Baltimore Area Conference  
October 5–7, 2017

THEME: Making Science Accessible: Full Speed Ahead

Strands:
Anchoring Our Natural Treasures Through Environmental Literacy  
Charting the Course for Innovation  
Tying the Knot: Coherence in 3D Science Learning

Strand One  
Anchoring Our Natural Treasures Through Environmental Literacy
Today’s students are tomorrow’s leaders. It is imperative that they be equipped to rise to challenges, including preservation of natural resources, mitigation of air and water pollution, and adaptation to climate change. They must think critically and understand how their actions impact the environment. Engaging students in local action, research, or citizen science projects today fosters the environmentally literate leaders of tomorrow, who are connected to the world around them, and informed enough about the environment to be decision makers. In this strand, teachers will learn to elevate student experiences by partnering with informal educational providers, getting students outdoors, and participating in authentic research.

GOAL: Provide workshops and presentations focused on one or more of the following:
- Learning that features local action research, community partnerships, or sustainability projects.
- Developing evidence based solutions to real-world, environmental problems.
- Securing external funding for classroom indoor/outdoor action research projects.
- Connecting learning to environmentally focused careers.

CRITERIA: Proposals will be evaluated on the extent to which they:
- Align with one or more strand goals.
- Support specifically identified goals from the NRC Framework, NGSS, or state standards.
- Are based on current and available research.
- Involve participants through activities or discussion.
Strand Two
Charting the Course for Innovation
To develop innovative scientific leaders for tomorrow, we must foster creativity, academic risk-taking, and perseverance within ALL students today. The next generation science learning environment must engage students in authentic problem solving that respects diverse thinking. A classroom culture that celebrates diverse ideas and solutions is essential for an effective STEM workforce. Presentations in this strand will focus on problem solving in STEM that involve all students. Participants will investigate effective classroom examples supporting preK–16 student learning that involves engineering design projects, use of technology, and computer science.

GOAL: Provide workshops and presentations focused on one or more of the following:
- Having lessons that emphasize culturally relevant pedagogy and responsive assessment.
- Providing innovative uses of technology that could be applicable for STEM, STEAM, makerspaces, and computer science literacy.
- Engaging learners at all levels (preK, elementary, middle school, high school, and postsecondary).
- Highlighting lessons or unit of instruction that demonstrate STEM integration.
- Collaborating with community partners.

CRITERIA: Proposals will be evaluated on the extent to which they:
- Align with one or more strand goals.
- Support specifically identified goals from the NRC Framework, NGSS, or state standards.
- Are based on current and available research.
- Involve participants through activities or discussion.
Strand Three
Tying the Knot: Coherence in 3D Science Learning

The Next Generation Science Standards emphasize three-dimensional learning to explain phenomena. Storylines and learning progressions are used within curriculum development and implementation to provide coherence within and across grade levels. Storylines help students connect activities, goals, and big ideas to make sense of the world. The three-dimensional learning view requires new assessment strategies and tools that provide feedback to support students’ sense-making. Assessment, both formative and summative, is instrumental in supporting responsive instruction. In this strand, participants will learn to use storylines, find ways to adapt instruction using responsive strategies, and focus on learning progressions.

GOAL: Provide workshops and presentations focused on one or more of the following:
- Highlighting units of instruction that demonstrate three-dimensional teaching and learning, coherent storylines, or learning progressions.
- Using phenomena-based instruction to engage diverse learners.
- Implementing instructional strategies and tools for inclusive three-dimensional teaching and learning.
- Highlighting responsive instructional strategies that bring in diverse student ideas and experiences.

CRITERIA: Proposals will be evaluated on the extent to which they:
- Align with one or more strand goals.
- Support specifically identified goals from the NRC Framework, NGSS, or state standards.
- Are based on current and available research.
- Involve participants through activities and/or discussion.