Milwaukee Area Conference
November 9–11, 2017

THEME: Making Waves: Moving Science Forward!

Strands
Preparing All Students for the Voyage
Navigating STEM Through the NGSS
Buoying Up Literacy with Science

Strand One
Preparing All Students for the Voyage
In a science- and technology-driven society, equity means that all students should have access to the three dimensions of the NGSS to be prepared to participate as productive citizens. Successful achievement of disciplinary core ideas, science and engineering practices, and crosscutting concepts demands strategies that address a diverse set of learners, including but not limited to students with special needs, English language learners, gifted and talented students, urban and rural students, and those in other underserved groups. This strand will demonstrate how teachers can provide equitable science and engineering learning opportunities that engage ALL students in constructing meaning about the world around them.

GOAL: Provide workshops and presentations focused on one or more of the following:

- Highlighting research-based, preK–12 lessons or units of instruction that address students’ diverse needs.
- Engaging students in constructing meaning about the world around them.
- Connecting to today’s learner by integrating technology into the science classroom.
- Enhancing opportunities for students from a variety of cultural, economic, and developmental backgrounds.
- Differentiating authentic assessments so that students have an equitable opportunity to demonstrate practice skills and content knowledge.

CRITERIA: Proposals will be evaluated on the extent to which they:

- Align with one or more of the 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.
- Enhance educators’ ability to meet the needs of all learners.
Strand Two: Navigating STEM Through the NGSS

STEM has become a buzzword attached to everything from a two-hour project on Friday to a fully integrated learning program. A common definition of STEM education emphasizes its interdisciplinary approach coupled with real-world lessons. The focus of this strand is on creating authentic preK–12 cross-curricular connections and engaging students in real-world applications using NGSS. The NGSS integrates science with other STEM disciplines, as well as literacy. This strand will increase participants’ understanding of the way the NGSS can be applied when implementing STEM lessons that are field tested and research based.

GOAL: Provide workshops and presentations focused on one of more of the following:

- Developing three-dimensional lessons and units that integrate STEM disciplines.
- Designing authentic, integrated assessments that are focused on the NGSS.
- Implementing standards-based grading in the era of the NGSS.
- Engaging students in real-world applications using the NGSS.
- Analyzing and structuring preK–12 STEM learning progressions toward college and career readiness.

CRITERIA: Proposals will be evaluated on the extent to which they:

- Align with one or more of the 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.
- Share sessions that provide innovative methods of enhancing STEM instruction through the NGSS.
Strand Three: 
Buoying Up Literacy with Science

Effective science instruction boosts literacy. Scientifically literate students obtain, evaluate, and communicate information. Integrating science and language arts instruction allows educators to support students from multiple angles. Reading, writing, listening, and speaking can be woven into science in meaningful mediums. In this strand, participants will develop an understanding of how science can support literacy and literacy instruction.

GOAL: Provide workshops and presentations focused on one or more of the following:

- Using strategies for writing in science such as constructed response, the creation of notebooks and lab reports through science and engineering practices, recommended approaches from the Common Core State Standards, and other research-based practices.
- Implementing strategies for engaging students in the written and oral argumentation of science and engineering.
- Supporting elementary literacy through science using nonfiction texts, Project-Based Learning, and engineering design.
- Examining strategies and tools for using anchor texts, text sets, or trade books to enhance literacy through the science program.

CRITERIA: Proposals will be evaluated on the extent to which they:

- Align with one or more of the 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.
- Share sessions that provide examples of enhancing literacy through science.