

Current CAMSE Projects continued

Shannon County Mathematics Improvement Project

The Shannon County Mathematics Improvement Project is a four-year US-DOE funded project designed to provide intensive, sustained mathematics professional development for every teacher and paraprofessional in the Shannon County School District. The professional development will focus on building teacher content knowledge and understanding of student thinking, as well as providing in-building support for the implementation of the district's recently adopted inquiry-based instructional materials. School leaders in the district will also participate in professional development each year. The administrator training is designed to build leadership capacity for supporting standards-based mathematics.

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Advanced Placement™ Power via On-line Engagement (APPLE)

The APPLE program enables recipients to develop or sustain programs that prepare low-income students to participate in Pre-AP® and AP® courses and college board exams. Science, mathematics and english courses are offered through this program to teachers from school districts all over South Dakota. This federally funded (US-DOE) three-year award is a partnership of Technology & Innovation in Education (TIE), SDDOE, CAMSE/BHSU.

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Resource Center

CAMSE houses an extensive collection of materials for mathematics and science instruction in grades K-12. The Resource Center offers classroom science modules, K-12 inquiry-math programs, videos, and other teacher resources available for check out. Materials available include FOSS, STC, Insights, Connected Math, Investigations, and many others. Educators are encouraged to visit the Materials Center to examine or borrow materials for evaluation or classroom purposes. CAMSE offers customized services through a Memorandum of Understanding with school districts. Contact us for further details about this unique opportunity.

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Making sense of magnetism.

Center for the Advancement of Mathematics and Science Education

*A South Dakota Board of Regents
Center of Excellence*



Studying science and math can be a hair-raising experience.


**Black Hills
State University**
~Transforming Lives~
www.camse.org

The *Center for the Advancement of Mathematics and Science Education (CAMSE)* at Black Hills State University (BHSU) is a statewide Center of Excellence funded primarily through grant support and contracts along with funding from the South Dakota Board of Regents. Established in 1997, the mission of CAMSE is to improve the teaching and learning of mathematics and science at all levels, K-16. Some areas of emphasis include: professional development opportunities in mathematics and science content, pedagogy, and leadership; enriching experiences for K-12 teachers and students; and research on the teaching and learning of mathematics and science.



Elementary students test foods for vitamin C - an example of participatory science learning.

Radioactivity By Inquiry

This National Science Foundation (NSF-TUES) grant funded project is developing researched-based course materials to help college non-science majors and high school students learn about radioactivity; what it is, how it interacts with matter, and how it affects people's health. The goal of the course is for students to understand basic ideas about radioactivity through inquiry-based instruction that incorporates inexpensive experiments and special computer simulators. Radiation literacy is important! The resources and materials developed are being disseminated to university and high school science classes.

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Life Science Concepts for Teachers

This South Dakota Board of Regents (US-DOE Title IIA) funded grant project provides professional development workshops in Life Science Concepts for Teachers in grades 6-12 from across the state. This course is part of the Science Specialist endorsement program offered through BHSU, and can also be taken as part of the Masters of Science in Curriculum and Instruction (MSCI) degree.

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Sanford Underground Research Facility (SURF) - Education and Outreach

CAMSE/BHSU is partnering with Sanford Underground Research Facility (SURF) to deliver diverse education and outreach programs and to develop the Sanford Center for Science Education (SCSE) to be constructed on the Homestake campus. The education and outreach programs network scientists, educators, students, and members of the general public using the cutting-edge science taking place in our state. By facilitating rich, innovative learning experiences featuring the unique science and engineering associated with the underground facility, we hope to inspire learners of all ages.

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Teachers observe the separation of white light into its color components.

Promoting Reflective Inquiry in Mathematics Education (PRIME)

Project PRIME, now in its 11th year, is funded primarily by a grant from the National Science Foundation (NSF-MSP) and is a partnership between CAMSE/BHSU, the Rapid City Area School District, and Technology & Innovation in Education (TIE). The goals of PRIME are to improve student achievement in mathematics for all K-12 students in Rapid City Area Schools (RCAS), with a particular goal of reducing the achievement gap between Native American and non-Native American students; to improve the professional capacity of K-12 teachers of mathematics in RCAS; and to support the preparation of pre-service teachers from BHSU.

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Kindergartners performing division using manipulatives.

South Dakota Counts

South Dakota Counts Phase III is an on-going partnership between CAMSE/BHSU and the South Dakota Department of Education (SDDOE-Title IIB) to provide statewide professional development designed to build broad-based expertise and leadership to improve elementary mathematics instruction. Ongoing funding provides K-6 teacher leaders, in 123 school districts throughout the state, the opportunity to earn graduate credit hours in the K-12 Mathematics Specialist endorsement program.

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Best Practices in Teaching Mathematics and the New Common Core Standards Year 2

South Dakota Board of Regents has funded this US-DOE Title-IIA project. CAMSE/BHSU partners with Bennett County, Colman-Egan and Eagle Butte school districts, to support the South Dakota Counts Middle School Mathematics Project. Teachers from other school districts across SD also have the opportunity to participate in the professional development provided through the project. Black Hills State University, Dakota State University, South Dakota State University and the University of Sioux Falls also provide faculty support for this project.

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