The Premier Science and STEM Teaching and Learning Event of the Fall

Strands provide a foundation and context for proposals for the sessions convened at the 2023 NSTA National Conference on Science Education in Kansas City. The descriptions and examples below provide some additional clarity about the strand and what will be prioritized when evaluating proposals for inclusion in the NSTA program. The list of examples is not meant to be all-inclusive.

Proposals that focus on strategies and ideas centering on diversity, equity, and inclusion will be prioritized as part of NSTA’s strategic plan is to equip and empower all educators in providing access and opportunity for all students to be successful in science and STEM.

### Strand Descriptions

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| **STEM Haven**          | Proposals in this strand will focus on transdisciplinary learning (engaging students where disciplines converge to solve real-world problems). For learning to be considered transdisciplinary, it should focus on solving real-world problems using knowledge and skills from two or more disciplines (science, technology, engineering, math, humanities, arts, computer science). Proposals in this strand should share tools, strategies, and ideas where students apply knowledge and skills from multiple disciplines to create and innovate solutions. Priority will be given to proposals that do one or more of the following:  
  • Offer learning opportunities driven by a specific problem where multiple disciplines are needed to develop a solution  
  • Offer learning opportunities for students in contexts of societal relevance and student/community interest  
  • Offer opportunities for student action and impact  
  • Offer opportunities to integrate science and robotics, computer science, or artificial intelligence. |
| **Tech Tools**          | Teaching is a passion, a calling, and a purpose; it can also be a source of stress and a heavy workload. Sessions in this strand focus on technology tools and strategies that, when implemented thoughtfully and emphatically, can positively impact student learning for all and/or provide support for teachers to reduce anxiety. Bring your tech tools to aid teachers in streamlining instruction, gathering, analyzing, and/or responding to data, managing the classroom or workday, tracking student data, increasing overall efficiency, and communicating with parents. This strand focuses on tech tools for teachers or students. |
| **Students and Sensemaking** | When students-as-scientists and engineers have authentic, relevant opportunities to actively make sense of the world and beyond—what we call sensemaking—science learning becomes engaging, accessible, and important to all students. Four attributes of sensemaking are phenomena, science and engineering practices, student ideas, and science ideas (grade-appropriate disciplinary core ideas). In this strand, we invite educators to share how they have integrated the pillar(s) of sensemaking into their practice. Particular emphasis will be placed on sessions that provide strategies for design or assessment using at least one of the pillars in combination with student work, student video, or specific examples of the strategy in the classroom and the impacts on student learning. |
| **Leadership & Advocacy** | Proposals in this strand should focus on supporting science/STEM leaders as change agents or on raising the profile of science education. The target audience can be educators or partners in the classroom, building/site, district, or at the national level. Examples include professional development (job-embedded professional learning, enactment of high-quality curriculum, instruction and/or assessment), emerging research areas, science/STEM professional learning for administrators, management ideas, leading and learning, school branding and social media, strategic communication techniques, working with new teachers, and retaining teachers. |
| **Research to Practice** | Proposals in this strand should focus on highlighting a specific research project, publication, or finding in education and how it can be implemented in the classroom. Proposals that use specific classroom examples or specific classroom strategies will be prioritized. |

### Review Criteria

The following key elements will be used by reviewers to evaluate session proposals.

- Alignment to conference strand and theme.
- Degree of connection to the Framework, NGSS, state standards, or peer-reviewed contemporary research.
- Focus on equity or Science/STEM for all
- Use of specific classroom examples, student work, specific strategies, or specific projects/lessons/units.
NSTA is seeking proposals for the following session types:

**Conference Strands**
- STEM Haven
- Tech Tools
- Students and Sensemaking
- Leadership and Advocacy
- Research to Practice

**Poster Sessions**

**Speed Sharing**

**Presentation**

**Workshop**