

## **Advancing Content Through Interactive Virtual Environments (ACTIVE)**

Marjorie Darrah  
West Virginia University/WVHTCF

This presentation will discuss an interactive learning environment that allows exploration of Earth and space science data and information, through touch, sight, and sound. Elementary and middle school students who are blind or visually impaired are able to utilize this learning environment because it integrates a technology called haptics, which allows force-feedback and tactile sensations for users while interacting with a virtual object.

## **Providing Teachers Opportunities to Practice Teaching Students with Disabilities through the use of a Simulated Classroom**

Tandra Tyler-Wood  
Gerald Knezek  
Rhonda Christensen  
University of North Texas

Through the use of a simulated classroom environment (simSchool), teachers can practice working with students with disabilities. As effective teaching strategies are implemented., simulation demonstrates that student achievement improves.

## **Signing Science!**

Judy Vesel  
TERC

The presentation will demonstrate the interactive features of the SigningAvatar® accessibility software that have been incorporated into the illustrated 3D Signing Science Dictionary (SSD) for students in Grades 4-8 who are deaf and hard of hearing. Preliminary research findings and directions for ongoing development will also be shared.

## **Working memory and math problem solving by blind middle and high school students: Implications for universal access**

Carole Beal & Erin Shaw  
Information Sciences Institute, University of Southern California

Math achievement tends to be low for blind students, relative to other academic subjects. The project is investigating how blind students solve math word problems varying in text length and grade-level readability. The results will be used to adapt online math tutoring software for use by middle school blind students.

**The Effectiveness of Texas Instruments Navigator Technology on the Algebra I Achievement and Attitudes of High School Students with Learning Disabilities or Who are “At Risk”**

Barbara Dougherty  
Center for Educational Research and Evaluation  
The University of Mississippi

This presentation focuses on the use of TI-NSpire and the Navigator System in Algebra I. Classroom videos and artifacts from the study's first round will be linked to the technology's impact on achievement and attitude. The design of the professional learning for teachers will be aligned to the classroom implementation.