Family Development

Winter 2004/2005 — Report to New Mexico from the UNM Family Development Program College of Education, Center for Family and Community Partnerships

Learning in the Natural World



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Insert: Letters, Letters Everywhere! ¡Letras, Letras por Todas Partes!

A Sense of Wonder

by Ellen Biderman

"... that was the main thing about kids then: we spent an awful lot of time doing nothing. All of us, for a long time, spent a long time picking wild flowers. Catching tadpoles. Looking for arrowheads. Getting our feet wet. Playing with mud. And sand. And water. You understand, not doing anything. What there was to do with sand was let it run through your fingers. What there was to do with mud was pat it, and thrust in it, lift it up and throw it down ... My world, as a kid, was full of things that grownups didn't care about."

Robert Smith



dults often fondly recollect unstructured times spent outdoors, in nature, as the best times of their childhood. Yet children today, even in a rural state of unparalleled beauty such as New Mexico, are more likely to know more about the habits of wolves in Idaho and whales in Canada than birds nesting around their homes. This generation gets more knowledge about nature from the Discovery Channel than from their own back yards, says Katherine Bouma in an article in the *Orlando Sentinel*. They can tell you about elephants in Africa, but can't remember the last time they watched the clouds move or the leaves fall.

The time that children spend playing in nature has dwindled dramatically in recent years. The reasons are plenty: urbanization and its attendant ills; the lure of television, computers and video games; the pressure to "learn"; busy family schedules; etc. The result is that youngsters today aren't experiencing some of the deepest, most passionate joys of childhood—the delights of the outdoors.

This alarming trend has implications for the changing nature of childhood and children's growth and development. Without opportunities for playing in nature, some childhood development specialists worry that we will lose something very basic. Current research has proven that in the first three years of life the brain is literally being "wired" for future learning. Human brains evolved in the natural world. Thus, we are wired to observe and differentiate in this real world. Experiences within the natural environment can play a very important role in the total development of the young child.

Children between the ages of birth and six gain their understanding about the world primarily through play. It is the way they learn what no one can teach them. It is how they explore and orient themselves to the actual world of space and time, of things, animals, structures, and people.

Child psychologist Brian Sutton-Smith observes that the manufactured playground has replaced nature as a place for children to play. "We need to find ways to let children roam beyond the pavement, to gain access to places that allow them to tunnel, climb, or even fall." He'd like to see kids have more smells, tastes, splinters, and accidents. The richness of natural settings—the wind, the sky, the plants, the hardness of rocks, the softness of water, the colors, the sounds, and more—offers endless play opportunities.

Nature, be it the New Mexico mountains or the dirt in the backyard, can be a steady play-partner for children, full of fun, easy, exciting, and developmentally appropriate learning opportunities. Nature nurtures children's growth by demanding the full use of their senses. An intimate connection to the natural world can give children a sense of freedom, imagination, and wonder.

In the first six years of life, children develop a sense of trust and competence that can come from forging direct

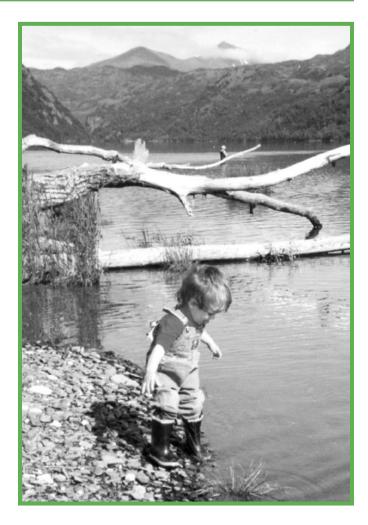
connections with plants, animals, and land. Naturalist Gary Nabhan in The *Geography of Childhood* points out that the natural world does not judge. It exists. One route to self-esteem, particularly for shy or undervalued children, lies in the out-of-doors. Experiencing the diversity in nature can reassure children (and adults) of their own validity. No matter that we differ a bit from our peers: difference in nature is the norm. In addition, understanding the force of the wind and the interdependency of plants and animals leads to an appreciation of the power of coexisting and collaborating with others.

Direct, unstructured experiences in the out-of-doors are essential to this healthy development. Children need time and places for puttering, catching, and watching. They need spots near home where they can roam from the trail, lift a stone, poke about, and merely wander; places where nothing intrudes on their spontaneous responses to the world around them.

Environmental scientist and writer Rachel Carson believes that all children are born with an inborn sense of wonder. This sense of wonder allows them to discover the joy and excitement of the world in which we live. Carson found that enthusiasm and passion for life, emotions essential to learning, are positively influenced by creative interactions with the diversity and mystery of nature. The child's experience of nature can encompass a wide range of emotions—wonder, satisfaction, joy, challenge, engagement, adventure, surprise, fear, and anxiety. All these emotions serve as powerful motivators for learning and development.

Carson believes that if the child is to keep alive this sense of wonder, he needs the companionship of at least one adult who can share it, discovering with him the excitement and mystery of the world. Parents often feel inadequate when confronted with the eager, sensitive mind of a child, and the complexity of nature. They may feel that they can't possibly teach their child if they don't know one bird from another.

But Rachel Carson has reassuring words for parents. She believes it is as important to feel as to know. The role of the parent in the early years is to develop children's appreciation for beauty and a sense of the enthusiasm for the new and unknown. The facts can easily follow. Exploring nature with your child is largely a matter of becoming receptive to what lies all around you. It is learning to use your eyes, ears, nose, and fingertips. This can be easy. Look up at the sky—its dawn and twilight beauties, its moving clouds, and its stars by night. Listen to the wind, feel the rain. Teach less, share more. Tell your children what amazes you. Put yourself in the position of your child and say, "What if I had never seen this before?"



The lasting pleasures of the natural world are available to anyone. Carson muses that by giving our children opportunities to play in nature we are giving them a gift that will last a lifetime—the gift of a sense of wonder.

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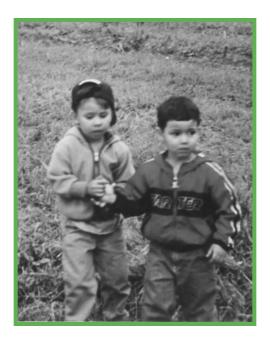
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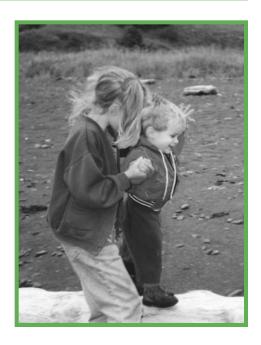
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More Than A WalkA Sensory Experience



by Paula Steele

ou don't have to have a degree in biology or zoology, or any special equipment, to take advantage of the science and learning opportunities that lie just outside your door. Whether you live in the urban jungle or near a bosque, there's lots to be learned from taking a walk. All you need to do is tune in to the natural occurrences that surround you—and that maybe you've taken for granted. Remember that although you've been walking planet earth for twenty years or more, the little ones walking beside you are relatively green to their world. They need your guidance with developing their skills of observation, questioning, and extending their knowledge.

Take a walk with me, on a May morning, and I'll share with you the sensations and ideas that come my way. I walk out the front door and stop to look around. I notice a wasp flying up near where two porch beams meet. That wasp is hovering, flying away, then circling round back. It appears to be looking for an opening. I wonder if it's searching for an entry into the wood. Or is it looking for a good place to begin construction? I'll have to remember to check on that later—before it gets serious about moving onto my porch.

As I saunter down the walkway to the sidewalk, bird calls assail my ears. They sound so happy for the arrival of spring! I don't know many birds, and even less their calls—I recognize the plaintive cry of the morning dove—but I do wonder at the variety of songs I hear. Walking along, I listen and silently count the number of different bird songs within one block—at least 7! Of course, I could be confusing some of them. But what matters is that I've taken some time to listen and to try to discern the differences. Just paying attention helps me appreciate them.

Ouch! Something is itchy, scratchy, and poking through my sock into my ankle. A dried grass seed head. It was so pretty when it was fresh and green and feathery. Now that it's dry and prickly, I'm not so pleased with it anymore. Look how easily it falls apart and floats on the wind. Look how many are stuck to that dog's fur! Here is a seed that knows how to travel. I wonder if the birds will eat it and drop it elsewhere in their travels. I wonder if birds drop scat while flying or do they have to be sitting on a tree branch. And I'm thinking that this seed doesn't seem like bird seed, but maybe I should



Christopher watches mom feed a horse.

take some time to watch them and see if they do eat it. I'm betting with myself that they don't. Why? Because it seems too big and scratchy for them. I bet even a horse wouldn't eat it. But I can check that out. Natalie—She-Who-Loves-and-Knows-All-About-Horses—could tell me. Or I could visit the horses at the fair grounds and try to feed them some of this dry grass. Except, I might get in trouble, so I better ask first.

Crunch! Eeew!! What's this? I've just stepped on a snail. My neighbor was watering and this little guy was out for a glide. There's another! It's a big one. And there's one no bigger than a pea! I pick them up to compare them. The little one's shell is so much thinner. Does the shell grow? They've both gone into hiding. I shake some water from leaves onto them and soon they're peaking out. Stretching first one and then the other eye. Are they really eyes? Or just feelers? I have a book that I can reread to remind myself.

One year we had snails as classroom pets. We read about them and pretended to be them. It was fun to imagine life as a snail. I liked to watch the kids in the grass trying to glide along on their bellies and stretching their arms and hands forth, ever so slowly, to experience the world as a snail does. We fed the snails leaves. The kids thought that leaves from their natural habitat would do. They figured that if that's where they lived, then it would probably be okay. They were right. And we spritzed them with water. How we loved to watch them move up the sides of glass or plastic containers! We could see their underneath. Watching them move and stretch was icky for some and endlessly fascinating for others.

Right now the Spanish Broom is in full bloom. It looks like pop corn sitting on branches and smells so sweet. I notice that it's a popular plant; many yards sport Spanish Broom. Some are six feet tall and others are just wee,

little plants. But I know from experience that they grow fast. Ours tripled in size from last year to this.

And, wow! Honeysuckle is spilling over walls, climbing up fences, and clinging to trellises as its tendrils curl around available support systems. Another aroma that wafts on the breeze or hovers in the air as you walk by. It invites you to close your eyes and breathe deep. When I was a youngster, my friends and I would carefully separate the stamen from the pistil to catch the single drop of succulent nectar contained within each small flower.

I've hardly gone a few blocks, yet so many experiences are available to ponder and explore with all of my senses. I look forward to the summer, fall, and winter months. Each season brings its own delectable sensory opportunities. Full blown summer with its shimmery heat waves will be upon us soon. Maybe this year I will try to fry an egg just with the heat of the sun. I always anticipate the smell of roasting chile in September. Winter brings the sharp contrast of bare branches against a crisp blue sky and the ragged caw of crows. These are just a few of the wonders that are available to us year round in the outdoor environment. \(\psi\)

Renew your sense of wonder and help to develop your children's. Start with the 5 senses:

Visual – Play 'I spy..."
Auditory – Name five different sounds.
Olfactory – What do you smell?
Taste – Be careful with this one!
Touch – Notice the variety of textures.

- Look closer.
- Comment on observations.
- Share your wonderings with the children and listen to theirs.
- Compare things such as leaves, flowers, stones, grasses, etc.
- Encourage collections.
- Don't forget to look up!
- Ask open ended questions such as, What would happen if...? Why do you think...? How could we find out...?



Some children bend close to smell the flowers—others just smell from afar.

Learning Naturally

by Alida Dávila Larrichio

hen I was a child and asked my father about going to school, he would say: "Living in the country and learning from it is the best school you can ever have. Everything you want to know about anything is here at the farm. There is no school that can teach you more about the wonders of nature. It just happens naturally!" I consider myself fortunate to have had exposure and contact with nature from a very early age. I consider my childhood at the farm to be one of the best gifts my family provided to enhance my education.

Children in contact with nature learn naturally. They have an inborn desire and curiosity to learn first-hand by figuring out how and why the world works around them. As one strolls through a park, through the woods, or even one's backyard with a youngster, one encounters countless experiences, not to mention the stimulation that nature provides for all of the senses.

While out in nature ask your child to observe one item, such as a leaf, a bug, or a rock, for a few minutes. Pay special attention to the shape, the color, and the size. Is it animal, plant, or mineral? One does not have to know the

name of every tree, flower, or rock; but just describing what is seen can capture a child's attention. Stand back and watch your child discover things by herself. Be sure she perceives your interest in what she finds; and when she finds that unique item that she wants to take home, this is the appropriate time to explain balances in nature and how everything has its purpose. In that way she limits the number of items she collects and thinks before taking just about everything home.

Remember when taking a walk with your youngster to allow enough time for her to observe, touch, smell, and perhaps taste. Children don't like to be rushed when they are enjoying the innumerable benefits of a walk. Prepare your child for the length of the outing you are about to take. Small children may not walk very far, but they do take their time observing what appeals to them.

Let's keep in mind that walking with young children is a self-learning experience, which they should enjoy on their own. "Structured activities are more appropriate when they're older." (National Families Network Magazine) So let the child be free without too many



restrictions. Challenges and adventurous risks are healthy for the child and the parent. The child usually knows what she is capable of, more so than adults. Be aware of your surroundings and alert the child without creating unnecessary fears. At the end of the outing talk about what she has discovered. Enrich children's language through discussions and questions.

So then why are walks important in children's education? What do they learn while being in the outdoors? According to *Children's Corner Education Update Magazine*, outdoor play reduces children's stress up to 97%. Consequently, children develop leadership skills, form greater awareness of their surroundings, and start to develop an appreciation of nature to last a lifetime. In his book, *Let Me Take You on a Trail*, John Hawkinson expresses the potential which nature offers:

How can you love a land that you don't know? Come and see and learn about me. Feel the soft moss on fallen logs. Climb up the highest hills. Slide down embankments to the creek below. Bathe your face in pools with shining stones. Swing on vines that have grown strong and long with the tree they hold onto. Listen to the birds and insects. The outdoors would relieve a tired mind.

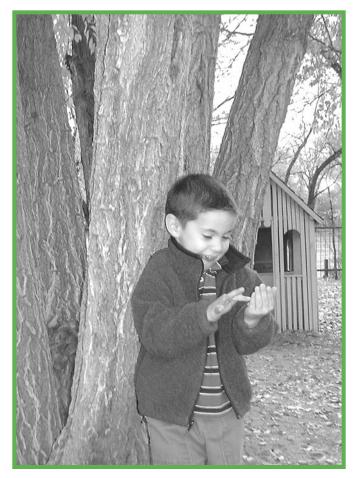
When asked why they like the outdoors, several preschool students from the Even Start Program, housed at Truman Middle School in Albuquerque, immediately responded: "Because we can see and hold the bugs." "It tickles my hand when I let a caterpillar crawl on it, and it makes me laugh!" "I just like to lay on the grass, that's it!"

These are great reasons to take children for a walk! \bigvee

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"It tickles my hand when I let a caterpillar crawl on it, and it makes me laugh!"

How Does Your Garden Grow?

by Judy Madewell, MA

The idea of growing children as in a garden is hardly a new one. Friedrich Fröbel coined the term kindergarten, meaning a garden of children, as early as 1807. In his thoughts associated with a plan for a school for young children, Fröbel was interested in the interconnectedness of all of nature. Within this system children as an organic whole develop through creative activities according to the laws of nature.

In the original thoughts on kindergarten, Fröbel envisioned a learning environment in which children could grow and learn through self-expression, social participation, and physical activity. These activities come easily enough to children, and if encouraged, can lay the groundwork for a future love of learning.

Teachers, parents, and caregivers may continue this metaphor of a garden to analyze their approach to educating (or just being with) children. According to the Garden Helper, growing a successful garden involves three P's: planning your garden, preparing the soil, and planting the vegetables. A first consideration in planning a vegetable garden is to consider what one might do with the extra produce of a bountiful garden.

How many times have you encountered a friend with a garden who brings in bags full of zucchini, tomatoes, and string beans? There is urgency involved in not letting the fruits of labor go to waste. When raising children, it is important for caregivers to realize that providing an optimal growing environment for children is likely to produce more than just a healthy child, but very possibly a child with many more fruits to give back to the world.

PLANNING

Considerations for planning a garden include the amount of sunlight the spot will receive, how well the soil drains, being sure that there is enough air flow, and that the soil is fertile. Children's needs are going to be similar—they need some time outdoors each day; they need to get a good night's sleep; and they need to be fed foods that will help to grow their bodies and minds – plenty of vegetables, protein, good carbohydrates, and books, rather than TV.

Think of vegetables that grow well together, and those that do not do so well. Asparagus and rhubarb have special needs. They are perennials, which means that part of them stays in the ground and grows back, year-to-year. If



Children, like plants, need tender care to grow healthy.

your garden requires cultivation of the soil on an ongoing basis, it might be best to plant those perennials over to the side. That way, their roots won't be unnecessarily disturbed. Early growing vegetables can be harvested, the soil reworked, and soon replanted. Similarly, it is important to consider the temperament of children. For some, it is very important not to disturb the roots that are growing deep into fertile soil. Others like to have things changed frequently. They need plenty of change and exposure to new things in their environment.

PREPARING

Once the garden is planned, it is time to prepare the soil. It is a fact of life that not all soil is created equal—some is sandy, some is full of clay, some is alkaline. These differences in environment can have a profound effect on the success of a garden, as can learning environments affect our children. What is important is to be aware of the environmental issues surrounding the individual child. Does the child come from a safe environment? Has there been a recent trauma in the neighborhood?

In agricultural communities there is a common phrase—too wet to plow. Under these conditions, the soil will ball up, get hard, and be unusable for planting. The timing of learning events is important to the effect they will have on children. If a child is suffering from environmental circumstances —parents arguing or fighting, being homeless, attending a school that is structurally or aesthetically lacking—it is important to take these conditions into account. Acknowledge what is going on for the children. Ignoring conditions only makes them worse. Find the resources that are available to repair the soil that is the child's growing environment. Honor the child by being very caring and holding these issues carefully, confidentially, lovingly.

PLANTING

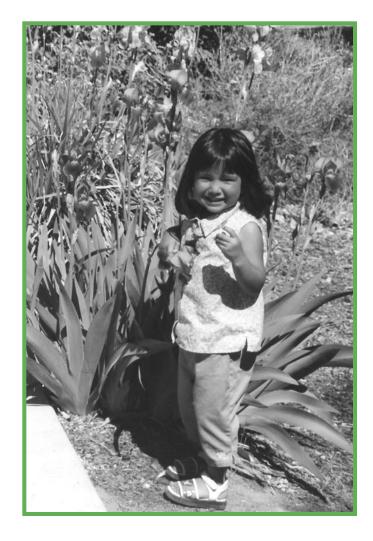
At last you are ready to plant. Some plants like to climb. Some make vines that spread out across the ground. Some shoot straight up. Some old-time gardeners plant their corn and string beans together, so that the string beans have the corn to trail around. The physical needs in children's development are often overlooked in today's test-oriented educational system. Providing plenty of opportunities for children to engage in physical activities and play reaps bountiful rewards in children's physical and mental health, and quite possibly, in their classroom behavior. Cover the seeds with fine soil—no heavy clods of dirt on the precious potentiality of the children. Water them well with a fine spray. Water them regularly. Provide protection from the elements when need be.

We live in a world where the news is sometimes disturbing. Buffer the children from the disturbing news items.

Be aware of what kind of exposure to news they will get through television. Caregivers may want to tape the news and watch it after their children are in bed. (Caregivers themselves may not want to be exposed to the graphic nature of television news programs, and may want to try the radio instead.)

When disturbing things are happening in caregivers' worlds, children pick up on the tension. Share with them in ways they can understand. Share your values with children—they are part of the nutrients children need for growth. Pick out the weeds and pests that can interfere with children's growth. If there is a bully in your child's life, be an advocate, involve the people who can help those children who may not yet have the means to help themselves. If we let our young plants fend for themselves, they may not do very well.

This article draws an analogy between the raising of food crops and the raising of children. I encourage you to go out and plant a garden with a child. If you do, you may or may not be convinced of the analogy, but getting yourself and your young sprouts in contact with the earth is good for the spirit anyway. •

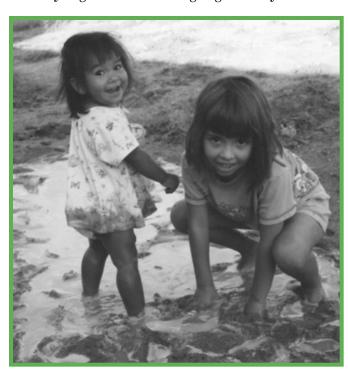


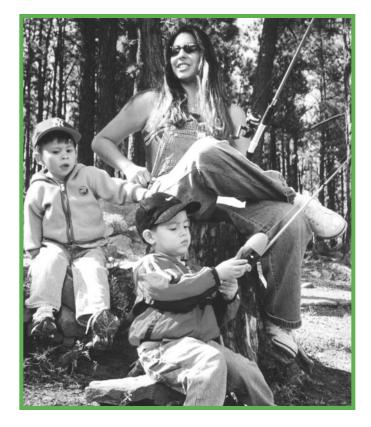
What Can You Do as a Family?

by Jan Winslow

What can you do as a family?

- Play in the mud. Just the mud—kids don't need anything to go with the "mud" experience.
- Wouldn't it be fun to experience looking at the stars away from city lights on a blanket very late at night with the kids in their pajamas?
- ▼ What about a slow car ride with the windows down, along an isolated road, listening to the sounds of the night? The kids might have the breeze blowing through their hair, or they might be bundled up with gloves and coats, but either way, meandering along a quiet road at night can be great fun.
- Find the sidewalk chalk and play hopscotch with the kids
- ▼ Buy a quart of plain old vanilla ice cream at the grocery store. Surprise everyone by taking the family to the neighborhood park after dinner to eat ice cream in paper bowls with plastic spoons! Then stay to play.
- Tell the kids you are going to teach the family dog some tricks, and work on that in the backyard with them.
- ▼ Lie on the grass and watch the clouds slowly move across the sky!
- How many different ways can you play with a hula hoop? Can you still hula? Can you use it like a jump rope? Can you roll it away and make it return to you? Can you get more than one going around you at once?





- ▼ Play a game of "What Have You Been Into?!" while taking a hike or playing outside. Attach a piece of masking tape to each person's wrist with the sticky part out. While playing, things will invariably stick to the tape—grass, leaves, sand, dirt, seeds, feathers, you name it! Later these pieces of tape provide a springboard for conversation and a review of the day's excursion!
- Early in the morning, before the whole world is active, take the other early-risers outside to sit and listen. Greet the joggers and dog-walkers and make up stories about who they are and what they are going to do that day.
- ♥ Play "Got Your Shadow" by stepping on each other's shadow. Help the kids figure out why it's easier to play the game when the morning or afternoon sun makes nice long shadows, versus the middle of the day when shadows are short.
- Pot some plants on the patio—flowers in the warm months to set outside, indoor house plants to freshen up the darker, cooler months.
- If possible, hang an old tire from a branch and show the kids why earlier generations loved tire swings!

Cooking with the Sun

by Jan Winslow

Feel like hot dogs tonight? Here's a fun project your whole family might get a kick out of. Have you ever made a solar oven? There are many different ways to make one, and successful ones really work. A solar oven will reach 200 to 300 degrees Fahrenheit easily, and, when well made, can actually be used to cook meat, cookies, rice, bread, even beans! In addition to your oven, you will need patience and a sunny day. Cloudy days don't work.

To simplify the most common solar oven instructions, take a box and make it black on the inside (by painting it or covering it with black construction paper) so it will attract the sun. Right at the bottom where you will put the food, make a "bowl" out of aluminum foil and place your dinner to be heated on the foil. Cover the box with plastic wrap to hold the warm air in. Place the box so the sun's rays can best hit your oven. And then wait! There are many specific directions at the library and on the Internet, but it is also fun to experiment on your own to see which ways work best for you. Have a contest within the family and you'll determine if smaller or larger solar ovens work best, and if it matters how the box is shaped, among other things. But of course, it's not totally up to your oven-making skills—it also depends on the weather!



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