



Wonder-filled Stewardship

Worldwide efforts are underway to help today's children grow up in a 'greener' world. Finding ways to inspire children's love for the earth today will help them become tomorrow's generation of caring environmental stewards. Momentum is building. Change is happening. Add your

voice to the celebration of actions that are being taken in playgrounds and board rooms and demand continued effort — for the sake of our children and of our world.

In this edition of Wonder committed educators from across the globe reflect on

this message as they respond to the Nature Action Collaborative for Children guiding principle:

We believe it is important for educators to encourage children's development of wonder and a sense of environmental stewardship.



Photo by Alejandra Benavides / ConCienca

Reflection: Let Nature Captivate Children

from Daniela Benavides, Adriana Gonzalez, and Jeff Reiss, Peru

ConCienca in Spanish translates roughly to 'science with conscience.' By helping develop self-esteem and leadership skills in youth, we uncover hidden talents and allow children to build a genuine life-long appreciation for nature. *ConCienca*'s 5-week travelling summer nature camp is a window to the wonders of nature for dozens of coastal Peruvian children each year. We pack up our telescopes, fish nets, goggles, bathing suits, and our team moves to a small coastal fishing village. Each week we welcome a rotating cast of outstanding professionals from different fields to create multidisciplinary lesson plans. In *ConCienca*, wonder of nature turns complex scientific concepts into practical playful experiences.

In our fourth year, in Lobitos, we took a beach hike to a rocky point named Pisinás, a favorite swim spot for our students. In awe at the hard waves crashing against the point and filling up the natural pool that gives Pisinás its name, students stood admiring this phenomenon. Prompted by wonder and curiosity they began observing the comings and goings of the tide and thinking critically about its cause. Pepe, Lucho, and Maria excitedly explained to our colleague Amelie, how this landmark originated according to local legends as others joined in. Guided by her Reggio Emilia background, Amelie took notes and shared them with the team at dinner when we met daily to share and enjoy each other's insights from the day.

Sitting in our usual spot under an old *algarrobo* (locust tree) in the small town park, we revisited these stories. Students loved analyzing natural phenomena in fantastic ways and proposing hypotheses. This motivated our team to design an integrated learning project, allowing us to explore narrative structure, language, scientific concept, myths, art, and music. Some children developed the story while others drew the animals and natural elements that appeared. We all thought deeply about our environment. We worked outside for most of this process and were easily inspired.

We decided to have an end-of-camp play for our friends and families, portraying the environment and folklore. Trash, an obvious problem around us, was an important theme. Creatively and playfully we made costumes with waste that often washed ashore. The octopus and shark, naughty mermaids, a seven-headed monster, and even God came alive from the rubbish. We made storyboards, an original soundtrack, and a 20-foot mural for our makeshift theater. The result left teachers and students beaming with pride and happily exhausted! Our audience agreed this was the greatest theater production this 1,000-people town had seen.

Driven by their wonder at nature, children became active learners pursuing knowledge to accomplish their goals. They made joint decisions and motivated each other. As teachers, we also felt motivated. We did not have to drag our students along, but rather just offer nudges here and there. The most important nudge was out of the house and into the elements. Nature did the rest.

ConCienca is a nature-based environmental education initiative for coastal Peru.

Contact Daniela Benavides with questions, suggestions, or to get involved: daniela@conciencia.org.pe.



Photo by Alejandra Benavides / ConCienca

Photos provided by Elaine Davis,
 Fredrickson Family Early Childhood Center, California

Reflection: Stewardship Starts with Wonder-filled Connections

from Elaine Davis, United States

“Look deep into nature, and then you will understand everything better.” — Albert Einstein

Four years ago, when we were designing our new outdoor space at the Fredrickson Family Early Childhood Center at California Lutheran University, I was asked to recall a favorite childhood memory. Immediately I was back with my father, fishing pole in hand, enjoying the feel of the wind and sun on my face, the soft sounds of the water's waves as they hit the rocks, and the quiet companionship of my father. No words were ever necessary when we were together. I knew that as we planned our outdoor environment for our new center, I wanted to recreate the possibility of that experience in some small way. And we did. It is magical for me now when I escape from my desk, as I do often, and go out and sit on one of the river rocks, that I can relive that fond childhood memory.

Imagine my delight when recently I listened in as one little boy, Anthony, sat in his plastic milk carton boat, fishing rod (a stick, string, and magnet) in hand, telling his friends that he hoped he could land a big one, just like the fish he had caught with his Papa in Catalina recently. As I continued to sit on the rocks, I remembered a family vacation to Mammoth Mountain. My grandson, whom I am blessed to have enrolled at our center, announced to all of us as we hiked along the creek on our way to Rainbow Falls, “Nahni, we have a creek like this one at our preschool!” As an educator you aspire to open windows of opportunity for each of the children that enter your doors and to support their innate sense of wonder. How rewarding it is when you see and hear the confirmation that it is indeed occurring!

For children to become environmental stewards of our big, beautiful world, they will need to transfer experiences they have in their small preschool world to the world beyond it. Hearing both my grandson's words, as well as Anthony's conversation about his fishing trip with his Papa, confirmed for me that children are making the connection. My grandson, Kayden, was able to see our 'small creek' and then experience a creek on a much larger scale, and appreciate the magic in both. Anthony had experienced a fishing trip to Catalina with his Papa and was able to recreate that experience at our center and share his sense of wonder with other children that might not ever experience fishing in Catalina or anywhere else. I can only hope that as children connect with nature on a daily basis in our beautiful outdoor environment, that their sense of wonder is nurtured and supported and that they go home and talk to their parents about adventures they have had and want to continue to have on a grander scale.

In conclusion, it is clear that Albert Einstein (in his quote above) understood what children inherently know, which is that being in nature can teach us everything we need. Now it is our turn as educators to embrace this principle, even if it means setting aside our longheld beliefs about where and how learning occurs. Perhaps if we all take some time to reflect on what we gained and learned from what used to be considered the wasted summer days of our childhoods, filled with play and imagination, we will be ready to embrace the majesty of our ultimate classroom. Children watch us and take cues from us. Let's demonstrate that we appreciate the wonder of our world. Children have always had this knowledge and now it's our turn to catch up with them. So go outside and enjoy these moments of limitless possibilities with the children in your life!

Elaine Davis has been the Director of the Fredrickson Family Early Childhood Center, California Lutheran University, Thousand Oaks, California, since 2000; she began her work there as a teacher in 1986.

Consider this:

- How can you enhance your outdoor play space to support imaginative play that reflects connections with nature that children and their families may be making with your local or regional natural environment?
- What changes can you make to your outdoor space that would give children more opportunities to experience the magic and wonder that exists in the natural world?



Future Issues of Wonder We invite you to email your ideas, stories and photos that relate to the following *Universal Principle for Connecting Children with Nature* to Tara Hild: tarah@natureexplore.org.

We believe it is important that children be supported in developing life skills through holistic nature-based learning.

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Reflection: A 'Pretend' Farmer's Market Gives Children Real-World Learning Experiences

from Dana Holahan, United States

Felicitas runs a child care program out of her home in New Haven, Connecticut. She has been a member of All Our Kin's Network of family child care providers for many years and is a participant in our Garden Project. The project, now in its third year, has installed raised-bed organic gardens in the homes of 16 providers in New Haven and six providers in Bridgeport, Connecticut. It also offers regular consulting and support so that providers can hone their gardening skills and also develop a toolkit of garden-related early childhood experiences.



Photograph: Children at Felicitas Family Childcare, New Haven, Connecticut

Last year, Felicitas and the children in her care developed a farmer's market during their morning outdoor time to buy and sell the produce that they had planted, cared for, and harvested. They enjoyed it so much that Felicitas had to make an Open/Closed sign and 'close' the market when it was time to carry on with other parts of the day's routine. The children set up the market space, organized their produce into baskets, determined who would be in charge of each task, assigned prices, helped to make signs, and then began their pretend play!

The Garden Project, along with the outdoor space in Felicitas's yard, has given children the opportunity to develop a meaningful learning experience using materials that were not only natural and authentic (as opposed to using plastic fruits and vegetables), but also grown by the children. This experience allowed children to revisit their knowledge of plant cycles by discussing and practicing the harvest phase. It also introduced them to the important concept of a plant's 'commercial' cycle —

what happens to a plant after it is harvested, and how it can be sold in a community-oriented, sustainable, and environmentally-friendly way.

- The children's farmer's market helped them develop a series of skills that are important to their stages of development.
- Their early literacy skills increased by making signs and having conversations during planning and play.
- For early numeracy, they learned more about one-to-one correspondence, prices, and exchange of 'money' for commodities.
- They also developed social-emotional skills, like working as a team, solving problems, and assigning and acting out roles.

Even more important, however, was the sense of pride and accomplishment they felt when offering the vegetables they had spent so many months helping to grow.

At All Our Kin, we believe that enjoyable, rich early learning experiences are the best way for children to create pathways toward future success in school and in life. The teachers who work in the Garden Project are helping to create young environmental stewards by offering fun, real-world experiences in the outdoors with natural materials that are part of, and essential to, our environment. Young children, who delight in outdoor experiences and gain an early understanding of natural cycles and processes, are much more likely to continue enjoying the outdoors throughout their lives and to protect the environment for their own benefit and that of the people around them.

Dana Holahan is the Professional Development Coordinator, All Our Kin, Inc., a nonprofit based in Connecticut that trains, supports, and sustains family child care providers to ensure that children and families have the foundation they need to succeed in school and in life. Visit the organization at www.allourkin.org.

Consider this:

- How can you add gardening experiences for your children or expand on the gardening activities that are already taking place in your program? Consider a 'seed-to-table' approach to provide firsthand experiences about one of the environment's most fundamental processes: life cycles.
- Evaluate and communicate everything a child can learn through the process of planting, tending, harvesting, investigating, cooking, and eating plants as these experiences relate to your curriculum or learning objectives.



Reflection: Children Who Spend Time in Nature Will Always Care for It

from Erum Kamran, Pakistan

“When children come into contact with nature, they reveal their strength.”

— Maria Montessori



Photos provided by Erum Kamran

We believe there is an urgent need to bring a paradigm shift in education, especially in the early years, so that children’s tendencies to explore nature will become the basis of our education system. Our focus should be on nature-play, which has the power to develop a healthy child in terms of physical, psychological, emotional, social, and intellectual terms. Nature-play is not a new discovery when it comes to educating young minds; it’s the only medium used by man throughout history to learn and discover the hidden magic of the universe.

Environmental researchers are constantly reminding us of the dangers and threats our world is facing starting with global warming and extending to extreme water crises. Scientists and communities, governments and agencies are struggling to combat the damage. We believe that short term, we have to take immediate measures to minimize the damaging effects. But if we want to work on a long-term basis, we have to start from scratch; to produce a generation of people who not only think about solutions to the vast environmental problems, but also participate in creating a sustainable environment. This can only be done through a revolutionary nature-based education system with campaigns and ‘green’ programs, especially in the early years to instill love for nature: children who spend time in nature will always care for it. This is a fact which we are witnessing. People who spend their childhood in nature are the ones who are taking the initiative to identify environmental problems, to combat them by offering solutions, to choose environmental-related professions, and to work with their hearts to save the earth and its habitats from disaster.

Instead of developing their own educational modules, educators should be observing children in their natural surroundings to see how they learn. It’s our observation that children are naturally curious. Researchers are proving that educators can use nature as a force to attract natural curiosity and exploration tendencies in children. The “immense concentration of a child” is the natural outcome when he works in nature; we do not need to do anything to build up children’s attention spans or speed up their curiosity — it’s already there. It’s a chain reaction: nature awakens natural curiosity, which leads to exploration and ends up in discovery; that’s how humans learn. “A book of botany or zoology has the power to stimulate the already curious human mind, but nature has the power to change this curiosity into discovery” (Erum, 2010, Children & Nature Network blog).

I have observed this in my students. Their senses sharpen dramatically as soon as they are taken outside. Their sense of wonder appears, leading them to investigate like scientists:

- They discover the laws of nature every day.
- As they play, their senses alert them to the different sizes, colors, and shapes of rocks.
- They experience the amazing strength in a piece of rock as compared to a piece of leaf.
- They discover the law of gravity when they throw one of those rocks and observe the glorious effect it has on water when it lands in a pool.
- They learn about climate, seasons, weather, and all about botany when they play in seasonal gardens.

Ultimately, children understand the whole landscape all by playing in nature.

My message is simple. When we start realizing the power of discovery on children’s learning and lives, we will be able to champion environmental stewardship. Let’s change the way we educate young minds; let’s connect children with nature.

Erum Kamran works as a Montessori Directress, play expert, nature-based curriculum developer, and children’s rights advocate. She founded the Children and Nature Network Asia in Pakistan to address connections between children and nature in educational and social surroundings.

Consider this:

- Engage your children in conservation activities that focus on positive actions they can take without worrying them with the frightening aspects of environmental problems they’re too young to understand. The activities suggested in the *Environmental Action Kit: Toolkit for Educators* are fun ways teachers and children can work together to help the world become a ‘greener’ and healthier place.

www.worldforumfoundation.org/working-groups/nature/environmental-action-kit/materials/educators