

PARTNERING FOR K-12 EDUCATION

By Mike Journee



IT HAS EVERYTHING.

It's a university-community partnership, with well-established and well-respected partners. Its focus on science education makes it immediately relevant. It advances key graduate programs at Boise State. Its focus is local and could leave a long lasting legacy with thousands of kids. And, like a lot of things Boise State is doing these days, it sets a new record.

"You couldn't have designed an initiative to better reflect the principles that are paramount to our growing research programs all across campus," says Mark Rudin, Boise State's vice president for research.

Over the summer, Boise State researchers partnered with three Treasure Valley science education centers to create locally focused

lessons designed to stimulate an interest in science, potentially reaching up to 40,000 of the region's school children.

The new program is funded with a \$2.26 million grant, the largest National Science Foundation grant ever awarded to Boise State, through the NSF's Graduate Teaching Fellows in K-12 Education program.

Over the next five years, 32 Boise State graduate fellows in biology and the geosciences will work with educators at the Discovery Center of Idaho, and the City of Boise's two science education centers, the Foothills Learning Center and the Boise WaterShed Environmental Education Center. Their charge is to develop new science curriculum with local and regional themes for the K-12 classes that visit the centers

regularly. They will also develop programs and activities that will be used in traditional classroom settings through outreach.

"This research is timely and relevant to the community," Rudin says. "Its legacy will not only be new and engaging science curriculums for educators, but also a revitalized interest in science among our children. The community partnerships that will be fostered and the experience our graduate fellows will gain are invaluable."

Karen Viskupic, a Boise State geosciences professor, was awarded funding for the initiative by the NSF and will oversee the project along with Jim Belthoff, chairman of Boise State's Biology Department, and David Wilkins, a professor of geosciences at Boise State.



photos provided by Discovery Center of Idaho

COUNSELOR EDUCATION ACCREDITED

The Department of Counselor Education's school counseling program received accreditation this spring from the Council for Accreditation of Counseling and Related Educational Programs. The accreditation decision was based on the board's extensive review of self-study documents, a report from a visiting CACREP team, and the institution's response to the visiting team's report.

Carol Bobby of CACREP wrote in the acceptance letter, "Programs receiving accreditation for an eight-year period deserve to be commended for the work they completed throughout the accreditation process. This is indeed a worthy achievement. Congratulations!"

"On behalf of the CACREP Board, I would like to extend my thanks to you and your administration for the support provided to this program. Such support is considered vital to maintain quality educational offerings. Once again, congratulations are extended to all of those involved in making this a successful accreditation review process."

Department chair Ken Coll accepted the certificate at the College of Education Advisory Board meeting in April.

SHAPING THE NEWS



Boise State professor Peter Müllner, director of the Center for Materials Characterization and an associate professor of materials science and engineering, made headlines earlier this year by developing a new "magnetic shape-memory foam" that could have applications in the space and automobile industries.

In his research, which was funded by the National Science Foundation, Müllner developed a new porous foam of an alloy that changes shape when exposed to a magnetic field and then "remembers" or returns to its original shape. This polycrystalline nickel-manganese-gallium alloy is potentially cheaper and lighter than other materials currently used in devices ranging from sonar to precision valves.

Müllner conducted the research in conjunction with David Dunand of Northwestern University.

The new "magnetic shape-memory foam" could also have applications in the space and automobile industries, according to NSF program director Harsh Deep Chopra.

"It's the first foam to exhibit magnetic shape memory – it has great potential for uses that require a large strain and light weight, such as space applications and automobiles," says Chopra. "These materials are able to do more with less, given their foamy structure, and provide a sustainable approach to materials development."

Müllner also co-authored a paper on the research with Dunand that was published in the highly respected physics journal "Physical Review Letters."

"I am excited about this project because it will benefit both the university and the community," Viskupic says. "The project will build on our partners' success by funding graduate students to develop locally relevant science education activities. These activities will help K-12 students and the community learn about biology and the geosciences and understand the importance of scientific research. At the same time, our graduate fellows will gain experience in communicating science to K-12 students, which will prepare them for interacting with non-technical audiences throughout their career – audiences that may include policy makers, politicians, school groups and the general public."



Geosciences professor Karen Viskupic announces the record-breaking NSF grant.

Boise State's partners are equally excited about the project's prospects.

Boise Mayor David Bieter says the project advances the city's emphasis on environmental education at the Foothills Learning Center and the new Boise WaterShed facility.

"We're thrilled to have these graduate fellows contributing to Boise's environmental education centers. The classes and programs they develop will provide an even richer educational experience for the teachers and students who visit," Bieter said. "This partnership developed by Boise State will touch the entire community and is another reason why Boise is the most livable city in the country."

By focusing on the creation of a lifelong interest in science, Woody Sobey, the education director at the Discovery Center of Idaho, says the project was a natural fit for the popular hands-on science learning center.

"We're very pleased to be part of this exciting project," Sobey says. "It will be a great addition to our offerings and our kids' engagement."

Top left: Boise State's NSF graduate teaching fellows pose this summer with program leaders, Boise State leaders and partners, including Boise Mayor Dave Bieter.

Left: Youngsters like this little girl visiting the Discovery Center of Idaho will soon be learning new lessons created by Boise State graduate researchers.

Photo credit: Discovery Center of Idaho