2018 VAST PROFESSIONAL DEVELOPMENT INSTITUTE

THURSDAY PRE-CONFERENCE HANDS-ON WORKSHOPS
November 15: 3:15 PM – 4:45PM

Preregistration is required. Register online at www.VAST.org. Deadline to register is October 31. Cost is $5.00/workshop. Each workshop is limited to 25 participants.

ELEMENTARY WORKSHOP – (sponsored by Delta Education)

Take a Walk on the High Wire! Exploring Balanced and Unbalanced Forces through Inquiry and Practices of Science!

Presenter: Roxane Dupuis, Science Education Consultant

Inquiry and practices of science are best learned when integrated into instruction of science concepts. Sometimes, however, developing the practices and learning the content can be a difficult balancing act. In this make-it/take-it session, engage in ***FOSS*** investigations, aligned to the Virginia Standards of Learning, which address concepts of balanced and unbalanced forces through the practices of science. Activities for forces, motion, magnetism, and simple machines will be explored through hands-on activities, engineering design challenges, art, and text. Through the practices and unifying themes of science, such as cause-and-effect, opportunities exist for integrating reading, mathematics, and writing. *Can you walk on the high wire?*

MIDDLE SCHOOL WORKSHOP

Data Science: Integrating Science, Math, and Workplace Skills – (sponsored by Longwood University)

Presenters: Dr. Ginger Lewis, Longwood University, Dr. Julia H. Cothron, STEM Author & Consultant, Dr. Paula Leach, ITTIP at Longwood University

STEM professionals make discoveries by looking at and analyzing data. How would you like to make discoveries about whales, roller coasters, or long-term plant growth? Not in your repertoire of hands-on investigations. No problem, just learn to use a free web-based data tool (CODAP), which is designed for students in grades 6-14. Use CODAP to search for patterns, identify relationships, or model complex phenomena. Apply CODAP to your classroom data or large data sets available on-line. With data science, students can develop critical workplace skills (5Cs) and make authentic connections between middle school science and mathematics. Data science gives students a new tool for designing and implementing authentic projects, which are increasingly a part of modern STEM competitions such as VJAS and INTEL affiliated fairs. Participants need to bring a laptop computer with an internet connection and modern browser (Chrome works best).

HIGH SCHOOL WORKSHOP – (sponsored by National Geographic Learning-Cengage)

Diversity in Science and Inclusive in the Classroom

Presenter: Munazza Alam, National Geographic Young Explorer

STEM programs have become increasingly focused on expanding the diversity of students in related fields, but these efforts focus have largely overlooked the longstanding barriers that prevent the participation from underrepresented minorities. This dichotomy between "who is in the building" versus "who is trying to get in" must be understood in the context of diversity and equity. In this interactive workshop, we will define the concepts of diversity, equity, and inclusivity and delineate the key differences among these three topics to explore how equitable and inclusive learning environments are linked to excellence in education.