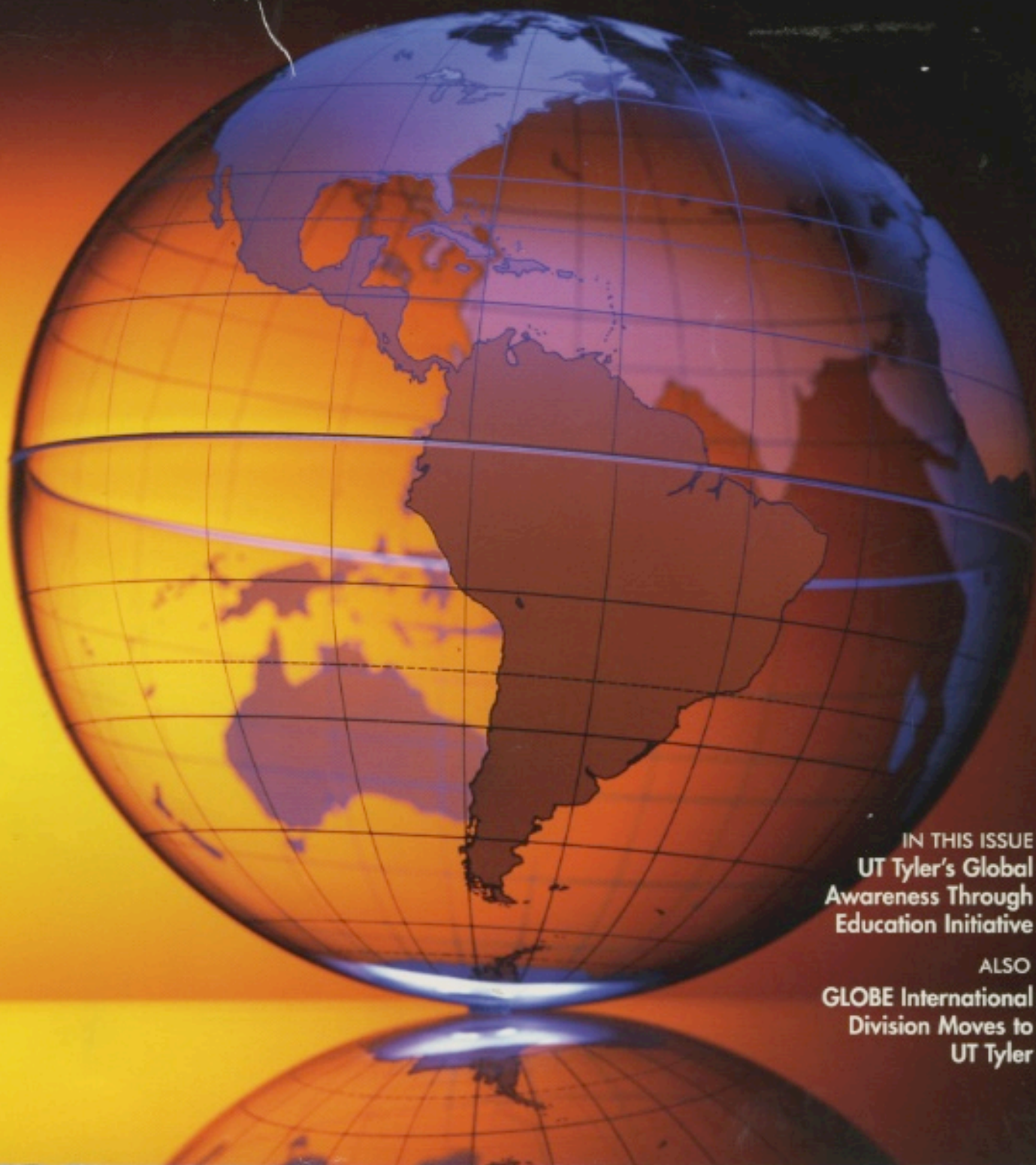


UT TYLER

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UT Tyler

Global Awareness Through Scientific Inquiry

Dr. Teresa Kennedy Brings International Division of GLOBE to UT Tyler

Sixty Western and Middle Eastern high school students gathered in California and Florida in the summer of 2009 to explore the wonders of the ocean from coastland to deep sea. Meanwhile, students in Africa were planning an autumn trek to the peak of Mount Kilimanjaro to evaluate the evolving ecosystem of the world's tallest free-standing mountain. Both groups would share their experiences with students worldwide via Web posts and chats, email and video.

And as fall turned to winter, U.S. and Canadian students were bidding farewell to ruby-throated hummingbirds migrating to warmer climates. They would learn about the birds' arrival and winter habits in Mexico and Central America through a network with students there.



GLOBE students, educators and scientists climb to the summit of Mount Kilimanjaro in Africa to investigate the mountain's ecosystem. This and many other activities are facilitated through the GLOBE International Division, now located at UT Tyler.

At any given time of year, activities are taking place in Global Learning and Observations to Benefit the Environment. Students in the GLOBE science and education program collaborate in research with scientists around the world, thereby gaining environmental and global awareness and exposure to careers in science. And The University of Texas at Tyler plays a central role in those activities, under the direction of Dr. Teresa Kennedy, professor of Bilingual, English as a Second Language and Science, Technology, Engineering and Mathematics education.

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Dr. Teresa Kennedy





GLOBE students reach the top of Mount Kilimanjaro in 2009. Program participants returned to the mountain for a second expedition this fall.



Ocean for Life participant in California.

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Involved in GLOBE since 1996, Dr. Kennedy came to UT Tyler in 2009 from the University Corporation for Atmospheric Research in Boulder, Colo., a federally funded research and development center in atmospheric and related sciences. Along with joining the UT Tyler School of Education faculty, she brought the GLOBE International Division to the university from UCAR.

GLOBE is an interagency program implemented through a cooperative agreement between the National Aeronautics and Space Administration and UCAR. GLOBE's management infrastructure is funded by NASA, the National Oceanic and Atmospheric Administration and the National Science Foundation, and supported by the U.S. Department of State.

The GLOBE International Division serves as liaison to the GLOBE community, including coordinators in 111 countries and 140 U.S. partners as well as teacher, student and scientist networks around the world. The U.S. partners, 40 of which are located in Texas, include institutions of higher education, museums, federal agencies and school districts as well as NASA and NOAA education centers.

The division's GLOBE Help Desk receives calls from around the world and fields email and Skype/video conference correspondences from all GLOBE countries and the U.S. network. The seven-member staff also coordinates GLOBE's North America regional activities.

The Ideal Location

GLOBE sought to move its international division to Texas because of the large number of GLOBE partnering institutions and trainers in the state, Dr. Kennedy said. UT Tyler's Global Awareness Through Education initiative and close proximity to Camp Tyler, a GLOBE international training facility, made the university the ideal Texas location, she noted.

"We looked for an educational campus that was embracing cultural diversity in a global perspective, and UT Tyler is doing that with GATE," she said. "The vision of GLOBE meshes beautifully with the vision of GATE."

GATE will begin in fall 2011, providing UT Tyler freshmen and sophomores opportunities to enhance their global knowledge and understanding of other cultures and world-views through learning opportunities and cross-cultural experiences, including international travel, according to Dr. Donna

Dickerson, UT Tyler vice provost and dean of the graduate school.

"GATE, GLOBE and our new Office of International Programs all contribute to increasing students' understanding of their role as global citizens," Dr. Dickerson said.

"Bringing GLOBE's international division to UT Tyler is an excellent opportunity to enhance our GATE initiative," said Dr. William Geiger, dean of the College of Education and Psychology. "As we move forward with the GATE initiative, the experience that Dr. Kennedy and her staff bring to international activities will enrich what we're able to do."

Dr. Arlene Horne, vice president for research and federal relations, agreed. "UT Tyler is exceedingly proud to have Dr. Kennedy and the GLOBE program hosted on our campus. Dr. Kennedy has brought international prestige to UT Tyler and we will all benefit significantly from having an affiliation with such a nationally and internationally known and respected scholar and program," she said.

Dr. Kennedy teaches and is developing an ESL curriculum in the School of Education. In support of GATE, the new ESL program will integrate global content and real-world



GLOBE participants in Qatar examine soil samples.



Exploring the ocean in Florida.

projects into pre-service and in-service education programs, preparing future teachers to meet the needs of English language learners in K-12 classrooms.

UT Tyler students will also have opportunities to participate in GLOBE. The organization is best known as a K-12 program "but in reality, GLOBE is K-16, since universities across the U.S. and abroad are implementing GLOBE, especially in pre-service education programs where university students work with teachers and their students in GLOBE schools as part of their practicum," said Dr. Kennedy, who spent 15 years as a K-12 teacher and has taught more than 15 years in higher education.

Student Opportunity

Jennifer Salsgiver, a UT Tyler graduate student in public administration, joined the GLOBE staff as a student assistant in 2009, after completing her bachelor of arts degree in English. Hoping to pursue a career in government and the non-profit sector upon completing her master's, Salsgiver said she applied to work at GLOBE after researching the program.

"The potential of working with a program that has been supported by the Department of State, the Department of Education,

NASA, NOAA and NSF immediately caught my attention. These government entities are very appealing for me personally to work for in the future, so working with the GLOBE International Division has been a great opportunity," said Salsgiver.

"Since I began working with GLOBE, I have experienced opportunities in assisting leaders from across the globe," she said. "I enjoy being a part of something that transcends cultural differences and enables nations to work together."

Drawn to GLOBE

GLOBE's creators envisioned a worldwide community of students, teachers, scientists and citizens working together to better understand, sustain and improve Earth's environment at local, regional and global scales.

Since the program's initiation on Earth Day in April 1995, over 1.5 million students and their teachers in more than 24,000 schools worldwide have explored the Earth system through inquiry-based learning activities, scientific data collection and analysis and global collaborations. While collecting more than 21 million environmental data for use in further research, students have gained environmental awareness, understanding of other cultures and a sense of global community.

A Washington, D.C., native who grew up in Boise, Idaho, Dr. Kennedy holds a doctorate degree in education with a concentration in bilingual science education, content-based foreign language and ESL/ELL education and a master of arts in Spanish from the University of Idaho.

Dr. Kennedy was introduced to GLOBE during the first year of the program's implementation. Back then, she was a professor at the University of Idaho and directed the Center for Evaluation, Research and Public Service in the College of Education, as well as the NASA Idaho Regional Educator Resource Center.

She also served as NASA broker/facilitator for the state, working for the NASA Idaho Space Grant Consortium in the University of Idaho College of Engineering. "In that role, I was part of the NASA Pacific Northwest broker/facilitator network and we disseminated NASA education materials and conducted training throughout our states. Each state in the Pacific Northwest had a special focus and part of my focus was to promote science education for Spanish-speaking students," said Dr. Kennedy.

"In Idaho, there was a growing number of Hispanic students in the schools who needed

access to bilingual materials. I saw a GLOBE cloud chart at a NASA meeting and was thrilled to see that it was in multiple languages – including Spanish. I said, ‘Where do I get one?’ That was the first thing that drew me to GLOBE,” she said.

“After learning more about the program, I realized that GLOBE is the perfect venue for providing international perspectives through science education, while also serving as the focal point for a truly interdisciplinary curriculum that can include every classroom in the school! That’s one of the things I love about GLOBE,” said Dr. Kennedy, who left the University of Idaho in 2003 to work full-time with GLOBE as deputy director, a position she held until coming to Tyler in 2009.

Inspiring Future Scientists, Leaders

GLOBE offers a cross-curricular approach to the study of science, mathematics and technology in conjunction with geography, social studies and the arts. Areas of scientific investigation include atmosphere and climate, hydrology, land cover biology, soil, phenology, astronomy and ocean science.

Students choose scientific questions to investigate in their local environments and conduct research using scientific protocols aligned to National Science Education standards. They also connect to schools in other countries investigating the same research questions. And they take part in collaborative research projects such as the Ocean21 for Life exploration in Florida and California, the annual Mount Kilimanjaro expedition and ongoing ruby-throated hummingbird investigations.

While the underlying concept of GLOBE is to inspire and connect the next generation of global scientists, the program’s overall focus is to raise the abilities of students worldwide to think critically and scientifically, Dr. Kennedy said.

“Students learn how to conduct, analyze and understand scientific research so that when they leave school, they are informed citizens and they are global citizens. They won’t all become scientists, but many will become decision-makers and leaders in their communities, informed citizens for the next generation,” she said.

GLOBE not only contributes to scientific understanding of Earth as a system, but also provides wonderful opportunities to better understand the diverse cultures of our world,” added Dr. Kennedy, who has visited more than 70 countries through her work and educational experiences.

New Day for Saudi Arabian Girls

She works with NASA and the Department of State to form bilateral agreements with countries to bring GLOBE to their schools. One of her most exciting accomplishments occurred last spring during a trip to Saudi Arabia. She visited the country’s first female cabinet minister, Noura al-Faiz, who was appointed in 2009 to oversee women’s education. As a result of the visit, GLOBE is now offered in Saudi Arabian girls schools.

“That, to me, is one of the most wonderful things I’ve been able to facilitate with the GLOBE program,” Dr. Kennedy said.

For more information about GLOBE, see www.uttyler.edu/globe or www.globe.gov. ■

Tribal Colleges and Universities Program interns learn atmosphere protocols during GLOBE training at Stone Child College in Box Elder, Mont. A GLOBE partner, the college primarily serves educational needs on the Rocky Boy’s Indian Reservation.

UTTyler student Jennifer Salsgiver (center) joined the GLOBE staff last year. She is pictured with Nan McClurg (left) and Dr. Teresa Kennedy.



Dr. Kennedy (far right) and GLOBE staff members at UT Tyler.



Camp Tyler serves as an international training facility for GLOBE.



GLOBE staff members Jaarna Krier (left) and Amanda Weaver at UT Tyler.



Climbing Mount Kilimanjaro is an ongoing GLOBE project in Africa.

Dr. Kennedy with student taking water samples in Featherville, Idaho.



Subil Fisher collects scientific data at UT Tyler for GLOBE.



Dr. Kennedy in India for Earth Day 2008.





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