

# Why Science



# Outdoors?

## Martin E. Fortin, Jr.

Director of Learning Centers, AWSP

### PRINCIPAL EVALUATION CRITERIA

Aligning Curriculum; Improving Instruction, Engaging Communities

*Last spring, I wrote about the advantages for principals in Washington state by having our own residential outdoor learning centers for our students. That was the “30,000-foot view” of our operations. Recently I heard a touching testimony about using the outdoors to teach science that was very personal and meaningful. Below is an excerpt from her presentation to the PEI Board of Directors. Heather Sisson is the elementary science instructional specialist for the North*

*Thurston Public Schools. As an outgrowth of her passion for science teaching she is also a facilitator and curriculum writer for the Pacific Education Institute (PEI). PEI is a nonprofit in Olympia that has brought us the concept of FieldSTEM®—using the outdoors to teach science. Heather is also a donor to PEI. Here is an excerpt from her presentation to the PEI Board of Directors describing why she is inspired by FieldSTEM® and why she donates to the effort to take students outdoors to learn.*

I believe that our youngest children come to us with intrinsic curiosity. They are born scientists, making sense of the world by testing theories and asking questions. It’s a beautiful thing to witness a child making sense for themselves; their eyes get big when they realize they’ve figured something out. It’s what many teachers I mentor say is the reason they go into teaching — the “ah ha!” moment.

Eventually little scientists head into our schools, where they have a small window of time to decide whether they will continue asking and searching to build meaning for themselves or begin to lean on others to tell them why and how things are. I believe scientifically literate adults, or young adults, have maintained the wonder they carried with them when they entered elementary

school. They are creative thinkers and problem solvers. Their questions were respected and developed with support from adults who aimed at fostering curiosity. They continue to ask, “Why?”

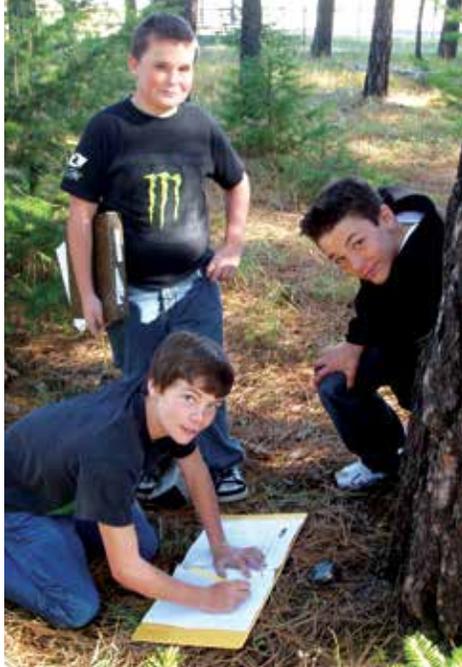
“It’s a beautiful thing to witness a child making sense for themselves; their eyes get big when they realize they’ve figured something out.”

We need to prioritize science and the learning opportunities it provides children inside elementary schools — and outside classroom walls — as equitably as other valued subjects like reading, writing, and math. Science

allows students to approach learning at whatever level of expertise they have when they first engage, to build their own meaning in a space where mistakes are visible steps to learning, and to celebrate the growth they have made regardless of whether they have arrived at the “final answer” yet or not. It is an equalizer to diverse populations and varied backgrounds who can be marginalized without multi-sensory learning experiences. Science in elementary school develops cooperation, discourse, evidence seeking, and reflection no matter the age of the scientists. You do not have to wait for a certain developmental level to be able to engage in “real science.”

In my district, my role as Elementary Science Instructional Specialist is to support teachers in service of growing more depth of scientific understanding in our students. I

“ In Thurston County, where they all live, five students shared that they’d never been around trees that tall, and two said they had not been to a creek or an ocean.”



champion prioritizing time to grow curious and reflective children through science.

The tenets I work within are Integrity, Authenticity, and Equity, especially with our highly mobile military population and diverse student backgrounds. Integrity and Authenticity are mandatory when building communities with new members frequently joining them, who aren’t afraid to fail, pull together, and work toward solutions or answers. Resilience has to be intentionally grown if you are going to be a courageous scientific community.

Equity is critical if a class is to look back on a learning experience and create meaning together. Any student excluded means one less meaning-making voice.

During my first year in this role, I joined a fifth-grade class that went out water quality testing with South Sound GREEN. This authentic, outdoor, citizen science project was impressive to me because our children’s data would inform “real science.” Students worked with chemical processes to run multiple trials, record data, and discuss right then what could have contributed to the readings they had taken! A few discussed how it would impact salmon runs.

I asked multiple groups of children what was the coolest part of their day, and I was sadly surprised. Sure, many said they felt like real scientists, or they liked applying what they’ve been studying in class. But, what struck me was that five of the 23 students said they liked being out near big trees. In Thurston County, where they all live, five students shared that they’d never been around trees that tall, and two said they had not been to a creek or an ocean. At 12-years old, that was saying something.

Gone are the days of assuming children have had “common experiences” when they begin school. This is now a large part of my job, tying equitable outdoor experiences

to Next Generation Science Standard learning targets in order to leverage more support within our educational systems, and connecting students to their environment and community through partnerships.

I love helping teachers try new things, engaging them as learners, supporting their goals, and collaborating with them around how to integrate subjects so that science keeps receiving a portion of the classroom day. I love helping them explore why science is important, and then helping them move into how it fits naturally into the way students learn and what they already are teaching, and stretching them to get students outside to give context to what they are studying. ■

*If you share Heather’s passion for having all students in Washington state learn outdoors, visit PEI’s website: [www.pacificeducationinstitute.org](http://www.pacificeducationinstitute.org) and AWSP’s Learning Centers website: [www.awsplearningcenters.org](http://www.awsplearningcenters.org) to learn how you can engage students in your school to use the outdoors for learning. Heather’s full statement in support of PEI’s year-end campaign will be available on the PEI website later this year.*