, the joy, and the process of watching the plants grow.

Create Imaginary Scenes and Places

The natural world offers endless opportunities for children to develop their imagination through pretend play. A place in the woods is readily transformed when children pretend to be adventurers in a foreign land. Sand castles can become entire miniature worlds. In both “life sized” and “miniature world” play, children draw on the resources of the environment to represent their ideas. In this process, they develop these ideas and come to see and appreciate myriad aspects of their surroundings. Elaborate equipment and props are not necessary—simply provide access to the environment and the freedom to explore.

Engage Schools and Teachers

My Child Spends All Day at Home in a Tree

Let your child's teachers know how highly you value both environmental education and also unstructured time outdoors during the day (e.g., recess; school lunch). Discuss your child's relationship with nature in parent-teacher conferences, letting teachers know how your child connects with trees, pets, and other living things in and around your home.

LEARNING FOR NATURE'S SAKE

Connections between children and nature foster not just intellectual, social, emotional, and creative growth, but also—in the longer run—moral development. The child who overcomes her anxiety about touching a worm and gives it a name has become attached to that worm. She is interested in the environment that sustains its life not only for scientific reasons, but also for personal ones: she knows this worm, and wants it to survive.

Adults who are concerned about environmental problems often worry about the impact of these problems on the children of today. They can also be anxious to teach young people to take responsibility for addressing a range of pressing issues such as global warming, habitat destruction, and pollution of the world's oceans. But before our children can become stewards for and protectors of the natural world, they must first come to love it. To quote David Sobel once more: “Authentic environmental commitment emerges out of firsthand experiences with real places on a small manageable scale.”

Children's awareness of environmental issues should increase over time, in ways that are developmentally appropriate. In schools this may mean, for example, starting with school beautification and gardening in the early grades, graduating to grounds maintenance, composting, and recycling by the later elementary school grades, and holding off on more direct investigation of issues like climate change and rainforest destruction until middle school. If we ask children to consider complex and seemingly intractable environmental issues before they are ready, we risk scaring them into fear and inaction.

Connecting children to the natural world from an early age through frequent, joyful experiences is the best way to assure that they will—as one eighth grader in California confidently put it—be part of taking care of the world we all share. This is surely among the most valuable lessons our children can learn.



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