



Rocky Mountain Middle School Technology Instructor Michelle Miller shows her excitement at an assembly to announce a \$15,000 grant for improving STEM instruction.

## Educator jumps for joy after STEM grant announcement

for INL Communications & Governmental Affairs

The resources to update and modernize educational activities aren't always available to support teacher initiatives.

"I watched an educator literally leap in the air with joy and then tear up as she told students they would have the equipment they need," said Anne Seifert, INL's iSTEM program coordinator. "You realize in these moments that the grants make a big difference in providing quality STEM instruction."

In October, INL announced awards for school district STEM proposal grants worth \$15,000 would be provided to Idaho Falls School District 91 and Bonneville School District 93. Battelle Energy Alliance (BEA) provided \$30,000 in grant funding to improve elementary, middle school and high school STEM curriculum.

The grant awarded to District 93 will fund its "Future Technologies for Future Jobs Project." The goal is to provide students access to advanced technologies to develop interests and skills to prepare them for careers in the STEM field. Providing Lego kits, computers and Apple iPods to the program leverages hands-on activities in the classroom to teach programming and robotics skills. Students will build robots to perform specific tasks and solve problems. iPods and wireless Bluetooth technologies are programmed to control sensors and motors.

"The equipment helps students, many from a disadvantaged background, to program with technology they wouldn't otherwise be able to access," said Chuck Shackett, School District 93 superintendent. "The skills they learn here will help their transition to high school and we hope influence their pursuit of higher education and a STEM career."



**Rocky Mountain Middle School Technology Instructor Michelle Miller explains how the school district will spend its STEM grant.**

Students in the Future Technologies for Future Jobs Project will work in teams to apply solutions to real-world problems. Building and programming a robot made out of Legos develops interpersonal, mathematical and problem-solving skills. These activities also support greater competence in reading and language for technical subjects aligning to the Idaho Core Standards.

District 91 is using the grant to support the needs of several schools requesting additional funding to improve the technology available to students. At Eagle Rock Middle School, the funding will purchase a ShopBot for students in the pre-engineering and technology program. The ShopBot assists in the digital design and fabrication of student projects. The school has committed to match this portion of the grant to purchase the equipment and the necessary accessories to assist kids in the classroom.

"It was fantastic that the students were ready to show us their current experiments and then tell us how the grant would enhance their laboratory," said Marsha Bala, INL Educational Outreach Program director. "Hands-on work with scientific instruments is exactly the type of experience we need in future INL scientists."



Idaho Falls High School has modern science laboratories, but the equipment is very limited. The school plans to purchase Vernier sensors and probes to augment the lab experiences for its students to heighten their physics experience.

"Attending the STEM workshops was a springboard to new ideas and advanced projects," said Matt Houser, Idaho Falls High School teacher. "I have taken the technology from the workshop to the classroom and the students are enjoying the interactive course work."

Student enrollments in physics courses at the high school have dropped, causing serious concern for this important course offering. The faculty has found that providing more equipment leads to more

***Bonneville County School District 93 Superintendent Charles Shackett, left, instructor Michelle Miller, middle, and Rocky Mountain Middle School Principal Jason Lords, right, with INL's Angela Good, Brenda Greenhalgh, Anne Seifert and Marsha Bala.***

hands-on activities and a higher level of intellectual engagement for students.

Compass Academy, a magnet high school in Idaho Falls School District 91, will use its portion of the grant to develop a full video production lab with professional-quality video and audio equipment. The equipment allows students to render video at a much faster rate, making their projects more realistic and timely. The school had purchased good quality video equipment but it falls short of the level required to provide students with a true professional-level experience.

In 2014, 63 STEM grants from INL provided materials, resources and technology to enrich STEM education and bolster students in STEM. The national lab's goal is to pique students' interest in science, technology, engineering and math as early as kindergarten and build on that STEM literacy throughout their school years. The future of the lab relies, in part, on the next generation of scientists and engineers who will conduct cutting-edge research and invent new technologies. Since 2007, INL, under the management of BEA, has provided nearly \$4 million in support of K-12 STEM education in Idaho.

*(Posted Jan. 5, 2015)*

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