Education

CLIMATE CONNECTIONS: YOUR ACTIONS MATTER. Eugene G. Maurakis & Richard C. Conti, SMV, 2500 W. Broad St., Richmond, VA 23220. Objectives are to educate the general public about the science of climate change on global and local scales; current and potential future impacts of climate change on Virginia and its communities; community resiliency and why it is important; how they can contribute to the resiliency of their own community by taking personal steps to be prepared for weather events and health threats related to climate change; and, convert awareness and understanding into personal action to increase readiness and resiliency in homes, schools, and communities. Communication methods used to convey climate change and resiliency information are: a NOAA Science on a Sphere®, the museum's digital Dome theater, a statewide digital media series (24 audio and 12 video productions/year); social media; lecture series; resiliency-themed programming (Art Lab, Challenge Lab, EcoLab), extreme event challenge workshops; and community preparedness event and resiliency checklist and certification programs. A front-end evaluation was conducted to survey general audience understanding of the difference between climate and weather, climate change impacts, and resilience. Funded by NOAA Award NA15SEC0080009 and Virginia Environmental Endowment.

THE RELATIONSHIP BETWEEN SCIENCE CLASSROOM FACILITY CONDITIONS AND NINTH GRADE STUDENTS' ATTITUDE TOWARD SCIENCE. Kurt Y. Michael & Angela Y. Ford, School of Education, Liberty Univ., Lynchburg, VA 24515. The purpose of this correlational study was to identify the relationship between high school science teachers' perceptions of their school science environment and their ninth grade students' attitudes toward science. Archival data was used from the High School Longitudinal Study of 2009 conducted by the National Center for Educational Statistics. A sample of 11,523 cases was extracted from the national data set. Three research questions looked at teachers' perceptions of the instructional equipment, demonstration equipment, and the condition of the school building in relationship to students' *enjoyment*, *boredom* and *value* of their science class. A series of multiple linear regressions was used to analyze the data. All three questions were statistically significant at ($p < .01$). The best predictors of high school students' *enjoyment* of their science class were demonstration equipment ($p < .001$) and facilities ($p < .001$). The best predictors of high school students' *boredom* of their science class were demonstration equipment ($p < .001$) and facilities ($p < .001$). The best predictors of high school students'

PROMOTION OF INQUIRY-BASED LEARNING USING CULTURAL HERITAGE MATERIALS AND OTHER LOCALLY ACCESSIBLE RESOURCES: A PROFESSIONAL DEVELOPMENT ACTIVITY FOR PRECOLLEGE STEM TEACHERS. I.T. Urasa[1], V. T. Ward[2], V. Carroll[3], A. Adibi[4], D. Gibson[5] & P. Gueye[6], [1]Dept. of Chemistry & Biochemistry, [2]University Museum, [3]Preservation Dept., [4]Dept. of Biological Sciences, [5]Dept. of Marine & Environmental Science, [6]Dept. of Physics, Hampton Univ., Hampton, VA 23668. This pilot study was guided by the State of Virginia Standards of Learning (SOL). Selected teachers from three Hampton City Schools designed and tested inquiry-based laboratory activities utilizing resources from Hampton University's inventory of cultural heritage and historical materials; the Chesapeake Bay watershed; and Hampton Univ. faculty research programs. The project culminated in a two-week summer institute. Findings from the pilot project: (1) practicing science teachers need professional development opportunities to acquire new skills that will allow them to teach content and subject matter using the inquiry method and sustained learning experience; (2) teachers are responsive to new curriculum guidelines and other mandates coming from the school districts; however, there are areas within those mandates that restrict the teachers' ability to implement new ideas (for example, SOL tests, resource and time limitations, etc.); and (3) precollege students adapt easily and quickly to new expectations if they are challenged. This study was supported by a grant from the National Science Foundation (NSF).