Shell Urban Award - Grade Band Plan Examples for Conference Attendance

Elementary School (K–5)

Attending the national science education conference will allow me to strengthen my ability to engage young learners in hands-on, inquiry-based science that builds curiosity and foundational scientific thinking. My primary goal is to deepen my understanding of how to design learning experiences that help elementary students ask questions, make observations, and develop early explanations based on evidence.

I plan to attend sessions focused on phenomena-based learning in the elementary grades, early science and engineering practices, and strategies for supporting multilingual learners in science. I am especially interested in workshops that demonstrate how to integrate literacy and science instruction, as this is critical for my students' reading development and conceptual understanding.

Another priority is learning new approaches to classroom investigations that are safe, accessible, and engaging for young learners. I also plan to explore sessions that focus on equity in elementary science education, particularly strategies for ensuring that all students—regardless of background or ability—can participate meaningfully in science learning.

Following the conference, I will implement at least two new instructional routines, such as structured science talk strategies and improved observation-based investigations. I will also share strategies with my grade-level team through informal professional development sessions and collaborative planning meetings.

Ultimately, attending the conference will help me strengthen alignment with NGSS by improving how students engage in early science practices, build foundational knowledge, and develop curiosity about the natural world.

Middle School (6–8)

Attending the national science education conference will support my goal of strengthening student engagement in inquiry-based science and improving my ability to design learning experiences that connect scientific concepts to real-world issues. My students benefit most when they are given opportunities to investigate meaningful problems, and I plan to expand my instructional strategies through targeted professional learning.

I intend to attend sessions focused on three-dimensional learning, scientific modeling, and argumentation from evidence, particularly in middle school contexts. I am also interested

in workshops on engineering design challenges and phenomenon-driven instruction that align with NGSS expectations or equivalent state standards.

Equity and access are central to my instructional goals, so I will prioritize sessions that focus on supporting multilingual learners, students with disabilities, and students who need academic scaffolding in rigorous science classrooms. I also plan to explore technology tools that support data analysis and student collaboration.

After the conference, I will implement new instructional routines such as structured argumentation protocols, enhanced lab investigation designs, and student-led modeling activities. I will share my learning with colleagues through department meetings and contribute to curriculum refinement efforts within my school.

Attending this conference will allow me to strengthen alignment with NGSS by deepening student engagement in science and engineering practices and improving how students apply crosscutting concepts to explain phenomena relevant to their communities.

High School (9–12)

Attending the national science education conference will provide me with the opportunity to refine my instructional practice and expand student access to authentic scientific inquiry and problem solving. My goal is to strengthen my ability to design rigorous, relevant, and equitable science learning experiences that prepare students for postsecondary pathways and informed citizenship.

I plan to attend sessions focused on advanced scientific modeling, data analysis, and project-based learning in high school science courses such as biology, chemistry, physics, and environmental science. I am particularly interested in workshops that demonstrate how to integrate real-world data sets, engineering design challenges, and research-based instructional strategies aligned with NGSS or equivalent state standards.

Equity is a central focus of my teaching, so I will also attend sessions on culturally responsive science teaching, supporting multilingual learners in complex scientific discourse, and differentiating instruction without reducing rigor. Additionally, I plan to explore how technology tools and simulations can enhance student understanding of complex systems.

Following the conference, I will implement new strategies such as student research projects tied to local environmental issues, improved scientific argumentation routines, and enhanced lab-based inquiry experiences. I will also share conference learning through

professional development sessions within my department and contribute to curriculum updates.

Ultimately, attending this conference will help me strengthen my alignment with NGSS by enhancing how students engage in scientific practices, deepen conceptual understanding through three-dimensional learning, and apply science to real-world challenges in their communities.