



TEACHERS take advantage of **PROFESSIONAL DEVELOPMENT** opportunities and see student's scores rise at **BLACKRIDGE ELEMENTARY**

Student's SAGE science scores have moved from an average of 56 percent to 77 percent this past year at Blackridge Elementary.

Steve Giles, principal at Blackridge Elementary, attributes this success to their teachers who have taken advantage of professional development opportunities offered to the school by Dr. Steven Shumway, professor for the Technology & Engineering Education program in the Fulton College of Engineering and Technology at Brigham Young University.

Dr. Shumway is in his second year of work with Blackridge Elementary, and does grade specific work with their teachers using the science standards at each grade level for his activities. His teaching models everything from content information, to

resource and material management, to activity structure. The teachers then take the resources and information back to the students, where Dr. Shumway returns to co-teach with them and consult on things they can do to increase student engagement and improve student-learning outcomes.

Dr. Shumway was the recipient of this year's Utah STEM Innovation Award, which included \$2,000 to put toward STEM programming in schools. Dr. Shumway decided to use these funds to purchase Mag Lev tracks, pendulums, magnets, and a large assortment of other items, which have helped in Blackridge's effort to create an extensive resource and materials room for teachers and students including robots, consumables, and other STEM-related items.



"A huge part of the success can be attributed to the teachers who were willing to participate in professional development and make changes in the way they teach science content to include the engineering design process, thus allowing students to apply math and science content to design solutions to technological problems," said Shumway.

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In these photos, Dr. Shumway spends a morning working with second grade teachers modeling engineering activities that address core standards.

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