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To Whom It May Concern:

We invite all teachers of science to attend the National Science Teachers Association (NSTA) 2016 Portland Area [Conference on Science Education](#) at the Oregon Convention Center, November 10–12.

NSTA conferences offer the latest in science content, teaching strategies, and research to enhance and expand professional growth for preK–12 educators. Working with NSTA, we and other science education leaders from Oregon and Washington have developed conference strands that reflect the best content designed around the areas of greatest need as we work toward implementing the vision of the NRC *Framework for K–12 Science Education* and detailed in the *Next Generation Science Standards (NGSS)*.

As our committee crafted the PD offerings and selected speakers, we had the *NGSS* top of mind because it represents a fundamental shift in science education and requires a different approach to teaching than has been taken in the past. Our ultimate goal is for Portland conference attendees to gain the skills and resources necessary to positively impact overall student performance in science and engineering, especially with regard to:

- Systems thinking and modeling needed to explain phenomena and to give a context for the ideas being learned.
- Students conducting investigations, solving problems, and engaging in discussions with teacher guidance.
- Students discussing open-ended questions that focus on the strength of the evidence used to generate claims.
- Students reading multiple sources and developing summaries of information.
- Students writing journals, reports, posters, and media presentations that offer explanations and arguments.
- Provision of support so that *all students* can engage in sophisticated science and engineering practices.

Based on research that shows how students best learn science, the *NGSS* expand the opportunities available to all of our students. The *NGSS* will prepare more students for advanced science studies, while teaching *all students* to understand the world around them and be better critical thinkers and complex problem-solvers.

Hands-on sessions, panels, featured speakers, and networking opportunities will focus on:

Integrating Elementary Science Instruction with Math and ELA

Science education fosters the natural curiosity and creativity in students. By teaching science and laying the foundation, elementary teachers provide students with the tools they need to reach the summit to become scientifically literate adults. When teachers integrate content during instruction, they are modeling how the real world operates, allowing students to make meaning of the world they live in. Teachers choosing this strand will learn how to bundle science, mathematics, and ELA standards in a way that reaches the whole child and improves the efficiency in the elementary classroom.

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All Standards, All Students

In a science- and technology-driven society, equity means that all students should have access to knowledge that will allow them to participate as productive citizens. Successful application of science and engineering practices and the understanding of how crosscutting concepts play out across a range of disciplinary core ideas will demand increased cognitive abilities of ALL students (e.g., special education, English language learners, gifted and talented). This strand will demonstrate how teachers can provide equitable science and engineering learning opportunities that engage students in constructing meaning about the world around them.

Connecting Three-Dimensional Science Instruction

The NRC *Framework* and the *Next Generation Science Standards* identified research-based best practices for today's learners. Quality instruction incorporates the three dimensions of *NGSS* (crosscutting concepts, disciplinary core ideas, and science and engineering practices). Three-dimensional science learning produces scientifically literate and competent students. This strand will exemplify the intertwining nature of the three dimensions necessary for high-quality science instruction at all levels.

We are confident that the programing and events associated with the 2016 NSTA Portland Area Conference on Science Education will help to ensure successful implementation of the *NGSS* and *CCSS* into our schools and communities.

We hope you and your colleagues will take advantage of this powerful opportunity. More information about the conference can be found at www.nsta.org/portland.

Bradford Hill, Conference Chair
2016 NSTA Portland Area Conference
Science Specialist and Teacher, Beaverton School District
2013 Presidential Awardee for Excellence in Science Teaching
Past-President, Oregon Science Teachers Association

Dr. Susan Holveck, Program Chair
2016 NSTA Portland Area Conference
Science Specialist, Beaverton School District
President, Oregon Science Teachers Association

Lori Lancaster, Local Arrangements Chair
2016 NSTA Portland Area Conference
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2009 Presidential Awardee for Excellence in Science Teaching