

EDITOR'S NOTE

Photo courtesy OMSI



On a recent rainy day visit to a Northwest science museum, I watched toddlers happily navigate an exhibit called the “Science Playground.” Armed with a pail and shovel, one child explored the physics of sand, intently watching as the grains rearranged themselves

each time he dipped into the sandbox. Across the room, a little girl experimented with a water wall, spinning wheels and turning valves as the stream flowed over, around, and through the obstacles.

“Young children are more scientist than anything else,” observed the late Herbert Zim, a professor and editor of the Golden Nature Series of small books that introduced countless youngsters to the wonders of the natural world. Indeed, from the earliest age, children are actively manipulating and interacting with their environment, trying to make sense of things. The barrage of questions seems endless: How does this happen? Why does this happen? What happens if I change things around?

Albert Einstein warns us, “The important thing is not to stop questioning.” But, that’s exactly what occurs as the child grows older and loses that natural curiosity. One study asserts that 57 percent of our students get “turned off” to science by the time they reach seventh grade.

Why is that such a troubling statistic? One reason simply is that developing scientific literacy is critical today and will become increasingly so. Not only does science personally affect our lives through the physical world, medicine, and technology, but it’s also at the heart of some of the thorniest ethical issues we face as a society. From global warming to stem-cell research, nuclear capabilities, and the depletion of fossil fuels, the citizens of the 21st century will be called on to make decisions that require an understanding of the basic laws of the universe and the capacity to weigh evidence-based arguments.

Underscoring the importance of science education, the U.S. Department of Education is training a spotlight on the subject. Under the No Child Left Behind Act, states must develop science standards by 2005–2006. Beginning in the 2007–2008 school year, states are required to administer annual science assessments at least once in elementary, middle, and high school. These assessments must be aligned with state standards and involve multiple measures, including higher order thinking and understanding.

In this issue of *Northwest Education*, we look at how our region is preparing to meet the NCLB challenge. “Measuring Up to Standards” describes Oregon’s unique “claims-evidence” approach to science instruction and assessments that incorporate work samples. We also see how Washington, Montana, Idaho, and Alaska are setting their own course.

On the campus of Western Washington University we’re introduced to a bold initiative to transform the way students and teachers are taught scientific principles. We travel to frozen Alaska—where polar bears are just one of the complications of field trips—to find out how students are collecting important data for a university geophysicist. And, at one of the nation’s oldest outdoor education programs, we camp out in an Oregon forest where sixth-graders learn enduring lessons about the environment and themselves.

In interviews with some of the Northwest’s outstanding scientists, we’re reminded of the role that teachers play in nurturing groundbreaking biologists, geologists, physicists, and chemists. Someday—with any luck and good teaching—that young child who marvels over the way sand particles filter through a sieve may turn out to be the next Newton, Watson, or Curie.

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