

NO CHILD LEFT BEHIND GRANT ABSTRACTS 2014-2015

Following is a list of sub-grants funded by the Arkansas Department of Higher Education through the federally funded No Child Left Behind grant program. The purpose of the grant funds is to improve the quality of teaching in Arkansas. The grant notifications were distributed in March 2015. For more information and to receive a registration form, contact the project director of the funded project using the email provided below.

ARKANSAS STATE UNIVERSITY

\$62,939

Craighead County

Project Title: Integrating Science and Mathematics Using Project-Based Learning

Contact Information: Dr. Julie Grady – jgrady@astate.edu

The goals are to improve grades 4-6 science teaching and increase student science achievement. Objectives include (a) a statistically significant increase in teachers' knowledge of physical science, Earth/space science, and life science; (b) an increase in teachers' classroom use of project based learning within an engineering context; and (c) a statistically significant increase in students' knowledge of physical science, Earth/space science, or life science. Arkansas State University (ASU) partners include the Education Renewal Zone and Colleges of Sciences and Mathematics, Engineering, and Education and Behavioral Science (COEBS). The high-need LEA Blytheville School District is the school district partner. Instructional staff from ASU includes Dr. Ashraf Elsayed (Engineering), Dr. Julie R. Grady (COEBS), and Dr. Amanda Lambertus (Mathematics). In addition, an engineer from Nucor-Yamato Steel Corp will discuss engineers' work within industry. During the eight day summer and two fall face-to-face sessions, participants will engage in *Engineering is Elementary* units developed by the Museum of Science, Boston with funding from National Science Foundation. Several sessions will be scheduled for school-based mentoring of teacher teams. ASU will provide meeting space for the institute.

ARKANSAS STATE UNIVERSITY

\$58,123

Craighead County

Project Title: Science and Mathematics in Grades 5-7 (SM57)

Contact Information: Dr. Cynthia Miller - camiller@astate.edu

The Science & Mathematics for Grades 5-7 (SM57) project will provide a 3 hour graduate course for 20 grade 5-7 science and mathematics teachers to be held July 6 –9 and 13 - 16, 2015 with 48 hours of contact (8 six hr. days), two Sat. TBA 6 hour workshops during the fall, and a classroom visit by mentors to observe participants teaching SM57 lessons. The focus will be on developing rigorous integrated Physical Science/Data Analysis lessons aligned to the Common Core State Standards and the newly Next Generation Science Standards. Another focus will be on the Engineering Practices which are a part of the new NGSS science standards. SM57 will improve participants' Physical Science and Data Analysis content knowledge and pedagogy; and their professionalism by developing and publishing a 5E lesson plan, presenting at the Arkansas Curriculum conference, and by writing a state organization newsletter article. Teachers will

receive tuition/fees, \$300 stipends for the two Sat. follow-up trainings and 5E lesson plan, classroom books & materials valued at \$300, and Arkansas Curriculum Conference registration and luncheons. Participants will receive 15 hours of professional development credit for the 3 hr. graduate course and 12 PD hours for the follow-up trainings.

HENDERSON STATE UNIVERSITY

\$53,592

Clark County

Project Title: The Common Sense of Common Core: Practical Applications of the Standards for Grades 6-8

Contact Information: Ms. Betty Ramsey – ramseyb@hsu.edu

The Common Sense of Common Core: Practical Applications of the Standards for Grades 6-8 is a 10-day professional development institute designed to assist classroom teachers in implementing a broad researched-based approach to mathematics instruction that is “connected” with the Common Core State Standards in Mathematics. Participants will be involved in finding solutions which require mathematical applications to real-world problems. The vision of this institute is to produce mathematically proficient students who can demonstrate the use of mathematical principles and to prepare them for the PARCC assessment.

The summer institute will provide instructional support for teachers in designing units for the big topics in Grades 6-8 which include: Number Systems, Proportional Reasoning, 2-D & 3-D Geometry, Geometric Measurement, Transformations, Scale Drawings and Similarity and Congruence, Integers and Rational Numbers, Sampling and Statistics, Probability and Expected Value and Functions. Content and pedagogy will be connected with lesson format and planning, questioning and discourse, identifying and selecting worthwhile mathematical tasks, classroom assessment, problem solving and appropriate use of technology. The institute will be held during the weeks of June 22-25, 2015 and June 29-July 2, 2015 for grades 6-8 teachers. Two additional days of training during the school year will also be scheduled.

SOUTHERN ARKANSAS UNIVERSITY

\$59,992

Columbia County

Project Title: Get a Life: Science Math Integration Project

Contact Information: Dr. Roger Guevara – rcguevara@saumag.edu

A key tenet of the Common Core State Standards (CCSS) and the Next Generation Science Standards (NGSS) is that disciplines must be integrated and applied to real world practical situations to better address student learning. Employing an overarching theme, this research project focuses on embedding technology in the conceptualization, design, and evaluation of biological themes as an approach to integrate 4 core science ideas associated with biological sciences as delineated in the Next Generation of Science Standards: LS1A: Structure and Function; LS1B: Growth and Development of Organisms; LS2A: Interdependent Relationships in Ecosystems; LS2C: Ecosystems dynamics, functioning and resilience. Furthermore, all 6 of the crosscutting concepts will be used to link the different domains of biological science with mathematics using technology as an embedded tool for discovery when analyzing the following: 1) Patterns; 2) Cause and Effect; 3) Scales, Proportion, and Quantity; 4) Systems and systems models; 5) Structure and

function; and 6) Stability and Change in order to help make student learning explicit by using hands on methodologies and embedding technology. The content, grade level, pedagogical approach, learning experiences, and follow up activities have been exceptionally vetted to maximize enhanced teaching and learning for all science teacher participants providing instruction in grade levels 5-12, with an emphasis on the assessment of a blended science and math content knowledge.

UNIVERSITY OF ARKANSAS, FAYETTEVILLE

\$52,642

Washington County

Project Title: Science Content in the Elementary Classroom

Contact Information: Ms. Lynne Hehr – lhehr@uark.edu

The Next Generation Science Standards have been endorsed by the Arkansas Department of Education and apprehension is being felt by teachers/districts in Northwest Arkansas as to how to best fit science content practices (as highlighted in the *K-12 Framework for Science Education*) into their classrooms, specifically at the K-5 grade levels. Next Generation standards-based and science content- and engineering practices- driven, this two week institute will provide K-5 teachers with science content and engineering practices as they relate to specific science content/strands/topics set by the Next Generation State Standards in K-5 science. The summer institute will consist of one ten-day institute for K-5th grades. Two follow-up days with CMASE personnel will also be required in the fall for all summer institute participants. A needs' assessment survey will be given to the partner school participants in order to more closely plan for content specific needs. An optional three hour science graduate level course from the 60 hour institute will be offered.

UNIVERSITY OF ARKANSAS, FAYETTEVILLE

\$64,692

Washington County

Project Title: Improving Teacher Quality Institute – A Modeling Instruction Institute

Contact Information: Dr. Stephen R. Skinner – sskinne@uark.edu

The Improving Teacher Quality Institute, a Modeling™ Instruction Institute, at the University of Arkansas with participating teachers from high need LEA schools will provide high quality professional development opportunities for high school science teachers to gain physics and physical science content knowledge, develop their teaching strategies through modeling techniques, and attain the “Highly Qualified” status as outlined in the No Child Left Behind federal legislation. The institute will support a cohort of 24 teachers from high need LEA public and private schools from Northwest and North Central Arkansas and three student-teachers from the UATeach program for a sustained professional development of 12 months (60 contact hours) through a Modeling™ Instruction Institute. Instruction will be given in a 8-day residential intensive institute at the University of Arkansas including educational and mentoring activities. There will also be two one-day follow-up sessions for participants to share experiences in the implementation of workshop activities, technology, and concepts in the participants' classrooms. Support for the participants will include: content knowledge, supplies for implementing pedagogical approach in the classroom, daily stipend, and scholarship toward (3) hours of graduate credit.

UNIVERSITY OF ARKANSAS AT FORT SMITH

\$60, 860

Sebastian County

Project Title: Teach, Engage, Assess, Collaborate and Hands-On Teaching Practices with Next Generation Science Standards – Year 2

Contact Information: Dr. Darlynn Cast – darlynn.cast@uafs.edu

Teach, Engage, Assess, Collaborate and Hands-On Teaching Practices with Next Generation Science Standards – Year 2 is a professional development program designed to equip teachers for the implementation of NGSS into their teaching practice. The program is designed to teach teachers how to effectively integrate the three dimensions of NGSS, science and engineering practices, crosscutting concepts and disciplinary core ideas. TEACH NGSS year one focused on the Core Ideas in Life Science and Physical Science, introducing science and engineering practices. TEACH NGSS year two will focus on earth and Space Science.

UNIVERSITY OF ARKANSAS AT MONTICELLO

\$57,632

Drew County

Project Title: Summer Institute: Statistics and Probability, Grades 6-8

Contact Information: Ms. Wanda Jackson – jacksonwm@uamont.edu

The University of Arkansas at Monticello Summer Institute of Statistics and Probability (SP6-8) Project will focus on statistics and probability for mathematics teachers in grades 6-8. The focus of the project is to provide teachers with professional development that promotes the content knowledge and pedagogy to teach effectively to the rigor of the Common Core State Standards. The course, held in June 2015, will consist of eight six-hour workshops, two Saturdays (TBA) six-hour workshops during the school year, and two classroom visits by mentors to observe participants teaching statistics and probability lessons. Participants will receive tuition/fees or a \$1500.00 stipend for the ten workshop days in developing, teaching, editing, and submitting a statistics and probability unit plan. A lesson from the unit will be observed during the classroom visits. Participant will also receive professional development hours, classroom books and materials valued up to \$300.00, and registration and luncheon fees for the Arkansas Curriculum Conference. This project will improve participant's statistic and probability content knowledge, pedagogy, and their student's achievement in mathematics.