Strands and Review Criteria

Strands provide a foundation and context for proposals for the sessions convened at the 2025 NSTA National Conference on Science and STEM Education in Minneapolis. The descriptions and examples below provide additional clarity about the strands and what will be prioritized when evaluating proposals for inclusion in the NSTA conference 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 to equip and empower all educators in providing access and opportunity for all students to be successful in science and STEM.

Strand	Descriptions
Designing and Implementing High-Quality Instructional Materials and Assessments to Support 3D Teaching and Learning	Proposals in this strand should focus on selecting, implementing or modifying curricula and/or assessments to support 3D teaching and learning. These sessions should deepen the educator's knowledge base and instructional practice. High-quality instructional materials (curricula) and assessment materials used as the context or examples must be OER or freely accessible to all and free of charge. Proposals should indicate the specific name or type of curricular or assessment materials used. For assessment-focused sessions, please clarify whether the assessments are formative or summative.
Outdoor and Place-based Education: Building Connections Beyond the Classroom	Proposals in this strand should showcase how outdoor and place-based learning experiences foster engagement, exemplify 3D learning, and incorporate local contexts and issues into STEM education.
Teaching for Sensemaking	Proposals in this strand should focus on instructional strategies to support student sensemaking. 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 lesson 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 its impacts on student learning.
Literacy and Math in the Three Dimensions	Proposals in this strand should focus on either the integration of science and literacy or the integration of science and mathematics to create opportunities for student learning, problem-solving, and impact. Examples could include: supporting elementary, middle, or high school students in using literacy approaches tailored to science; resources and guidance for developing science-specific reading, writing, and communication skills; how mathematics and computational thinking help students explain phenomena; or developing solutions to problems in 3D learning.
Climate Science and Sustainability: Teaching with Relevance and Impact	Proposals in this strand should focus on climate science, environmental or natural stewardship, and sustainability. Examples of subtopics include: the intersection between 3D learning and climate science; strategies for addressing misconceptions and misinformation about climate science; connections to local environmental challenges; and the intersection of STEM education and sustainability.
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 opportunities to integrate science and robotics, computer science, or artificial intelligence.
No Strand	If your proposal cannot be strongly connected to any strand above, please choose this option.

Review Criteria

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

- Alignment to conference strand, theme, or focus area.
- 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:

POSTER SESSIONS

- Outdoor and Place-based Education: Building Connections Beyond the Classroom
- Lesson Showcase
- Climate Science and Sustainability: Teaching with Relevance and Impact
- STEM Haven

SPEED SHARING

- Outdoor and Place-based Education: Building Connections Beyond the Classroom
- Literacy and Math in the Three Dimensions
- Climate Science and Sustainability: Teaching with Relevance and Impact
- STEM Haven

30 MINUTE PRESENTATION

- Outdoor and Place-based Education: Building Connections Beyond the Classroom
- Literacy and Math in the Three Dimensions
- Climate Science and Sustainability: Teaching with Relevance and Impact
- STEM Haven

30 MINUTE ROUNDTABLE

- Outdoor and Place-based Education: Building Connections Beyond the Classroom
- Literacy and Math in the Three Dimensions
- Climate Science and Sustainability: Teaching with Relevance and Impact
- STEM Haven

60 MINUTE PRESENTATION

- Outdoor and Place-based Education: Building Connections Beyond the Classroom
- Designing and Implementing High-Quality Instructional Materials and Assessments to Support 3D Teaching and Learning
- Teaching for Sensemaking
- Literacy and Math in the Three Dimensions
- Climate Science and Sustainability: Teaching with Relevance and Impact
- STEM Haven
- No Strand

60 MINUTE WORKSHOP

- Outdoor and Place-based Education: Building Connections Beyond the Classroom
- Designing and Implementing High-Quality Instructional Materials and Assessments to Support 3D Teaching and Learning
- Teaching for Sensemaking
- Literacy and Math in the Three Dimensions
- Climate Science and Sustainability: Teaching with Relevance and Impact
- STEM Haven
- No Strand

120 MINUTE PROFESSIONAL LEARNING WORKSHOP

- Designing and Implementing High-Quality Instructional Materials and Assessments to Support 3D Teaching and Learning
- Teaching for Sensemaking
- Climate Science and Sustainability: Teaching with Relevance and Impact

NSTA Conference Reviewer • PROPOSAL RUBRIC

Directions: Please use the proposal rubric to rate the proposal from 1-3 for each of the evaluation criteria listed. Total the Score and Answer Q1 below. Clarity of writing and organization should be considered as part of the score in all sections.

	Rating Scale: 1 is the lowest rating with 3 being the highest			
Criteria	**1 · Not Acceptable**	**2 · Borderline**	**3 · Exceptional**	**Score**
1. Alignment to the conference strand.	The conference strand, theme, or focus area **is not** incorporated into the proposal.	The conference strand, theme, or focus area **is somewhat** incorporated into the proposal.	The conference strand, theme, or focus area **is clearly** incorporated into the proposal.	
2. Supports or identifies specific goals from the NRC Framework, NGSS, or state standards and the contemporary research connected to those standards.	The proposal provides no reference to or identifies specific goals from the NRC Framework, NGSS, or state standards. There is **no degree** of connection to these goals.	The proposal seems to build upon a specific goal from the NRC Framework, NGSS, or state standards and has **some degree** of connection to this goal(s). The connection can be **interpreted** rather than evidenced.	The proposal builds upon a specific goal from the NRC Framework, NGSS, or state standards **and** has a **high degree** of connection to this goal(s). One can **easily** see the connection to the Framework, NGSS, or state standards. The connection can be **evidenced**.	
3. The proposal is grounded in equity or Science/STEM for all.	The proposal provides **no** indication that the session is grounded in strategies, ideas, or guidance in providing science for all (equitable classroom practices, including all students in learning, inclusive environments, OR culturally relevant pedagogies).	The proposal **references** specific strategies, ideas, or guidance in providing science for all (equitable classroom practices, including all students in learning, inclusive environments, OR culturally relevant pedagogies). However, the description/abstract **does not** provide information about the extent to which the session will be grounded in these practices.	The proposal **has** specific strategies, ideas, or guidance in providing science for all (equitable classroom practices, including all students in learning, inclusive environments, OR culturally relevant pedagogies) **and** provides multiple examples of how these practices will be demonstrated or addressed in the session.	
4. The proposal engages session participants in classroom/ leadership examples or specific classroom/leadership strategies OR includes examples of assessments (formative and summative), classroom lessons or units, or student work.	The proposal **does not** engage session participants through classroom examples or specific classroom strategies OR the proposal provides no examples of assessments (formative and summative), use of lessons or units, or student work in the session description/abstract.	The proposal **references** classroom examples or specific classroom strategies OR examples of assessments (formative and summative), use of lessons or units, or student work in the session description/abstract. However, the description or abstract **does not** provide information about the extent of use.	The proposal **provides** at least one example of how the proposed session will include classroom examples or specific classroom strategies OR examples of assessments (formative and summative), use of lessons or units, or student work. It **is clear** that the use of these/this example will be a large focus of the session/integral piece.	
5. The proposal addresses current issues/hot topics (as identified by you) that have clearly defined takeaways for the attendee	The proposal **does not** address current issues/hot topics (as identified by you) and/or **does not** have a clearly defined takeaway for attendees.	The **proposal addresses** a current issue/hot topic OR has a clearly defined takeaway for attendees but not both.	The proposal both addresses a current issue/hot topic **AND** has a clearly defined takeaway for attendees.	
6. The proposal is concise, clear, organized, and well-written.	The proposal contains **several** spelling, punctuation, and grammar errors	The proposal contains **minimal errors** in spelling, punctuation, and grammar	The proposal is **clear** and contains no noticeable spelling, punctuation, or grammar issues.	
Additional Resources: Sensemaking · Next Generation Science Standards (NGSS)			**TOTAL**	