

NO CHILD LEFT BEHIND GRANT ABSTRACTS 2008-2009

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 2009. 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 **\$99,147**

Craighead County

Project Title: Biotech in a Box

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

The “Biotech in a Box” (Biotech) project will provide a 3 hr. graduate course for 25 grade 7 – 12 science teachers to be offered during the fall semester of 2009 and again in the spring semester with 45 hours of contact (15 weekly meetings, 3 hours each) during the fall semester and 15 hours of follow-up in the spring 2010 semester which includes two 6 hr. workshops, and at least two classroom visits by mentors to observe participants teaching with the Biotech in a Box Kit. This project will improve participants’ Life Science and Physical Science and content knowledge as related to cellular biology of plants and animals. Teachers will receive stipends of \$200 for the two Sat. follow-up trainings, and classroom materials valued at \$150. Participants will be certified to check out the Biotech in a Box Kits for use in their classroom. Participants will bring their students to the Arkansas Biosciences Institute to tour the facilities and to perform labs. The Arkansas Department of Education allows 15 hours of professional development credit for a 3 hr. graduate course; attendance at the follow-up sessions will provide an additional 12 hours of professional development in the areas of science content, instructional strategies, and technology.

Arkansas State University **\$64,988**

Craighead County

Project Title: Together We Teach: Reading and Writing Across the Content Areas-Part 2

Contact Information: Dr. Natalie Johnson-Leslie – njohnson@astate.edu

The ability to read and write proficiently lay at the front and center of student success in all subject areas. All content area teachers play a vital role in furnishing students with the requisite and prerequisite reading comprehension and writing skills. The purpose of this professional development workshop is to train 40-50 junior and high school teachers served by the Great Rivers Educational Cooperative to utilize effective reading and writing (literacy) strategies to sharpen students’ literacy skills. To improve skills in literacy, teachers need knowledge of effective research-based strategies to help students; increase reading fluency, improve vocabulary, strengthen reading and text comprehension as well as increase writing skills. Research shows a positive correlation between students’ vocabulary knowledge and their reading comprehension (Baumann, Kaem’enui, & Ash, 2003). Student success is intricately linked with their ability to read

and write and it is incumbent on teachers to help students attain these skills (Ness, 2007). The results of this 60 hours of intensive training will be teachers improving their content knowledge; being better equipped with reading and writing strategies; and the development of effective reading and writing teacher-made assessments. Rigorous evaluation techniques will be utilized to measure the fidelity of workshop activities.

Arkansas State University

\$61,307

Craighead County

Project Title: Concepts in Middle School Science

Contact Information: Ms. Jannie Trautwein – jhuffman@astate.edu

The *Concepts in Middle School Science* project will begin with an eight-day (two weeks) summer training for intensive content & pedagogical instruction. Each day will consist of six hours of instruction for a total of forty-eight contact hours. There will be three follow-up Saturdays of six contact hours each day during the 2009-10 school year in which further training will take place. Instructors will mentor the participants on visits to their classrooms. According to the results of the needs-assessment survey, the sections of each strand in the 5th -6th grade Arkansas Science Frameworks in which teachers indicated their greatest need were: Life Science - Structure and Function; Physical Science - Properties of Matter & Motion and Force; and Earth & Space Science – Structure & Properties. The project has been designed to address the Student Learner Expectations in these sections. Progress in the learning of content by the teachers will be measure by a content pre- and post-test. The scores of their students on the Arkansas Benchmark test will be monitored as an indicator of the improvement in teaching of the participants.

Harding University

\$128,609

White County

Project Title: Increasing Teacher Core Content Knowledge, Improving Pedagogy, Reflecting on Assessment of Student Achievement and Ready Teachers to Become Highly Qualified in Core Subject Areas through the National Board for Professional Teaching Standards (NBPTS) FY2009

Contact Information: Dr. Clara Carroll – ccarroll@harding.edu

The National Board candidate process is a high-stakes endeavor for educators. The goal of the certification process is greater core content knowledge and pedagogy resulting in improved student achievement. In partnership with the Cannon-Clary College of Education, College of Sciences, and Augusta, Brinkley, Newport and Norfolk Public Schools, this project provides highly rigorous, quality graduate studies in core content areas and is a respected voluntary licensure system which provides an opportunity for professional growth unlike any other for educators. The methodology includes: a 3-hour graduate course offered May 27-May 30, OR June 2-5, OR June 9-12, AND September 20, 2008 and twelve follow-up sessions during NBPTS candidacy. The state of Arkansas currently has 842 Nationally Board Certified Teachers and nationally 55,328 NBCTs. A study conducted with participants in the No Child Left Behind Grants of FY05, FY06, Dr. Clara Carroll found that Harding University is providing statistically significant research-based instruction for participants to be effective in providing the knowledge

teachers need to become National Board Certified Teachers. These results were presented by Dr. Clara Carroll at the National 2005 and 2007 National Board for Professional Teaching Standards Conferences in Washington, D.C. and at the 2006 and 2007 Mid-South Educational Research Association Conference.

Henderson State University

\$53,541

Clark County

Project Title: Exploring Arkansas Through Science and History

Contact Information: Ms. Brandie Benton – bentonb@hsu.edu

This field trip course will address the 4th-8th grade Arkansas Science and Social Studies Content Standards and Student Learning Expectations for science strands (Nature of Science, Life Science, Physical Science, and Earth Science) and the social studies strands (Geography, History, Economics). Emphasis will be placed on the ways that science has been tightly integrated throughout the history of Arkansas and the abundance of resources that are available across the state to expand teachers' scientific and social studies understanding that will benefit their instructional skills. Students will relate to the interactive digital presentation, lessons and projects that will result from the participant exposure to historical/scientifically relevant sites across Arkansas, including Hot Springs, the Buffalo River, the Little Rock historic sites, a Scott plantation, the Prairie Nature Preserve (Stuttgart), Old Washington, the Hope Migrant Center, and the Texarkana Regional Museum. Participants will develop interactive lessons, be observed teaching lessons, and will present their lessons at breakout sessions at the Henderson State Southern Regional Social Studies Conference in June, 2010.

Henderson State University

\$46,919

Clark County

Project Title: The South Arkansas Mathematics and Science Teachers'

Collaborative, Year 2

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

The South Arkansas Science Teachers' Collaborative is located at the South Arkansas Math and Science Center at Henderson State University. Research states that teachers who have an understanding of their content have a greater impact on student achievement. The purpose of the Collaborative is to provide long-term science instruction and networking opportunities for 4-7 grade teachers which will translate into increased student achievement. During the second year of the collaborative the focus is physical science and earth science. Instruction will be given on speed, velocity, potential and kinetic energy, and how these forces affect motion. These concepts of force and motion will then be applied to how forces in the earth cause the endless cycle of plate tectonics as it relates to rock formation, soil formation, and landform changes. Physics professors from Henderson State University and specialists from the Arkansas Natural Heritage Commission, the Arkansas Geological Service, and the Natural Resource Conservation Service will provide content instruction for the participants. Two field trips will be taken, one to the Crater of Diamonds State Park and the other to the Hot Springs

National Park to provide participants field experiences to further the educational experience.

University of Arkansas

\$129,553

Washington County

Project Title: 3T: Teaching (on the way) to Tomorrow

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

3T: Teaching (on the way) To Tomorrow project consists of two major parts. Part I: Three summer sessions will be held for teacher professional development: • *Algebra and Data Analysis for the 21st Century*: Standards-based and content-driven, this week will provide middle level (5-9) Arkansas teachers with algebra/data analysis and technology integration. Content to be covered with include: patterns, relations & function; the language of algebra; algebraic modules; algebraic representations; analysis of change; data interpretation & probability; and benchmark testing. • *K-4 Back to the Future I - Bridging the Gap Between Life and Earth Science*: Content-driven and framework-based, this institute will provide primary/elementary level (K-4) Arkansas teachers with life and earth science basics that includes: living system characteristics, structure & function; life cycles; populations & ecosystems; properties of Earth; natural resources; weather; and the solar system. Hands-on activities with math, literacy, and technology integration will be incorporated into this institute. • *5-8 Back to the Future II - Bridging the Gap Between Life and Physical Science*: Content-driven and framework-based, this institute will provide middle level (5-8) teachers with life and physical science basics that include: the structure and function of living systems; heredity and reproduction; regulation and behavior; populations and ecosystems; properties of matter; motion and forces; and energy. Hands-on activities with math, literacy, and technology integration will be incorporated into this institute. Each of these institutes will have the possibility of being a three hour science or math graduate level course with 45 hours be conducted during the two week institutes followed by 12 hours of two one-day workshops per institute during the fall. The final three hours will occur as teachers implement the science, math, and technology strategies covered during the summer through on-campus professional development offerings, classroom visits, and dissemination of information and techniques learned to school, district, and state curriculum events. PART II: As a continuum of PART I, two day-long workshops (per institute) and seven half-day workshops will be offered during fall '09 and spring '10 focusing on math & science content requested by participants involved with the summer institutes.

University of Arkansas at Little Rock

\$63,426

Pulaski County

Project Title: Arkansas STRIVE 2009: Inquiry and Problem-Based Teaching Approaches

Contact Information: Dr. Jim Winter - jdwinter@ualr.edu

Arkansas STRIVE places science, math, and computer teachers from middle, junior high, and senior high schools (6-12th grades) into summer research positions or on projects in industry, government agencies, universities, research facilities, and nonprofit organizations. Teachers work with professionals in the field for eight weeks and learn

how professionals solve problems facing their organizations. We support about 25 teachers per summer in our program with a variety of private and public funding sources. We request matching monies from the No Child Left Behind (NCLB) Program for seventeen teachers to work on research projects in the ADHE-supported Centers for Math and Science Education at Arkansas universities and at other nonprofit organizations. We also present workshops to the teachers on inquiry and problem-based teaching, and on using computers for data analysis. In addition, we help the teachers develop inquiry-based or problem-based lessons using the new skills and experiences that the teachers acquired during the summer.

The main expected outcomes are that teachers will experience real-world research and problem solving, learn methods of inquiry and problem-based teaching, and develop two inquiry-based and problem-based lessons that they will use in their own classrooms. We place the STRIVE teachers' lessons on computer CDs and give a CD to each teacher so that they have a library of good inquiry and problem-based lessons.

University of Arkansas at Little Rock

\$47,358

Pulaski County

Project Title: Standards at Work: Developing and Demonstrating Excellence

Contact Information: Dr. Dave McAlpine - dcmcalpine@ualr.edu

This proposal seeks funding to provide professional development opportunities for second language teachers through a series of daylong sessions designed to assist them in understanding and gaining the knowledge and skills required for candidacy for certification by the National Board of Professional Teaching Standards (NBPTS). The NBPTS for World Languages were revised in recent months to reflect the profession's current understanding of best practices leading to excellence in second language teaching. The State of Arkansas has identified foreign language competency as an area of critical need, and highly qualified teachers to inspire and educate students to learn a second language are essential to progress toward meeting the need. No one has been certified using the new standards since they were released in early November, 2008. Therefore, this initiative proposes a series of workshops focusing on each of the nine standards to enable teachers to progress toward satisfaction of requirements for candidacy for national board certification. Such knowledge will enhance the capacity of the state to meet the expressed need for second language proficiency as more highly qualified teachers using the most up-to-date professional content knowledge and pedagogical skills will challenge their students to become more proficient in second language communication.

University of Arkansas at Pine Bluff

\$52,651

Jefferson County

Project Title: Concepts in Math and Science for 5-8 Grade Teachers

Contact Information: Dr. Shelton Fitzpatrick - fitzpatrick@uapb.edu

The project will facilitate activities which are aligned with Arkansas Curriculum Frameworks and national standards. The project will consist of a three-credit hour graduate course taught over fifteen (15) three-hour sessions, starting June 8, 2009 and ending June 26, 2009. There will also be in-school mentoring during the 2009-2010

school year, along with two follow-up sessions. Participants will be trained with regard to best practices and recognized teaching techniques for teaching effectiveness with low income, minority, and academically challenged 5th to 8th grade students. No Child Left Behind will be the unifying theme as teachers are taught how to better understand content areas tied to Arkansas standards and to incorporate NSTA and NCTM standards of science and mathematics pedagogy and technology use in their classrooms. Professional development activities will include, but not be limited to, a three-hour curriculum based course where the teachers may receive graduate credit, a summer program to reinforce or introduce new technology based teaching materials, and follow-ups during the school year to evaluate materials usage and teacher performance. Pine Bluff and Dollarway-Alzheimer, are the targeted districts for recruiting teachers into the project.

University of Central Arkansas

\$59,921

Faulkner County

Project Title: Visualizing Natural Science Frameworks with Satellite Remote Sensing and GIS

Contact Information: Dr. Brooks Pearson – bpearson@uca.edu

This project will provide advanced training in secondary natural and earth sciences through an integrated combination of workshop and course interactions. Participants will not only learn several important aspects of earth and atmospheric sciences (physiography, radiation balance, the interaction of electromagnetic radiation and the atmosphere and land surface, atmospheric physics, atmospheric chemistry, blackbody radiation laws, etc), but they will also learn to use imagery from satellite remote sensing to visualize these frameworks-based scientific principles in their classrooms. Besides achieving mastery of the course's scientific content, participants will be able to locate, acquire, interpret, and effectively utilize satellite imagery and digital map data to facilitate the delivery of frameworks-based content in their classrooms.