

mathematics teachers, Coordinated Vocational Academic Education (CVAE) and Related Vocational Instruction (RVI) coordinators. M.A.T.H. Today's objectives are to 1) improve work-related mathematical skills of students with special needs through contextual learning experiences; 2) increase level of performance in mathematics application utilizing Key Train's Applied Mathematics program; and 3) prepare students with special needs for successful completion of the Georgia High School Graduation Test mathematics subtest. Potential long-term outcomes for students with special needs are improved school retention, employability and social competency. Long-term outcomes for teachers are improved instructional practices in providing work-related mathematics to students with special needs.

Key Teacher Education Innovations:

- The program prepares teachers to address the mathematical learning needs of special education students.
- The program addresses important high-stakes mathematics assessments and the personal development of special education students.

Anticipated Impact:

- Special education students will perform better on the Georgia High School Graduation Test mathematics subtest and will develop social competency.
- Teachers will be better prepared to make use of improved instructional practices in providing work-related mathematics to students with special needs.

Georgia Internships for Teachers—GIFT

Principal Investigators:

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Description: It is natural for people to be interested in the world around them, yet many teacher professional development courses lack a connection to the real world. UGA's Tifton campus, host to over 100 PhDs in the applied sciences, offered paid summer internships to a limited number of south Georgia K-12 science, mathematics, and social studies teachers. This professional learning course for teachers will strengthen the connection between learning and place as teachers paired with scientists examine first-hand the scientific method and become familiar with current research problems. By partnering with the GIFT Program at Georgia Tech and the Learning Inquiry-based Science Techniques (LIST) Project at Valdosta State University, this workshop also connects teachers throughout the state and promotes inquiry-based learning for students.

Key Teacher Education Innovations:

- Teachers work elbow-to-elbow with scientists in laboratories and in the field.
- The program is linked to related efforts at Georgia Tech and Valdosta State University.

Anticipated Impact:

- Teachers develop understandings of science as a way of thinking and a way of investigating.
- Pre-college students will vicariously experience real science through the stories of their teachers.
- A teacher network will be developed of persons who have experienced real science at the elbow of a scientist.

The Science Behind Our Food, Fiber, and Bio-Fuel System

Principal Investigator:

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Description: The National Environmentally Sound Production Agriculture Laboratory (NESPAL) conducts a two-week traveling study tour for 15 middle and/or high school science or social studies teachers titled, "The Science Behind Our Food, Fiber, and Bio-Fuel System." This project gives teachers both the big picture view of our nation's food, fiber, and bio-fuel system, and through Georgia farm/business visits, instills an in-depth and practical knowledge on how agriculture touches every part of our lives. Coursework will touch on each area of the science curriculum – earth, life and physical science – and will be

highly relevant to social studies coursework in economics and Georgia's physical geography. Tour instructors will include scientists and business professionals who will ensure teachers understand the processes involved and relate real-world applications that will help teachers apply state standards for science and social studies in fun and educational ways in the classroom.

Key Teacher Education Innovations:

- The program involves a two-week traveling study of Georgia farms and agricultural businesses.
- Science and social science understandings that link to the Georgia school curriculum are targeted in the program.
- Tour instructors will include scientists and business professionals.

Anticipated Impact:

- Teachers will develop in-depth understandings of the nation's food, fiber, and bio-fuel system.
- Students of the teachers will experience a science and social science curriculum that reflects the ways in which agriculture touches every part of human life.

Standards-Based Professional Learning

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Description: The goal of this project is to improve student achievement in mathematics by enhancing the classroom practices of all mathematics teachers at Clarke County's Alps Road Elementary School to enable them to meet the learning needs of their students. To accomplish this goal, we propose to conduct intensive, site-based, daily professional development during the 2006-07 school year. This project has four main staff development components, all of which take place in the context of the new Georgia Performance Standards. The first is daily classroom-based support for individual teachers and/or teams of teachers; the second is monthly grade-level team meetings devoted to mathematics; the third is monthly staff-development sessions; and fourth is the development of a math focus group of teacher leaders.

Key Teacher Education Innovations:

- This is a site-based program that addresses mathematics teaching at one school.
- The program's centerpiece is daily classroom-based support for individual teachers and/or teams of teachers.

Anticipated Impact:

- Teachers will build content knowledge as well as pedagogical content knowledge in mathematics.
- Students of the teachers will perform better on assessments that reflect the new Georgia Performance Standards in mathematics.

Scientists and Professional Educators Learning Outdoors (S.A.P.E.L.O.): An Ecological Research Experience for Teachers

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