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Professionals Enrich Classroom Lessons With Expertise

Schools Draw Historians, Scientists, Mathematicians, Artists

By [Kathleen Kennedy Manzo](#)

A typical class of 4th or 5th graders might be skeptical about the potential for fun when a mathematician or historian pays a visit to class. But not at Stevens Elementary School in Seattle, where professionals-in-residence might ask students to test a homemade apple launcher to learn about trajectory and other algebra concepts, or sit on a desk and pretend to row the boat that carried George Washington across the Delaware River in 1776 to surprise British and Hessian troops.

The school has long tapped into a corps of local professionals in the arts, math, and history as a way of enriching the curriculum and engaging students in activities that bring the content to life.

Such arrangements are popular across the country as schools collaborate with community groups, businesses, universities, and individual professionals to expand on traditional curricular programs without sapping their limited budgets.

At Stevens and several other Seattle schools, historian-in-residence Mary Anne Christy works with classroom teachers to plan lessons and activities that give depth to a historical topic or era that students are studying.

Drawing on her theater background, Ms. Christy has helped students write

plays and perform re-enactments in the subject, such as a dramatic recitation of the Declaration of Independence that accentuated such important words as “liberty” and “equality.”

“My goal is to capture their imagination and make them love history,” she said. “Teachers can’t always go into that kind of depth, so the best situation is when I’m supporting what the teacher is doing in social studies, and I can come in and go deeper into one thing.”

Ms. Christy conducts lessons at Stevens weekly throughout the school year. The school’s vocal music teacher and artist-in-residence meet with each class weekly as well, while the mathematician-in-residence plans enrichment lessons for accelerated-math students. Stevens Elementary also offers after-school programs, like chess, knitting, and science, taught by experts from the community.

“As school budgets have gotten cut more and more, we’ve asked what do the children at our school need and how can the [PTA] help fill in holes or provide enrichment,” said Wendy Saffel, a co-president of the Stevens PTA. “There’s a big wonderful world out there with people with all sorts of specialties and information, and we have learned how to tap into those resources,” she said.

The Stevens PTA provides more than \$30,000 for the year-round residencies in art, history, math, and vocal music.

Community Partnerships

In place of such funding sources, schools have found ways to collaborate with organizations with deeper pockets and broader reach to pay for partnerships or recruit volunteers to share their expertise with young people.

For little or no money, Washington Latin School, a charter school in the District of Columbia, offers normally costly programs to its diverse group of 334 students through a dozen partnerships with private-sector and cultural institutions in the nation’s capital.

An arrangement with the renowned Shakespeare Theater Company, for example, allows the school to teach the playwright's "Twelfth Night" at each grade level with the help of experts, and to attend the theater's rendition of the play.

Several teachers at the school work with retired scientists to create elaborate experiments related to lessons in the subject.

A local nonprofit group, [Retired Scientists, Engineers, & Technicians](#), or ReSET, matches volunteers with science backgrounds with teachers at the school.

On a snowy, icy afternoon last week, one ReSET volunteer hauled a carload of equipment to the school for a lesson on wind. With a small scale model of a house that he built, a leaf blower, and different kinds of fasteners, the volunteer and the teacher, Elise Baran, helped students test various roofing materials and features to determine which structures might hold up best in a hurricane.

ReSET volunteers work with 5th and 6th graders at the school periodically throughout the school year. The school's partnerships have led to a number of memorable lessons for students and teachers at Washington Latin, according to Sonya Hoffmann, who coordinates its community partnerships.

"Here's this person who brings an incredible enthusiasm for a life spent in science showing our students that science is this magnificent profession, and taking it out of the theoretical, textbook-based realm ... to real life," she said. "It is especially valuable for students who don't have role models like this."

Range of Benefits

While anecdotal information suggests that such programs deliver a range of benefits for students, teachers, and the experts as well, little research is available to quantify such professionals' impact. Such arrangements are popular, and teachers and administrators believe they are valuable, but data on their prevalence, frequency, and quality are scarce, according to Sandra

Laursen, a social sciences researcher at the University of Colorado at Boulder.

“The benefits largely seem to be that they develop an interest and enthusiasm for science [in students], and a sense that maybe science isn’t so boring after all,” Ms. Laursen said. “The teachers reported seeing good science modeled, and that can have an influence on their beliefs about pedagogy and their ideas about how to approach science teaching.”

Ms. Laursen and her colleagues have studied such partnerships between science departments at a university and local school districts.

One such program pairs graduate students at the University of California, Berkeley, with area teachers. The university screens interested graduate students who then receive training from Community Resources for Science, a Berkeley-based organization that provides professional development in science, on how to craft age-appropriate lessons aligned to the state science curriculum for a particular grade.

More than 70 graduate students are active in the program and often work in teams to devise lessons and experiments that they can teach once a month in nearby elementary schools. The schools and students aren’t the only ones who benefit, according to Robert Bergman, a Berkeley chemistry professor who helped get the initiative started.

“Faculty and graduate students both get something out of the program, too, because a lot of the funding agencies that give us grants want to know what the broader impact of our work is; they want to know about our outreach efforts,” Mr. Bergman said. “But mostly they do it because they like doing it, and they get very strong responses from the kids in these classes.”

Teacher Support

In addition to whetting students’ interests in science, the visitors help hone critical skills, such as observation, data collection, and experimentation, said Anne Jennings, who runs Community Resources for Science with Nicki

Norman. They also provide support and guidance for teachers who may not have a background in the discipline.

“When we started the program, we recognized that elementary teachers, in particular, don’t have a lot of personal background or training or confidence for teaching science, but elementary kids are the best audience for teaching science,” she said. “Yet there are all these great resources in the community, ... so we help teachers figure out what’s available.”

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