

# Project ReCharge brings energy efficiency and sustainability to the classroom

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Northern Nevada students are finding new ways to increase sustainability and energy efficiency through a program called Project ReCharge.

Project ReCharge (<http://envirolution.org/programs/education/project-recharge>) is hands-on project-based curriculum where students create proposals focused on saving energy and money within their own schools. Middle school and high school students from the Washoe County and Douglas County School Districts showcased their proposals at a year-end recognition event held May 31 at the Innevation Center.

"You've got students who are engaged in their education," David Crowther, executive director of the Raggio Research Center for STEM Education in UNR's College of Education and president of the National Science Teachers Association, said. "They are not just memorizing things, they are solving problems. And not just any problems, but real world problems."

Since 2015, Project ReCharge has engaged 4,523 students, partnered with 11 schools and has led to the implementation of three student proposals within the school district. The implemented projects have saved more than \$45,000 a year in energy costs.

The program is funded by a National Science Foundation grant in a partnership between the University of Nevada, Reno STEM Raggio Research Center, the Washoe County School District (<http://www.washoeschools.net/>) and Envirolution (<http://envirolution.org/>), a local nonprofit organization,

"Our mission is to inspire the next generation of leaders and workers that will drive the growth of a sustainable economy," Vanessa Robertson, Envirolution executive director and Project ReCharge director, said.

Project ReCharge is also designed to get students interested in science, technology, engineering and mathematics (STEM) careers.

"We all are aware of the flooding of STEM careers and jobs that are coming into our community and we need to get our students prepared for those jobs," Robertson said at the event.

Students worked in groups to develop their own projects. Twenty projects from 11 schools were selected to be showcased at the May 31 event. Projects included composting and recycling, motion-sensored lighting, installing energy generating bicycles and more. One group's project from Mendive Middle School in Sparks proposed a plan to save water at their school by installing water sensors in the restrooms.

"We wanted to think more about water conservation because of the recent drought," Mealea Dryer, a student from Mendive Middle School, explained.

Their project estimated they would be able to save Mendive 80-100 gallons of water per day if implemented.

Another group's project from North Valleys High School proposed a plan to replace the school's fluorescent lights with LEDs.

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"We were surprised to learn that we had the highest energy bill in the district," Jaiden Stewart, a sophomore at North Valleys High School, said.

Their proposed project is estimated to save the school \$4,000 per year and is expected to have a payback of three years.

Robertson announced at the event that Washoe County School District plans to implement the North Valley project this summer. The school district is looking at all of the other students' projects in closer detail with the possibility of funding additional projects.

Teachers at the event explained their students get excited about their sustainability projects because they are able to see tangible results from their work.

"It is really nice to have curriculum that students can take home and discuss with their parents," Todd Markey, a teacher at North Valleys High School, said.

"It makes science a lot easier and a lot more fun," he added.

Project ReCharge is continuing to expand. The funding has been extended for another year allowing the program to be added in seven additional schools in northern Nevada and to engage an additional 1,000 students. For more information about Project ReCharge, visit <http://envirolution.org/programs/education/project-recharge/> (<http://envirolution.org/programs/education/project-recharge/>).

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