

PATHFINDERS MONTHLY

Newsletter of the Office of Grants and Program Review
April 2007

Drs. Linda Johnston and Sandy Watson Offer Hands-on Science Workshop for Elementary Teachers

Research has shown that students perform better in science if their teachers have the skills and resources to engage them through hands-on, inquiry-oriented investigations. However, many elementary school teachers are not adequately prepared to provide hands-on science instruction or to differentiate instruction for their students. Recognizing the need for improved teacher preparation in these areas, Dr. **Linda Johnston**, an Associate Professor in the Teacher Preparation Academy (TPA), and Dr. **Sandy Watson**, an Assistant Professor in the TPA, have developed a workshop on differentiating science instruction in grades 4 and 5. Drs. Johnston and Watson have received an award of \$64,500 from the Tennessee Higher Education Commission's Improving Teacher Quality Grant Program to implement this week-long workshop, which will provide a unique learning opportunity for twenty-eight general and special education teachers from Grundy, Hamilton, Marion, and Sequatchie County school systems.

Drs. Johnston and Watson will provide participating teachers with strategies to differentiate instruction on a variety of physical science concepts, including graphing, metric measurement, heat, matter, physical and chemical changes, force, and speed. Workshop participants will gain experience using Assistive Technology (AT) software to adapt instruction to the individual needs of both general and special education students. In addition to these helpful strategies, participating teachers will receive significant classroom resources including textbooks, three science curricular modules with activities, AT software, and a start-up tool kit for classroom demonstration and experimentation activities. These tools and strategies, calibrated to address national and state curriculum standards, will enable participating teachers to engage their students in meaningful learning about concepts in physical science and across the curriculum.

To ensure the success of this project, Drs. Johnston and

Watson have engaged Dr. Verbie Prevost, Connor Professor of American Literature and Head of English, to present a portion of the workshop related to differentiating literacy in science. Drs. Johnston and Watson have also engaged community partners, including the Siskin Children's Institute and the Tennessee Aquarium, to develop ways to meet the needs of all students in the area of science instruction, and workshop activities will include visits to these sites.

The efforts of Drs. Johnston and Watson in developing and implementing this workshop represent a tremendous investment in the preparation and classroom resources that Tennessee's teachers need to provide engaging instruction in physical science for all students. This innovative project places UTC at the forefront of the movement to prepare teachers to differentiate instruction in core subject areas, making the curriculum accessible to increasingly diverse groups of students.

FUNDED GRANTS AND RESEARCH
MARCH 1, 2007 – APRIL 30, 2007

COLLEGE OF ARTS & SCIENCES

DR. RICHARD JACKSON Chattanooga State Technical Community College	Support for Meacham Writers' Workshop	\$1,200
DR. DEBORAH KREISS Solvay Pharmaceuticals, Inc.	Material Donation	\$18,550
DR. BARBARA MEDLEY City of Chattanooga	311 Customer Satisfaction Survey	\$2,489

COLLEGE OF ENGINEERING & COMPUTER SCIENCE

DR. RONALD BAILEY Federal Transit Administration	Advanced Technologies for Transportation Research Program	\$852,000
DR. JOE DUMAS Sun Microsystems	Equipment Donation	\$3,995
DRS. CECELIA WIGAL AND ED MCMAHON Tennessee Department of Education	Technology Designed to Benefit	\$35,000
SIM CENTER Enterprise Center	Chattanooga Fuel Cell Demonstration Project	\$456,529
Aerospace Testing Alliance	Analysis of Total Temperature Measurement Correction Techniques in the Aerodynamic and Propulsion Test Unit	\$25,000

COLLEGE OF HEALTH, EDUCATION & PROFESSIONAL STUDIES

DR. LINDA JOHNSTON Tennessee Department of Education	Assistive Technology at UTC	\$4,585
DR. KAY LINDGREN Erlanger	Increasing the RN to BSN Enrollment in the Gateway Program	\$160,040