

The ReSET Report

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ReSET Supports Teachers In Reaching DCPS Science Standards

By Lyndi Schrecengost

Over the years many people have asked if ReSET improves student test scores. Although this is difficult to quantify, we've had many teachers attest to how valuable ReSET is in reinforcing classroom curriculum, and they often point to specific improvements in student performance around key science and math concepts. Teachers and volunteers work cooperatively—volunteers complement lesson plans, and teachers often revisit the new skills students are learning with their ReSET volunteer.



ReSET volunteer Eva Jacobs guides students through a lesson on probability, a concept that showed up three times on the math standardized test.

Statistician Eva Jacobs designs one of her ReSET sessions around the concept of probability. This turned out to be a perfect fit with what teacher Kathryn Ross was

covering in math class that term. After Jacobs' first lesson, Ross asked her to do a few more sessions on the subject. Later, she was pleased when three questions on probability showed up on the standardized math test. Her class was well prepared.

ReSET volunteers endeavor to create exercises and experiments that enhance classroom curriculum, but they also hear from teachers that their work is helping to fulfill the science and math standards for D.C. Public Schools.

"Earth and Life History" is one of the broad science standards required of 6th graders. This includes a section on fossils as evidence of how life and environmental conditions have changed. Physical Anthropologist Beverly Yett makes a conscious effort to customize her lessons to these concepts.

"Using bones as a starting point," says Yett, "I discuss what you can learn from bones, even single isolated bones, and then tie that to Neanderthal man (e.g., how did they paint those murals of Neanderthal man at the Museum of Natural History?)" By examining the muscle markings on the bones themselves, Yett helps the children to make deductions related to the height and posture of earlier human forms. She also conducts a "archaeological dig" with the children, using trays with sand and buried bones (human and chicken), and then graphing the results to see

what might be deduced about the specimens they found at their "dig."

Another science standard for sixth graders is "Weather and Climate." Ken Brown, a former Systems Engineer with NASA who volunteers at Malcolm X Elementary School, used a



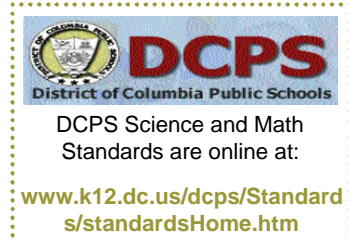
Children measure a femur bone during one of Beverly Yett's volunteer sessions, fulfilling one of the DCPS Science Standards related to Earth and Life History.

demonstration on the Bernoulli Principle to illustrate how strong air pressure is, and how differences in altitude will lead to specific meteorological conditions, the generation of winds, and the force of hurricanes.

Engineer Frank D. Winfield was excited to be able to introduce his class at Orr Elementary School to advanced engineering principles, but was initially a little concerned that such concepts might be too complex for them. He was pleasantly surprised to discover that dependent and independent variables were listed as a science standard for fifth graders.

One of the more overarching goals of the DCPS science standards is to understand that scientific progress is made "by asking relevant questions and conducting careful investigations." Winfield makes a point of engaging students in interactive dialogue by asking them simple questions pertaining to how and where objects are weighed, and then showing them how to build a simple scale of their own. "Getting the students actively involved is very important," says Winfield. "I like to ask open-ended questions that require them to think about a response, rather than give a yes or no answer."

Ken Brown poses the question "How big is a cricket?" and then shows his class how to collect evidence related to the food, size, and jump of crickets. "They learn how to acquire data through laboratory effort, to check and verify their findings, and to illustrate their results through the use of graphs," says Brown. "In short, they learn how to behave like scientists."



*** Next Volunteer Meeting ***
March 15th at 10:30 am.
Call 202-966-2122 for more information.