

Learning is in **BLOOM**

Cultivating Outdoor
Explorations

Ruth Wilson, PhD



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To all the soul-making aspects of nature

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Preface

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This book is about connecting young children with nature, and it provides the what, why, and how of doing so. Readers will find the forty hands-on activities effective in engaging young children in investigating nature, both indoors and outdoors, on the school grounds and on excursions around the neighborhood. While fostering a love of nature is a major goal, the activities also promote all areas of early childhood education and development.

Young children need frequent positive experiences with nature for their holistic development and for becoming environmentally literate individuals. Connecting young children with nature should focus more on fostering a sense of wonder than on teaching facts, more about promoting desired dispositions than on meeting academic benchmarks or achieving standards-based competencies. Yet, the academic areas are not ignored. This book addresses science, math, literacy, and the arts through activities as varied as experimenting with seeds in sand, making a name plate using natural materials, and comparing the size of leaves using informal measurement strategies. This book also offers suggestions on how to include children with special needs and how to deal with children's fears. The guidelines provided help teachers see how to connect children with nature in both developmentally and environmentally appropriate ways. The activities promote empathy, caring, scientific and philosophical inquiry, self-motivation, and independence. Additional topics addressed include nature play, natural play spaces, nature as an integrating context, ecological identity, and environmental literacy.

Acknowledgments



Many people have contributed directly and indirectly to the development of this book. There's no way to list them all, but I would like to recognize the colleagues with whom I've shared ideas, the friends and family who cheered me on, the students with whom I've worked, and the young children who remind me daily of what it means to live with wonder. To all of you, I am grateful.

I would also like to thank several individuals who contributed directly to this book. Gwendolyn Johnson, math educator at the University of North Texas, developed all the math activities for this book and contributed a discussion on how nature can be used as a resource in promoting mathematical thinking in young children.

Susan Talbott Guiteras, a supervisory wildlife biologist with the U.S. Fish and Wildlife Service, contributed sections of her ecological autobiography.

For these impressive contributions, I am truly grateful. Your tangible contributions and your ongoing support make this book so much more than I could have developed on my own.

Introduction

My childhood was filled with many rich nature-related experiences. I explored streams, woods, and fields on the farm where we lived. I picked tomatoes, planted peas, and fed the chickens. I made corncob dolls and wooden boats. By the time I became a parent and an educator, not many children were spending their time actively engaged with nature. I found this troublesome.

I taught at Bowling Green State University in Ohio in the 1990s. This was before the terms *biophilia*, *nature deficit disorder*, and *the nature principle* were a part of our mainstream vocabulary and before many people were concerned about the “denaturing” of childhood. I worked with the department of special education, where my primary focus was on preparing teachers to work with young children with special needs.

The integration of young children with special needs into regular education settings was gaining momentum at the time. While the fields of early childhood education and special education were once considered incompatible because of differing philosophies and strategies, new thinking called for an integration of these two disciplines. This new thinking was based on the understanding that a young child with special needs was a young child first and that the disability was just another aspect of the individuality of the child.

This understanding led me to other insights about young children and what they need to thrive. I knew that nature had nurtured me during my childhood years and had motivated me to explore and experiment. I was concerned that, without close connections with nature, children would be missing out on something important to their development and well-being. I decided to make connecting young children with nature an integral part of my professional work.

I worked with the university’s environmental studies program to write a grant proposal focusing on nature and young children. I then went about finding ways to integrate early childhood education and environmental education. The concept was difficult for some to grasp. I was frequently asked what I thought early childhood

environmental education should teach young children. Some assumed the focus would be on recycling, as sorting materials was something young children could do. Others thought I might try to teach scientific concepts such as the sun being a source of energy and the rainforest as an example of biodiversity. To my delight, I received funding for the project, which launched me onto a whole new path as an educator and writer.

Today, the movement to connect young children with nature continues to grow. We now have some excellent resources and guidelines to help us explain the what and the why of early childhood environmental education. Guidelines, however, aren't enough. We also need the how—and that's what this book is all about. Connecting children with nature includes environmental education, but it's more comprehensive than that. Working to connect children with nature includes the emotional aspects of ecological identity. Open-ended exploration and wondering connect children with nature through positive hands-on experiences.

For young children, nature isn't a topic or subject—it's the world in which they live, learn, and play. It's the milieu or environment in which they can become whole. Becoming whole includes developing an ecological identity that has emotional, spiritual, and aesthetic components. Children's emerging ecological identity allows them to see themselves as a part of the natural world, not separate from it. They also grow in appreciation of nature, not only as a resource to meet our basic survival needs, but also as a wellspring of beauty and wonder that enriches our lives in countless ways.

Young children are curious, inquisitive, imaginative, and eager to learn. Nature is their world, their natural habitat, a place where they can grow in holistic and authentic ways. It is my hope that the ideas and suggestions offered in this book will provide the inspiration and guidance you need to embark on the privilege of immersing children in the wonders of the natural world. The benefits of doing so are far reaching. By strengthening connections between children and nature, you will be fostering their development; promoting love, respect, and appreciation of the natural world; and contributing to the development of a more sustainable and peaceful society.



1



Connecting Children with the Rhythm of Nature

Nature and Children

If we made a list of what children need during their early childhood years, we would certainly include such things as food, shelter, water, and air. We know that young children also need love, security, a sense of belonging, and the freedom to explore. What's sometimes overlooked is children's need for direct contact with nature.

The benefits of connecting children with nature are evident in every area of child development. Nature helps children grow intellectually, emotionally, socially, spiritually, and physically. A review of the professional literature by Andrea Taylor and Frances Kuo indicates that children who spend time in nature are more creative, less stressed, better able to concentrate, physically more active, and interact more positively with others. This same review indicates that time in nature also reduces symptoms of attention deficit disorder, improves problem-solving and observational skills, and fosters a sense of wonder. Additionally, time in nature promotes conservation attitudes and a child's developing ecological identity—the way we see ourselves in relation to the natural world. This is important because how we view our relationship with nature makes a difference in how we act, what we value, and even in our sense of well-being. Most of us know that nature fosters inspiration, enchantment, and a sense of wonder because we've experienced it. While hard to measure, these benefits add to the holistic development of children and their experience of being alive.

When we think of rhythm, we often think of music—primarily in terms of tempo, flow, or pattern—but other aspects of life have rhythm as well. There's a rhythm to our day, to the way we walk and talk, eat and sleep, and even to how our bodies function without much conscious thought. Nature also has a rhythm. We see and

feel this in the ebb and flow of tides, the migration of birds and butterflies, seasonal cycles, and the way dawn comes after night. There's a rhythm in the way plants sprout from seeds, gradually mature, and eventually produce more seeds. There's also a rhythm in the way all living things come into this world, grow, and then eventually die. Everything in nature is connected in some way. Helping children become more aware of nature's rhythms and connections will foster their sense of wonder and deepen their interest in the natural world.

In her book *The Sense of Wonder*, Rachel Carson, a highly-respected author and scientist, describes a child's world as "fresh and new and beautiful, full of wonder and excitement." A part of our job in working with young children is to recognize and honor their unique experience of the world. If you watch children as they play and explore, you'll see that they have a rhythm of their own. Children can experience the world as fresh and new and beautiful because their focus is on the here and now—the present moment with all its wonders and possibilities. Adults, on the other hand, tend to get caught up in the pressures of time and the need to get things done. We also have a tendency to take the wonders of nature for granted and to spend very little time just contemplating the expansiveness of the sky or the unfolding of a flower.

Rachel Carson wrote about this concern. "It is our misfortune," she says in *The Sense of Wonder*, "that for most of us that clear-eyed vision, that true instinct for what is beautiful and awe-inspiring, is dimmed and even lost before we reach adulthood." We can help children enjoy their own unique and precious way of knowing the world by moving to their rhythm and trying to see through their eyes.

There's a certain magical thinking in the way young children know the world. We can honor this way of knowing by not contradicting or correcting children when they tell us that a tree can talk or that a stone can think and feel. A child perceiving or imagining the world as being full of wonder reflects an understanding of the essence of things which we, as adults, may no longer recognize. Rachel Carson talks about children's "clear-eyed vision" and their "true instinct" for what is beautiful and awe-inspiring. She urges us, as adults, to "take time to listen and talk about the voices of the earth and what they mean."

When we think of people who are wise, elders probably come to mind more often than young children do; yet, young children can display a great deal of wisdom.

Howard Gardner, author of *Frames of Mind: The Theory of Multiple Intelligences*, suggests existential intelligence as a way of knowing the world. This type of intelligence, he says, leads us to ask questions about the meaning of existence. Even young children ask such questions. You may have heard children ask “Why do people have to die?” “Where did the first seed come from?” or “Can anything be exactly perfect?” You don’t have to be concerned about having the right answers to these questions. In fact, it’s probably best to not answer the questions at all. Far better, join the child in wondering about the mysteries of life. Wisdom is often expressed in the questions we ask as much as in the answers we give. Following are some suggestions on how to honor and support the wisdom of children:

- Really listen to children, and give them the time and support they need to express their thoughts. Avoid telling them what you think they should be saying or thinking.
- Really talk with children. Children know the difference between being quizzed, redirected, or patronized, and being taken seriously for what they have to offer.
- Encourage wondering questions. You might start by saying something such as, “I sometimes wonder why birds sing. Do they sing because they’re happy?” You might then ask, “What do you wonder about?”



- Encourage children to share their ideas in poetic and imaginative expressions. Such expressions might include song, dance, drawings, sculptures, and paintings.

Howard Gardner's theory of multiple intelligences originally suggested seven distinct types of intelligence: logical-mathematical, visual-spatial, musical, interpersonal, intrapersonal, bodily-kinesthetic, and linguistic. In addition to suggesting an existential intelligence, in *Intelligence Reframed: Multiple Intelligences for the 21st Century*, Gardner also proposes the naturalistic intelligence. People with a high naturalistic intelligence tend to be more in tune with nature and are interested in exploring the natural world. They are also more likely to notice patterns and connections in the natural world.

Indications of high naturalistic intelligence in young children include an interest in caring for plants and animals and a tendency to notice similarities and differences in elements of the natural world. They usually enjoy exploring natural areas and collecting materials such as rocks, shells, and seeds.

Everyone has each type of intelligence to varying degrees. Culture, experience, and what children have at birth all play a role in how each type of intelligence develops. For the naturalistic intelligence to flourish, children need frequent, stimulating



experiences with the natural world. We can provide such experiences by giving children opportunities to manipulate and collect a variety of natural materials, encouraging them to closely observe different types of plants and animals, and engaging them in gardening and exploring natural environments.

The term *sustainability* refers to how living systems remain healthy over time. Sustainable systems are critical to the well-being of the entire Earth and every living thing. Connecting children with nature is important for developing an understanding and appreciation of how we all depend on a sustainable natural world for survival. This doesn't mean that we should tell young children to save the Earth. In fact, we should not. Children did not cause the environmental problems we now face, nor are they in a position to "fix it." We do, however, want to plant the seeds of sustainability by helping children care about the environment. Children will care if they become familiar with the wonders of the natural world and understand that Earth is where we live. It is our home.

Connecting children with nature is a win-win situation in that it's good for children and good for Earth. It fosters children's holistic development, and it plants the seeds of understanding and caring for the natural world. Efforts to connect young children with nature are sometimes referred to as *early childhood environmental education* (ECEE). This designation may suggest that connecting children with nature is more about teaching than about experiencing or exploring, more about knowing than feeling, more about stewardship than enjoyment. This is not the case; ECEE is about all of the above.

The North American Association for Environmental Education (NAAEE) defines ECEE as "a holistic concept that encompasses knowledge of the natural world as well as emotions, dispositions, and skills." Following are selected desired outcomes in each of these areas:

- **Knowledge**

- Understanding that people depend on the natural world for survival, that the resources for what we eat, drink, breathe, and wear come from nature
- Awareness that what people do affects nature
- Awareness that nature is a part of both our local and global environment

- Understanding that everything in nature is interconnected and constantly changing
- Understanding that all living things have basic survival needs
- **Emotions**
 - Sense of wonder
 - Enjoyment of the aesthetic and sensory aspects of nature
 - Sense of excitement and inventiveness while exploring the natural world
 - Dispositions
 - Intellectual curiosity about nature
 - Seeing oneself as a part of nature
 - Sensitivity to the beauty and diversity of the natural world
 - Self-motivation to explore the natural world
 - Sense of caring and respect for nature
 - Willingness to actively explore the natural world
- **Skills**
 - Observing—using the senses to gather information
 - Comparing—identifying similarities and differences in different aspects of the natural world
 - Classifying—grouping and sorting natural objects and phenomena according to properties
 - Measuring—making quantitative descriptions of natural objects and phenomena
 - Communicating—conveying ideas and descriptions orally, in written form such as words or drawings, and/or in three-dimensional representations such as sculptures

- Inferring—making judgments about the natural world based on observation; finding more meaning from a situation than can be directly observed
- Predicting—making reasonable guesses about the ways of the natural world based on observation, prior knowledge, and experience

The Current Disconnect

Perhaps we were fortunate enough to have known the world as a place of wonder during our own childhood years because we had opportunities to explore a nearby wood, watch hummingbirds and butterflies move from flower to flower in our backyards, and pick tomatoes or dig carrots in our families' gardens. Unfortunately, such opportunities are far less available to children today than they were for children of previous generations. This is due, in part, to the loss of access to natural areas in our neighborhoods and to the increase in the amount of time adults and children spend engaged with electronic media. The results are quite troubling.

Richard Louv, in his widely popular book *The Last Child in the Woods*, introduces the phrase *nature deficit disorder* as a description of the human costs of separation from



nature. These costs are especially noticeable in children and can include academic, developmental, and behavioral concerns. A growing body of research, as reported by Louv in his book, indicates that children's separation from nature contributes to attention difficulties, diminished use of the senses, obesity, depression, and higher rates of physical and emotional illnesses.

Separation from nature also interferes with developing an understanding of and love for the natural world. For children and adults alike, this can become a barrier to a healthy ecological identity and a commitment to caring for the environment.

Some children growing up without close connections with the natural environment also develop unfounded fears and prejudices against the world of nature. For some, this takes the form of not wanting to get dirty or wet or cold. For others, this means being afraid of living things such as white-tailed deer and butterflies. Unfounded fears and prejudices against nature are real barriers to understanding and appreciating the natural environment. In fact, fears and prejudices can lead to violence against nature and may be expressed in such actions as killing harmless snakes and trying to eradicate bees from a yard.

Several years ago, a group of four- and five-year-olds were interviewed to get an idea of what they thought and how they felt about nature. These interviews were conducted individually so that their responses would not influence each other. Following are some of the questions and typical answers from these interviews. In analyzing the children's responses, it's important to consider the age of the children and that what they say may not be what they would necessarily do. Some expressions of violence, for example, may reflect fear of the unfamiliar rather than a desire to harm.



Question: Where could you find wildlife?

Answers:

At the zoo

In the rainforest

I don't know.

Question: What would you do if you were close to a butterfly?

Answers:

Catch it

Hold it in my hand

Put it in a jar

Kill it

Smash it

Question: Do you like wolves?

Answers:

No, they would kill you.

They huff and puff and blow your house down.

They're mean.

Question: Where do you think we should put our trash?

Answers:

At the end of the street

In the trash can

I don't know.

Question: Do you think you should help save the Earth?

Answers:

My dad said we should recycle.

I guess so.

I don't even know what the Earth is.



Many more children now live in urban areas than at any other time in our history. Until recently, many urban planners gave little thought to the need for children's access to nearby nature. While some children living in urban areas have access to city parks, these play areas often include more concrete and equipment than nature. The result is that many children today have very limited opportunities for direct experiences with the natural world.

"Will there still be snow when I grow up?" "Why can't we swim in the lake?" "Do all animals live in the zoo?" These real questions asked by children indicate that our world is changing in dramatic ways and that children today are growing up in a world far more toxic and unstable than any other generation has experienced. We're now faced with an alarming extinction of species; but for children, there's also an extinction of experience.

Robert Michael Pyle, author and internationally known expert on butterflies, first introduced the term *extinction of experience* in his book *The Thunder Tree*. Pyle was referring primarily to how the loss of species in our own neighborhoods lessens our experience of nature. Once elements of nature disappear from our own personal world, our sense of connections to the natural world is also diminished. This is true for many children today and, as a result, holistic child development and the future of our natural world are at risk. The extinction of experience, Pyle explains, will ultimately lead to a lack of concern for the world of nature. This, in turn, will lead to further destruction of the natural world.

There's certainly little doubt that the introduction of television, computers, and video games into children's lives has greatly reduced the amount of time children spend outdoors. While data vary on the amount of time preschoolers spend with electronic media, there's little doubt that screen time is replacing time outdoors for many children. The result is a troubling divide between children and the world of nature. Screen time itself isn't necessarily harmful for children. The concern is about the misuse and overuse of technology. What we should strive for is a healthy balance between screen time and more hands-on nature-related activities. This balance, unfortunately, seems to be moving in an unhealthy direction.

Children's Rights

Children have basic rights, including the right to live and play in an environment that stimulates their healthy development. These rights are spelled out in a document adopted by the United Nations General Assembly in 1989, the *Convention on the Rights of the Child* (CRC). The United States and Somalia are the only two countries in the UN that have not yet ratified this important international agreement.

The CRC lists the universally accepted rights for children and calls on all nations to protect and enhance these basic rights through their policies, programs, and services. Some of the basic rights included are the right to freedom of expression, the right to be protected from exploitation, and the right to an education. As expressed in the CRC, the education of the child should include helping children develop to their fullest potential and develop respect for the natural environment. The CRC also includes a statement about children's right to play.

Within the last several years, there has been a growing recognition of another basic right that some are saying should be added to the CRC: the right of children to connect with nature. The International Union for the Conservation of Nature is one organization promoting official recognition of this basic right. Their argument is based on a concern about the increasing disconnect between children and nature and the adverse consequences for both healthy child development and responsible stewardship for the natural world. Responsible stewardship is the only way to protect another basic right of children: their right to a healthy future.



Guidelines and Resources

Since the early 1990s, there have been dramatic developments in integrating early childhood education and environmental education. We now have a set of professional guidelines, published by the NAAEE, and multiple resources to guide our efforts in connecting young children with nature in developmentally appropriate ways.

The following suggestions for early childhood environmental education are based on the unique characteristics and needs of young children and are designed for anyone working directly with children in a variety of settings.

- **Provide frequent, positive experiences in natural environments.**

Children's time in nature should be on a daily or almost daily basis and should allow for hands-on exploration. Children learn about nature by interacting with nature, not by hearing about it or watching TV documentaries.

- **Focus on experiencing versus teaching.** While outdoors, it's far better to let children explore and play rather than attend to lessons you may be trying to teach. Children will learn from observing, listening, feeling, pouring, digging, and experimenting. Hands-on experiences with nature have far more teaching power than prepared lessons have.

- **Respect children's fears and follow their interests.** Not all children come to nature with the same background and interests. Some children will be fearful of things they are not familiar with. Others may have been taught that some things in nature can hurt them. These fears should be respected. While a gradual introduction to things they are fearful of can diminish or eliminate children's fears, the process should not be forced. Encourage children's interests, even if what children choose to focus on is of little interest to you or relates to what is unfamiliar to you. For example, a child might be drawn to different kinds of rocks. He especially likes to experiment with how some rocks shatter or crack when hit with another rock. You may not be familiar with the different kinds of rocks and may even feel that pounding rocks has little educational value. You can still support the child's interest by encouraging him to describe what he's doing and discovering and by really listening to what he says. You can also encourage him to share his findings with others, perhaps through displays, drawings, and so on. Be attentive to any questions the child might have about rocks, and help him find answers to his questions.
- **Model interest in and caring for the natural environment.** Young children learn from nature by interacting with it—no direct teaching needed. We have a role to play, however, in helping children learn to relate to nature in respectful and caring ways. Many children enjoy looking for and catching a variety of critters. They delight in finding bugs under rocks or logs and netting minnows and tadpoles from streams and ponds. An important lesson for children to learn from these activities is that living creatures should be treated with respect. If we catch a critter, we should return it to its home after we've had a chance to observe it for a short period of time.
- **Avoid telling young children to save the Earth.** While we want children to love nature and respect the Earth, saving an environment in crisis is not a burden we should put on young children. Asking children to save the Earth is, in a sense, asking them to fix something they did not break and to handle something they are not equipped to handle. Even giving children messages about an endangered Earth can have the



opposite effect from what we are trying to accomplish in connecting children with nature. The idea of our planet in danger can instill fear and feelings of helplessness in young children. These feelings actually work against developing a positive relationship with nature.

• **Be sensitive to different family priorities and views about the natural world and our interactions with it.** One of the best ways

to identify the traditions and perspectives of children and their families is to get to know them on a personal level. Invite their ideas about how to include their cultural priorities and goals in your program and activities. It's also important to consider the family's view of nature-related activities for their children. If you know that parents consider worms and bugs off-limits, you should avoid pressuring the child to hold the critters in her hand. You can, however, still foster the child's positive connections with nature by encouraging close observation and helping her understand that all living creatures contribute in some way to the functioning of the whole.

- **Provide child-friendly tools to encourage closer observation and hands-on manipulation of natural materials.** Magnifying glasses are an obvious example of a tool that can be used for closer observation, but many other tools encourage children to look more closely. These include hand-held, nonbreakable mirrors; drop cloths to catch things that fall from trees and bushes; insect-observation containers; clipboards and paper for recording observations; field binoculars; plant and animal identification cards; flashlights; specimen boxes; pretend cameras; and empty picture frames. A picture frame with the backing and glass removed can be used to mark off an inspection area on the ground. Children will be amazed by how many different stones, creatures, and plants can be found inside that small area. Children

can also hold the frame up to frame a picture of something in nature. At a later time, a child may choose to describe or even draw what she captured in the frame. Use questions to invite closer observation: How tall is this plant? Which weighs more—a cup of water or a cup of sand? How far from the tree did the wind blow these seeds? Tools that encourage hands-on manipulation of natural materials include any type of digging tool, rakes, buckets, sifters, sorting trays, plastic cups, and child-size wheelbarrows and wagons.

- **Focus on open-ended activities.** An open-ended activity is an activity that allows for a great deal of freedom in how it is conducted. Stirring found materials such as leaves and flower petals in a bucket of water is an example of an open-ended activity. Coloring a predrawn image of a leaf is an example of a closed activity. Open-ended activities invite imagination and creativity and, at times, require problem-solving skills and persistence.
- **Give children plenty of opportunities to choose their own activities.** Allowing children to choose their own activities is consistent with differing interests and abilities and reflects an understanding of how different children march to different rhythms.
- **Keep it simple and keep it local.** Children don't need a half-acre garden to learn that much of what we eat comes from plants. A little lettuce or a few carrots grown along a fence can give young children rich opportunities for planting, harvesting, and tasting. A single tree in the yard can be almost as instructive as an entire forest for learning concepts related to the seasons or observing how other living things depend on trees for shelter. Keeping it simple also means getting children engaged with nature right outside the door rather than depending on field trips for nature-related experiences. It's important for children to connect with their own place, to become familiar with the unique sights, sounds, smells, and cycles of their immediate environment. Young children can start by walking barefoot in the grass or sand or by burying themselves in a pile of leaves.



Keep It Local

Gardening with children is one way to help them learn about some of the unique characteristics of the place where they live. Gardening requires attention to local weather and climate and an awareness of wildlife in the area that might interfere with growing and harvesting food. Once the food is harvested, children can learn important lessons about reaching out to others in the community by sharing some of what they've grown.

Primary Objective

Children will become more aware of some of the characteristics of their local natural environment. They will also become actively engaged with other people in their community.

Materials

Gardening tools

Planting containers or beds

Potting soil

Seeds or seedlings of fruits and vegetables that will grow in your area

Watering cans or hoses

What You Can Do

1. Identify a suitable place for gardening. You can use raised beds, containers, or ground plots. The important thing is to have good soil and enough light. Talk to the children about what makes a good place for plants to grow well and what time of the year they grow.
2. Choose suitable plants for the local environment. Talk to the children about how some of the food we eat, such as bananas and pineapples, may come from faraway places, while other food is grown closer to where they live. In gardening with children, it's best to choose plants that are easy to grow, have short growing seasons, and are fun to harvest. Plants that work well in many

temperate climates include lettuce, radishes, snow peas, cherry tomatoes, carrots, and potatoes. It's always fun to include some flowers, such as sunflowers, petunias, and zinnias.

3. Involve the children in planting, watering, and harvesting the garden. Encourage them to taste some of the food they grow.
4. Share some of the produce with a local food pantry and some of the flowers with a nursing home.

Additional Suggestions

- Take a field trip to a local farm or farmer's market, and talk with the farmers about what crops are locally grown and how they grow their crops.
- Keep a log about weather and growth patterns during the growing season.
- Check out the ideas and resources at the Kids Gardening website, <http://www.kidsgardening.org>.



GET and learn!

The movement to connect young children with nature continues to grow. Many excellent resources and guidelines explain the what and the why of early childhood environmental education, but guidelines aren't enough. You also need the *how*—and that's what this book is all about.

Learning Is in Bloom offers 40 hands-on activities to help children connect with nature. Discover ways to nurture their curiosity, wonder, awareness, excitement, and understanding of the world around them. Choose from activities that support learning about all sorts of habitats, how plants grow, what seeds do, and what animals need to thrive. Learn how to support

- ✓ science investigations,
 - ✓ mathematical thinking,
 - ✓ art explorations, and
 - ✓ literacy development
- all outdoors!



Ruth Wilson, PhD, is an educational consultant and curriculum writer with special expertise in the area of early childhood environmental education. She worked

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