THE HORSE BEFORE THE CART AND
BIG KIDS TEACH LITTLE KIDS:  AN
ALTERNATIVE APPROACH FOR SCIENCE
AND MATH EDUCATION IN SOUTH DAKOTA

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ABSTRACT

The University of South Dakota’s College of Arts and Sciences and School of Education established a teacher development partnership with Avon and the 21st Century Rural Schools Consortium (a group of participating high-needs schools in Region 3 and beyond) to provide two week-long short courses in summer 2009. The first course entitled “The Horse before the Cart:  Science Problems Driving Mathematical Understanding” provided depth of knowledge enhancement in mathematics by directing that science experimentation illustrate the need for mathematical modeling and understanding of the scientific phenomenon. The second course entitled “One Room Science Schoolhouse:  Big Kids teach Little Kids” was designed to partner a high school science teacher and a science teacher at the upper elementary grade level in order to provide innovative “hands on” science experiences to elementary students (little kids). These activities were delivered by high school students (big kids), guided by their teachers during the 2009/2010 academic year. Each short course provided the opportunity for participating teachers to earn two credits of graduate science content coursework through The University of South Dakota. Various aspects of the implementation of these short course activities into the classroom will be presented by two high school teacher participants.