



STORIES FROM THE CLASSROOM

Forest Hills Lutheran Christian School
Cornelius, OR

“If students read about science, then the students have learned about science.”

This is a common approach to Science education. Mike Schiemann, principal of Forest Hills Lutheran Christian School in Cornelius, Oregon, a suburb of Portland, discovered that the school was struggling with this approach when he arrived at the school three years ago. Students were learning science using textbooks, with limited opportunities for hands-on scientific inquiry. As the new principal, one of the immediate items Schiemann was tasked with was conducting a deep examination of the curriculum and how subjects were being taught at the school. Science stood out as a major area in need of improvement, and finding a solution was subsequently tasked to the school's Curriculum Committee.

“With science, students need to have hands-on experience and that wasn't happening,” Schiemann said. “Textbooks had their purpose once upon a time—it's how anyone in my age category was taught. However, the world today is not the world our students will face as they move onto their career path in the future, so it is critical that we teach them for an evolving tomorrow.”

Searching for Solutions

To shore up the school's science curriculum, the committee explored executing a two-pronged approach: develop a full-service science lab on campus and implement a comprehensive science curriculum to provide hands-on science learning. After evaluating a few different programs, the committee decided to pilot the award-winning Full Option Science System (FOSS), part of the School Specialty family of brands, as it came highly regarded from colleagues at Faith Lutheran School in Lacey, Washington, one of Forest Hills' sister schools.

Developed at the Lawrence Hall of Science at the University of California, Berkeley, FOSS is the leading active-learning science program in the United States. With an emphasis on learning science by doing science, The FOSS program seamlessly blends engaging, hands-on science investigations with science writing, language development, reading in informational texts, online technology, outdoor experiences, and formative assessment, inspiring students with STEM and helping them to construct increasingly complex understanding of science concepts over time.



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The Impact of FOSS

As a preK–8 private school, Forest Hills must raise all its own funds and Schiemann knew the 18 FOSS Next Generation Elementary modules were a bit out of reach for the school's budget. However, two modules were perfect to run a pilot and Schiemann decided if students and teachers liked FOSS, he would budget for two kits a year until the school had all 18.

FOSS quickly ignited student's interest in science. Among student's classroom projects were experiments with fiber optics and building their own instruments to study sound. Students couldn't wait to get home at the end of the school day to tell their parents what they had learned about science. The enthusiasm was contagious, as parents got excited about how energized their children were about FOSS and science. In fact, at Christmas time, instead of giving holiday gifts to teachers, two parents wrote the school a check to cover the cost of two more FOSS kits.

"The ball was really rolling at this point," Schiemann said. "Parents could see the impact and the students were finally engaged in science again."

Reading Toward Science Success

With excitement about FOSS sweeping the school, Schiemann and the curriculum committee decided to go out of the box and hold a fundraiser toward the cost of two more kits for a total of six—four more than originally planned for that school year.

The staff developed a school-wide Read-a-Thon, with the goal of raising \$3,000. Students leapt into action, reaching out aunts, uncles, grandparents, friends and others for pledges. Even the youngest learners were able to participate via the school's home reading program, which encourages parents to read to their preschoolers at home, with the number of books read counting toward the Read-a-Thon.

The six-week Read-a-Thon far exceeded its original goal of \$3,000, raising \$7,000.

"That just blew us away," said Schiemann. "It was tremendous."

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Schiemann created a bulletin board to track the school's progress toward the purchase of FOSS kits and how each kit was paid for, including via the school budget, donations or the Read-a-Thon. By the end of the school year, Forest Hills had 14 of the 18 kits it needed for implementation. A few months later, a parent came forward asking how much the remaining kits would cost. They then donated the entire amount to purchase the last 4 kits.



Moving Forward with FOSS

For the 2017–2018 school year, Schiemann plans to move full-steam ahead with FOSS, including a formal professional development training session with School Specialty representatives in order to ensure teachers are using the program to its full potential. He's also excited to incorporate the program into the new science lab, still in planning stages.

Schiemann praises FOSS for its ease in integrating collaboration among students, development of social interaction skills and authentic approach to teaching science.

"For anyone considering FOSS, I would recommend it 100 percent," Schiemann said. "If you really want science to have an impact, it needs to connect to real life and FOSS connects to real life."

See more success stories at deltaeducation.com/fossresults