

2010-2011 Improving Teacher Quality State Grants Awards (No Child Left Behind Act 2001)

-College of William and Mary- SURN Leadership for Effective Teaching 2.0

Project Director: Dr. Jan Rozzelle
Amount: \$ 216,746.00
Abstract: *SURN Leadership for Effective Teaching 2.0* (SURN LET2.0) promotes distributive leadership among teacher leaders (39) and administrators (36) engaging in classroom observations to collect instructional data and offering formative feedback to teachers (estimated 500) through dialogue. *SURN LET2.0* provides instructional leadership development and onsite building-level support in thirteen selected schools. It expands upon the 2009-2010 project by (1) focusing on 9th grade transition in four high schools into which the middle schools feed, (2) including teacher leaders, (3) piloting laptop computers for making observations, and (4) including flip video cameras to record dialogue for the participants' reflection.

-George Mason University- MASON I.M.P.A.C.T: Improving Mathematical Practices through Algebraic Connections & Technology

Project Director: Dr. Jennifer Suh
Amount: \$150,029.00
Abstract: MASON I.M.P.A.C.T is scaling up from two years of continuously funded 2008-2009 (ACT NOW) and 2009-2010 (IMPACT) SCHEV projects that piloted a content-focused mentoring model. As the project matures and continues to build the infrastructure for sustainable professional learning, it will continue to increase student learning by improving teachers' algebraic, technology and pedagogical knowledge in the middle grades at targeted high-need districts and low-performing schools. Other key features will include a new professional development program targeted to school administrators and coaches who can be more centrally involved in teacher development in the area of mathematics, technology and literacy. The project will involve 80 teachers, math coaches and administrators with summer institutes focused on mathematics content and pedagogy, follow-up Lesson Study and on-site and online mentoring with participants and university faculty that provides sustainable professional learning and broadens the impact of this project.

-Hampton University-
Climate Connections: Investigations and Literacy through Problem-Based Learning

Project Director: Dr. Dianne Robinson
Amount: \$ 114,416.00
Abstract: Hampton University will collaborate with Portsmouth Public Schools, Alliance Christian School, and Central Christian Academy to provide 32 teachers with a year-long professional development project, *Climate Connections: Investigations and Literacy through Problem-Based Learning*, which will be executed in three phases. Phase I will consist of a 3-day kick-off workshop focusing on developing Problem-Based Learning (PBL) modules that incorporate literacy skills and scientific investigations of a local problem. Phase II will provide 12 after school sessions that emphasize: science content related to climate and weather; use of GLOBE atmospheric protocols to collect environmental measurements; and strategies for increasing literacy skills. Phase III will culminate with 1-day symposium, where the teachers will participate in discussions with atmospheric scientists and present their final PBL products for peer review.

-Hollins University-
Hollins Inquiry, Integration and Differentiation Professional Development Project

Project Director: Dr. Michael Bentley
Amount: \$ 58,093.00
Abstract: Our program is an intensive two-week summer professional development institute with two academic year symposia for 30 grades 3-5 teachers in Region VI addressing both content specified in the Virginia Curriculum Framework and teaching methods. Topics addressed include the nature of science and integrating science, mathematics, and literacy in the curriculum through using research-based strategies: inquiry, active learning, and differentiated instruction. The program is "community-connected" to regional agencies that can supplement and enrich the school curriculum and includes scientist led field studies in local natural areas and behind-the-scenes visits to a planetarium and science center, a zoo, and a natural history museum.

-James Madison University-
Virginia Initiative for Robotics in STEM Education

Project Director: Mr. Dominic Swayne
Amount: \$ 215,554.00
Abstract: Virginia Initiative for Robotics in STEM Education (VIRSE) will provide upper elementary (grades 4-5), middle school (grades 6-8), and high school personnel of Martinsville, Richmond, Harrisonburg, Waynesboro, Staunton, and Augusta and Page Counties with a unique Science, Technology, Engineering and Math (STEM) development and instructional strategies program

in using robotics to enhance SOL/STEM content instruction. In-service teachers, along with principals and other educational leaders, will implement and expand STEM instructional strategies and examine teacher induction and retention issues. Over a 15 month period, 4 workshops, school year sustainment activities, and an interactive technology learning site will be disseminated using curriculum, expertise and resources of James Madison University's Colleges of Education, College of Science and Mathematics, Outreach and Engagement and the New College Institute. There will be a total of 55 participants in this program over a total of 15 months through the fall semester 2010.

-Longwood University-
Partnerships Required for Each Student's Success (PRESS)

Project Director: Dr. Manorama Talaiver
Amount: \$ 200,000.00
Abstract: The focus area of the proposed project, Partnership Required for Each Student's Success (PRESS) is the improvement of instructional leadership and collaborative resource management skills of principals and media specialists or teacher leaders (in schools particularly in Region 8) through 21st century learning and leadership e-learning courses to enable them to improve student achievement in Literacy and Mathematics for the K-5 and 6-8 student population. There will be 24 participants comprised of principals and teachers in the elementary and middle schools. Longwood's ITTIP partners with 35 school divisions for professional development and the area is large enough to allow for a diverse selection of both schools and participants for the study. Indirectly, this research proposal will benefit all teachers in the participating schools containing approximately 700 classroom teachers, and a total of approximately 9,000 students.

-Old Dominion University-
Integrating Science, Literacy, and Assessment for Powerful Learning

Project Director: Dr. Jack Robinson
Amount: \$ 94,904.00
Abstract: The project builds on and expands the collaborative work Old Dominion University and Norfolk Public Schools have been engaged in over the past three and a half years in support of the district's goal of developing "powerful literacy" for all its students. Twenty eight teachers will participate in a summer workshop followed by year- long professional development as members of "learning teams" to enhance their ability to integrate the teaching of reading and writing skills, and use assessment for learning skills in authentic inquiry oriented units of instruction in science to enhance student learning.

-Radford University-
Supporting Math, Science, and Literacy in Southside Virginia

Project Director: Dr. Franklin Jones

Amount: \$130,000.00

Abstract: The central purpose of this proposed project is to improve elementary and middle school students' science literacy and SOL achievement by improving teachers' elementary and middle science instruction, including teachers' understanding of how to teach literacy across the disciplines. Inquiry-based science, mathematics, and reading curriculum materials, strategies, and assessments will be incorporated that align with Virginia's Science, Mathematics, and English Standards of Learning. Project coursework will consist of a three-credit hour graduate elementary and middle science course in Danville, a three hour graduate elementary/middle school science course in Henry County, and a three-credit hour graduate science course in Pittsylvania County. The program is designed for 46 participants in Southside Virginia. Leadership development will be emphasized for teachers and principals through mentoring workshops and dissemination sessions.

-Radford University-
Teach for Achievement: Data-driven Instruction in Grades 3-5

Project Director: Dr. Eric Mesmer

Amount: \$ 180,645.00

Abstract: While students in the primary grades focus upon learning to read, students in grades 3-5 must read to learn. Teach for Achievement addresses the needs of students struggling to comprehend science, social studies and math texts. This project is building upon efforts to: 1) increase teachers' knowledge in reading instruction in a way that impacts student achievement in reading, science, social studies and math; 2) build capacity of leadership teams in high needs schools to improve literacy support and instruction for older struggling readers. Focus will be placed on over 60 teachers in Roanoke City Public Schools who attended a summer learning institute and who will receive professional development throughout the school year. In June 2011, a multi-disciplinary conference will be offered for school leadership teams to highlight best practices for struggling readers in grades 3-5 using a Response to Intervention framework.

-Randolph College-
Science and Math Links: Research –Based Teaching Institute

Project Director: Dr. Peggy Schimmoeller

Amount: \$ 134,449.00

Abstract: Science and Math Links: Research-Based Teaching project is a continuation of an Institute for K-8 teachers. The focus is to enhance content knowledge, and promote use of inquiry-based pedagogy aligned to Virginia SOL.

The Institute, facilitated by college faculty, will serve four school divisions and two community-based organizations. Sixty teachers receive five days of workshops in effective science instruction including interactive lessons, teaching experiences, and classroom observations. Six teachers apply training during a science camp. A website will be used for dissemination of resources. The partnership is expected to enhance teacher quality and improve science achievement, narrowing the achievement gap. Effectiveness is assessed through multiple research methods.

-Sweet Briar College-

Developing Experts and Advocated of Inquiry Teaching

Project Director: Dr. Jill Nelson Granger

Amount: \$ 116,515.00

Abstract: In collaboration with eight public school divisions and two private schools, this project develops and supports teacher-leaders in their efforts to implement and assess inquiry-based teaching strategies in their grade 3-8 math and science classrooms. Twenty teachers will engage in an intensive, year-long professional development experience, comprising instructional hours plus field work, that will strengthen content knowledge and scientific process skills, increase understanding and the implementation of inquiry instruction, and encourage reflection about instructional practices. Greater impacts of the project include the involvement of administrators, in-service workshops by the participants in their local schools, and assessment of student outcomes throughout the project.

-University of Virginia-

Teaching Scientific Inquiry and the Nature of Science

Project Director: Dr. Randy Bell

Amount: \$ 63,706.00

Abstract: Our professional development opportunity is designed to enhance middle school science teachers' understandings of, and ability to teach, scientific inquiry and the nature of science. The professional development includes a one-week summer institute plus ongoing support (including video reflections/coaching and a follow-up meeting at the annual meeting of the Virginia Association of Science Teachers) for 26 middle school science teachers. Participants will assess their curricular materials and develop a year long scope-and-sequence for teaching both scientific inquiry and the nature of science. Additionally, they will receive 3 graduate course credits, travel expenses, and all necessary materials to implement what they learn.

-University of Virginia-
Light and Optics Home Lab Activities

Project Director: Dr. Richard Lindgren

Amount: \$ 59,300.00

Abstract: We will conduct a 1-week workshop at UVa in the summer 2011 on "Light and Optics Home Lab Activities" for 12 Elementary and 12 Middle School teachers. Using an Optics Kit supplemented with inexpensive and easily obtainable lab materials, teachers will conduct experiments each morning. A physics teacher team familiar with testing and design of the activities will instruct the Labs. Each afternoon a science education teacher team will instruct on how to utilize the Lab activities in the classroom using inquiry based learning and Nature of Science teaching skills. Using live chat rooms with audio and video, follow-up includes conducting additional Lab activities at home and presenting lesson plans online for evaluation and presentation at VAST.