

NCSE 2013 ISSUE FORUMS

Issue forum A: Science and Engineering Practices and Inquiry

A sharing session where delegates report what is happening in their states and pursue guiding questions and results of readings

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Reporter Recorder: Delegate selected from the group

Science and Engineering Practices and Inquiry

Learn about the Next Generation Science Standard (NGSS) Science and Engineering Practices, how these practices relate to Inquiry-based learning, and discuss how NSTA and Chapter and Associated Groups can help improve STEM education by supporting and applying the best of both methods.

Guiding Questions:

- 1 How would teaching NGSS science and engineering practices compare to the way we currently teach the sciences using inquiry-based learning?
- 2 How could the NGSS science and engineering practices change the way we teach? What would stay the same? What would be different, and where do you see this approach being most beneficial to you and your students?
- 3 What training, resources, and/or support would science teachers need to successfully learn and teach the NGSS science and engineering practices?
- 4 How could the NGSS science and engineering practices help your students think about their future higher education or career plans?

Recommended Readings:

- NSTA's December 2011 journal articles titled, "Scientific and Engineering Practices in K-12 Classrooms," by Rodger W. Bybee.
http://learningcenter.nsta.org/files/ss1104_6.pdf
- *A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas*
 - Chapter 2: Guiding Assumptions and Organization of the Framework (pp. 24-34)
http://www.nap.edu/openbook.php?record_id=13165&page=23
 - Chapter 3: Dimension 1: Scientific and Engineering Practices (pp. 41-46)
http://www.nap.edu/openbook.php?record_id=13165&page=41
- *Taking Science to School: Learning and Teaching Science in Grades K-8*, Chapter 9: Teaching Science As Practice (pp. 251-256)
http://www.nap.edu/openbook.php?record_id=11625&page=251