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Many of us as children enjoyed building forts, climbing trees, weaving daisy chains, and engaging in other wonderful outdoor activities. And as adults, we can find peace and joy in the solitude and beauty of the natural world, where God seems very near. Unfortunately, most people in developed countries, especially children, now spend very little time in nature or even out of doors.

Adventists have special counsel regarding the value of spending time in God's creation. Almost a century ago, Ellen White wrote: "While the Bible should hold the first place in the education of children and youth, the book of nature is next in importance."¹ While this alone gives ample reason for a renewed focus on God's bountiful creation, a growing number of scientific studies have reported the positive effects of nature on human life. Even the secular world is starting to look for ways to bring outdoor learning into the classroom. As Adventist educators try to convince their administration and board to think "outside the classroom walls," they will need a solid rationale to support their ideas. This article will summarize some of the benefits of spending time in nature as revealed in current research and the counsel of Ellen White.

Nature Promotes Spiritual Development

Adventist teachers should be in the forefront of the nature education movement that is catching on in the secular world. Our church often talks about nature as "God's second book" and of our role as stewards of God's creation. Ellen White writes, "In the natural world, God has placed in the hands of the children of men the key to unlock the treasure house of His word. The unseen is illustrated by



the seen; divine wisdom, eternal truth, infinite grace, are understood by the things that God has made."² In *Education*, Ellen White describes the Bible and nature as the foundational curriculums for the development of the whole child. Of nature, she writes, "So far as possible, let the child from his earliest years be placed where this wonderful lesson book shall be open before him. . . . Let the children learn to see in nature an expression of the love and the wisdom of God."³ Then she adds, "The constant contact with the mystery of life and the loveliness of nature, as well as the tenderness called forth in ministering to these beautiful objects of God's creation, tends to quicken the mind and refine and elevate the character."⁴

I have found that even 1st graders can learn to find spiritual meaning in the things of nature and often get quite excited because they have discovered a hidden message from God. Using nature as a textbook will evoke curiosity and help them see the divine hand in the world around them.

BY ROSEMARY BAILEY

Nature Evokes Curiosity

When children see, touch, smell, and in general experience the world



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self-perpetuating cycle. J. Brune's research showed that "using environment as a learning tool . . . improved student motivation, life-long learning skills . . . and attitudes of respect and responsibility."⁸ Thus, the characteristics of nature motivate children to explore, to learn, and then to want to know more!

Nature Inspires Creativity

As students explore, they often find wonderful inspiration for creative expressions of their learning, emotions, and observations. Their creativity and imaginations flourish in the out-of-doors. Try sending your students outside with a sketchbook, and have

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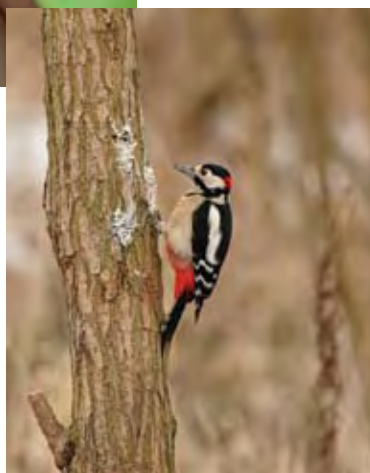


them draw the insects they find. Or watch what happens when you set up painting easels in front of a flower garden. I had a student who refused to write indoors, but asked for more time to finish her assignment when writing in the garden where her story (about a mouse) took place. Students find it much easier to write or paint when they can see things that give them ideas, instead of having to come up with inspiration while sitting at a desk.

Natural settings attract children because of the diversity of sounds, smells, colors, and objects. These settings allow them to interactively explore and manipulate a variety of objects.⁹ Artists, musicians, photographers, poets, and writers, and even inventors have all found inspiration from observing nature. Teachers can use nature for planning lessons in art, writing, science, and music classes.

Teachers should also give children time for unstructured play in nature. One study found that being in a natural environment resulted in more creative play by children. Instead of just playing on swings and slides, children invented imaginary storylines.¹⁰ Other studies have

found that gardens, forests, meadows, and other natural places provide a plethora of manipulatable objects that foster discovery and creative play. Play equipment, asphalt, and grass contain few if any of these types of objects.¹¹ Plants provide hands-on materials such as twigs, berries, leaves or needles, flowers, and seeds.¹² Creating a garden is something that almost any teacher can do in his or her



with their senses, it sparks curiosity.⁵ There are so many new things in a natural setting that children are inspired to ask questions: What is under the rock? Behind the tree? What kind of a bug is that? Why is the bird pecking a hole in the tree? Where does that trail lead? Because nature is ever changing, the same patch of forest or the same garden will offer new things to explore at each visit.

We know that curiosity motivates students. Studies have shown that if students are curious about something, their intrinsic motivation to learn about it is higher.⁶ In addition, they become more curious as they learn more.⁷ It is a

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schoolyard or even indoors. By providing natural places for creative play and exploration, teachers can nurture children's creativity. Natural places also make great locations for teaching and learning.

Time in Nature Strengthens Learning

Every teacher wants his or her students to acquire knowledge and skills that will make them useful and effective adults. Edward O. Wilson states that "the natural world is the most information-rich environment people will ever encounter."¹³ In nature, children experience opportunities to identify, name, and classify the things around them as they explore creatively. These activities help them build sorting skills and enhance retention.¹⁴ Why teach sorting skills with little cutouts when you can go outside and sort flowers or rocks or sticks, which will be more fun and more meaningful?



In addition to providing skill practice, nature also contains authentic teaching materials for many content areas. The connections with science are clear, but other subjects can be taken outside, too. If the English teacher is teaching adjectives, the students will discover many great adjectives firsthand as they describe the garden or the forest. Math also can easily be



taught outside using real problems, like finding the perimeter of the garden or calculating the amount of mulch the school needs to purchase for the trees. The Bible teacher can use nature to illuminate the Word of God and provide visual object lessons. The parable of the sower and the seed will come alive when students grow seeds in a garden. The lichen serves as a concrete lesson of cooperation. Students see results of the mercy of God in how animals and plants have been able to adapt to survive in a sinful world of disease, predation, and limited resources. The social studies teacher may find connecting his or her topics with the natural world more of a challenge, but the concepts of communities, neighborhoods, interrelationships, and pollution can be taught very effectively in the field.

To make teaching outside easier, many schools have developed outdoor learning areas called schoolyard habitats. Researchers made exciting discoveries in their studies of programs that involve instruction in schoolyard habitats or other natural



settings. Students in the field learned and retained more content. They also performed better on posttests than those whose instruction occurred indoors.¹⁵

Using the environment for teaching has also been found to increase student achievement in science, math, and reading.¹⁶ Author Richard Louv writes that “direct experience” learning and outdoor instruction improved standardized test scores and enhanced skills in problem solving, decision making, and critical thinking. He cites a California study where students in environmental-based programs raised their math and science scores by 27 percent and were more engaged in classroom activities.¹⁷ Research has continuously shown the effectiveness of spending time learning in a natural setting.

Time in Nature Affects Attention

Learning is greatly hampered when a student has trouble paying attention. A growing number of children have difficulty with concentrating—and not just those diagnosed with Atten-

tion Deficit Disorder (ADD) and Attention Deficit Hyperactivity Disorder (ADHD). This makes it difficult for them to memorize, complete tasks, or even enjoy a story.

A growing body of research shows the positive effect of nature on concentration. Because natural settings are not static, children’s attention is naturally drawn to the movements, sounds, colors and shapes surrounding them.¹⁸ In contrast, a worksheet does nothing to keep the attention engaged because students become fatigued and their attention wanders. When they are outdoors, students’ attention seems to be gripped effortlessly. They are not taxed by having to focus on a single boring assignment for long periods of time.

One study focused specifically on ADD symptoms and the effect of greener, more natural play settings. The findings showed milder symptoms of ADD for those children who played in greener play settings, and a relationship between nature and lessened ADD symptoms.¹⁹ The implication: Students periodically need a chance to rest their directed attention (the kind of attention they use to listen to the teacher, focus on an assignment, or complete a task).

Nature is full of things that involuntarily attract attention, and provides a restorative experience for children with taxed attention spans.²⁰ By simply scheduling outdoor playtime in a grassy place, teachers can help students concentrate better in class.

Time in Nature Reduces Stress

Many of us have felt the peaceful, stabilizing effect of nature. Children can receive the same benefits.²¹ Those of us who teach adolescents know that this period of life is full of change and uncertainty. For them, nature provides a “solid infrastructure in a world of swirling possibility, a place to return for stability and balance, a place that unguardedly provides the real stuff of life. Concrete experiences in nature contribute to a resource bank of material to draw on in the construction of the self.”²² As Christians, we would add that nature is a place where young people can connect with God in the midst of the stress of growing up.

Research has found that stressors have less impact on overall levels of psychological distress when people have a lot of access to nature. Nature provides a buffer against stressful life events.²³ For example, one study found that adults living in buildings without trees exhibited more procrastination when facing problems and assessed their issues as more severe, long lasting, and less solvable than adults in green surroundings.²⁴ Author Richard Louv states that exposure to nature around the home or even in a room with a view helps protect children’s psychological well-being. He also notes that caregivers have observed positive behavior changes in children with disabilities when the youngsters spend time in direct interaction with nature.²⁵

Today more than ever, our students suffer from high levels

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of stress. Providing them—and ourselves—with time in nature and with natural areas around the school is one way that we can help reduce the toxic effects of stress on the body.

Conclusion

The Adventist philosophy places much emphasis on wholistic development and health and on nature as God's revelation. Enabling our students to interact with nature will provide spiritual, cognitive, social, and physical benefits. These opportunities will also help them learn and remember more, and teach them habits of exercise. When students learn to enjoy nature at a young age, they will be more likely to spend time outdoors as adults and continue to reap the benefits. Thus teachers can help students build a love for nature that will last into adulthood and be passed on to their own children.

Adventist schools can create a schoolyard habitat that provides space for their students to interact with God's creation. Teachers can bring objects from nature into the classroom and take students on learning-oriented field trips to nature centers, parks, and other natural spaces.

Learning to see God in nature and to recognize spiritual lessons in nature takes time and an understanding of the natural world. If you want your students to reap the spiritual benefits of nature, you must become engaged in nature with them! As secular society becomes more and more aware of the need for nature, and as science discovers its benefits, Adventist educators can play an important role not only by implementing nature education, but also by emphasizing its spiritual importance. 🍃



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