University of Central Arkansas - Excellence in Elementary School Science (EESS)

The UCA STEM Institute together with Arch Ford Educational Cooperative and UCA STEM faculty seeks to create a partnership with five high-need LEA school districts, Catholic Schools of Arkansas, and Academic Plus Charter School. The program proposes to develop Science initiatives, which will augment earning progressions to support the new Arkansas K-12 Science Standards to improve grade K-4 science instructions. The goal is to enhance teacher content knowledge and teaching skills that prepare students for success through developing a vertical team to integrate science, mathematics, literacy, technology and embracing project-based learning. A statistically significant higher increase is expected in pre/post scores on the adopted science test for the students in the treatment group as compared to that in the comparison group. The EESS project will provide a long-term sustained high quality professional development, which includes four one-day sessions during the 2015-16 academic year, two one-week summer institutes and two classroom visits to observe and/or mentor teachers, for 30 K-4 grade teachers for a minimum of 100 contact hours during each year of the project. Teachers will develop lesson plans and share via Google Drive. Based on the needs assessment data, concepts of specific domains of Arkansas k-12 Science Standards (primary focus) and the most effective ways to teach them (secondary focus) will be thoroughly explored.

To evaluate the success of the project an experienced external evaluation specialist will conduct a comprehensive evaluation, using a quasi-experimental design with a carefully matched comparison group, formative and summative assessment and both qualitative and quantitative measures for each program goal.

Goals and objectives are as follows:

Goal #1: Increase teachers' levels of science content knowledge and teaching skills through incorporation of science practices by the use of Arkansas's new K-12 Science Standards and integrating Common Core State Standards in significant depths.

Goal #2: Establish a K-4 team, composed of one teacher from each grade from each school district for the vertical and horizontal alignment of the content.