

Resources to work with endangered plants and seeds and become part of an endangered-plant monitoring network. Students conduct experiments and record detailed observations on native and rare plants. The SBG recently received an EPA grant (\$19,000) to transfer curricular resources to the Internet that will facilitate use of the material in classrooms across the state.

Key Teacher Education Innovations:

- The project emphasizes native and rare plants, threatened habitats, and conservation biology.
- The State Botanical Garden of Georgia is a critical project partner, providing resources for teachers that address the Georgia Performance Standards.

Anticipated Impact:

- Teachers and their classes become part of an endangered-plant monitoring network.
- Teachers develop understandings about native and rare plants, threatened habitats, and conservation biology.

Enhancing the Teaching of Evolution through an Inquiry Safari

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Description: This project continues a collaboration between faculty in the department of mathematics and science education and research scientists in the Learning and Performance Support Laboratory with five school districts. The focus is the development and implementation of a one-week workshop that integrates principles and inquiry activities for learning about evolution and 3D virtual gorilla animations. Students then investigate the evolution of bipedalism using skulls of extant and extinct mammals and their own bilateral symmetry. A Video Analysis Tool allows teachers to record their teaching and student learning. Using an Evidence-Based Decision Support tool, teachers are able to systematically reflect on and improve their teaching practices. .

Key Teacher Education Innovations:

- The project features collaboration between science educators, research scientists, and teachers from five school districts.
- Human evolution is the key content focus of the project.
- Teachers use technology to record and reflect on their teaching and their students' learning.

Anticipated Impact:

- Teachers will be better prepared to teach about biological evolution.
- Teachers will have access to technology and other tools for use in teaching students about biological evolution.

The Georgia Shore Program 2006

Principal Investigator:

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Description: The Georgia Shore Program provides up to 20 K-12 teachers with an in-depth overview of marine and environmental sciences during an intensive two-week summer residential program at the UGA Marine Extension facility on Skidaway Island and Ossabaw Island in June. The schedule includes grant writing seminars, lab, boat, and field experiences, emphasizing "hands-on" inquiry methods for the classroom. Instructional technology will emphasize educational use of the Internet, mathematical and computer applications in science education, and distance learning. Teachers will work with scientists and conduct individual research projects using the marine environment as a model. Teachers will develop and share classroom curriculum based on inquiry methods learned during their research. Participants can earn six graduate education credits or 10 SDUs.

Key Teacher Education Innovations:

- Teachers work with scientists and conduct individual research projects that address aspects of the marine environment.

- The program involves an intensive two-week summer residential program at the UGA Marine Extension facility on Skidaway Island.

Anticipated Impact:

- Twenty teachers complete the experience with enhanced understandings of marine and environmental sciences.
- Teachers are also prepared to lead student investigations on marine topics.

Implementation of the Georgia Performance Standards in Science by Utilizing the JASON Project and Technology Bridges

Principal Investigator:

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Description: The project's goals are to facilitate middle school science instruction, help teachers implement new Georgia Performance Standards using technology-enhanced hands-on activities, support teachers as they apply this new strategy and expand the JASON Project to Georgia's underserved areas. The project will be coordinated by the UGA Educational Technology Training Center (ETTC) and offered to 60 school districts in four service regions across the state. It will include three components: 1) a hands-on science workshop based on the JASON Expedition; 2) teacher implementation of new strategies and activities with students; and 3) follow-up support provided by the local ETTC. Teachers may receive up to five PLUs. The grant will cover the cost of training, fees, materials and stipends for teachers.

Key Teacher Education Innovations:

- A key program element is coordination with the science-oriented JASON Project.
- The program is facilitated by collaborative arrangements with regional service agencies and regional universities.

Anticipated Impact:

- Middle school teachers will be better prepared to teach science in ways that reflect the new Georgia Performance Standards and use technology to support their teaching.

Rivers to Reef 2006: Water Quality Assessment and Issues

Principal Investigators:

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Description: Participating educators will be engaged in an intensive 14-day residential workshop based at the University of Georgia's Marine Education Center and Aquarium (MECA) on Skidaway Island. Participants work alongside scientists as they engage in field sampling and laboratory analysis, hear lecture and audio/visual presentations by faculty from MECA, the Marine Advisory Services, the UGA Marine Institute (UGAMI), the Skidaway Institute of Oceanography (SkIO), and scientists with the Grays Reef National Marine Sanctuary (NOAA). Additionally, teachers will use the on-site computer lab and research library to conduct literature searches, analyze data, explore GIS databases, and prepare their own computer presentations. Excursions on the UGA research vessel *Savannah* and to Sapelo Island are components of the workshop's itinerary. Participants can earn six graduate credit hours or 10 SDU credits.

Key Teacher Education Innovations:

- Participants work alongside scientists as they engage in field sampling and laboratory analysis; these experiences are augmented with lecture and audio/visual presentations.
- The project involves an intensive 14-day residential workshop based at UGA's Marine Education Center and Aquarium (MECA) on Skidaway Island.

Anticipated Impact:

- Teachers will improve their understandings of the marine environment and develop instructional materials that can be used with their middle school and high school science classes.