



Uncovering Students' Ideas with Three-Dimensional Formative Assessment Probes and Techniques

Description: K–12 students often bring alternative ideas to the classroom setting that may interfere with their learning. This session will focus on how to use formative assessments from the *Uncovering Student Ideas in Science* series, combined with formative assessment techniques, to identify these alternative ideas and support three-dimensional learning. With examples from physical, life, earth, and space science, participants will engage in ways to elicit students' thinking about concepts or phenomena and use those ideas to make informed instructional decisions, including differentiation. Participants will have opportunities to experience ways to weave together the disciplinary core ideas, scientific practices, and cross-cutting concepts with different types of formative assessment probes and techniques.

Audience: Grades K-12 Science Teachers

Facilitator: Page Keeley, Nationally Known Author, Speaker, and Science Education Consultant

<http://www.uncoveringstudentideas.org/about/authors>

Location: Locust Grove High School, Media Center

Time: 8:30 – 11:30

Time: 12:30 – 3:30

Depth of Knowledge and Rigor in Science

Description: Perhaps the most common confusion about DOK is that it always correlates to difficulty. Understanding the difference between difficulty and rigor is one of the first steps towards creating a common understanding of what mastery looks like. Participants will engage in activities that will connect the rigor found within standards to assessment and instructional practices.

Presenter: Georgia Center for Assessment

Audience: Grades 4-12 Science Teachers

Location: Union Grove Middle School, Media Center

Time: 9:00 – 11:00

MindTap for Forensic Science Teachers

Description: MindTap is the platform that powers students from memorization to mastery. It gives you complete control of your course—to provide engaging content, to challenge every individual, and to build students' confidence. MindTap is a fully online, highly personalized learning experience built upon authoritative Cengage Learning content. By combining readings, multimedia, activities, and assessments into a singular Learning Path, MindTap guides students through their course with ease and engagement. Participants will be able to create online learning experiences and offer data-driven guidance that is truly personalized and continuously adaptive.

Audience: Forensic Science Teachers

Facilitator: Sara Bumgardner, Cengage Learning

Location: Union Grove High School, Lab 322

Time: 1:00 – 3:00

Exploratory Stations with Robots and Coding

Description: Successful technology integration is more than just getting the tools into the classroom. When technology integration in the classroom is seamless and thoughtful, students not only become more engaged, they begin to take more control over their own learning. Effective technology integration changes classroom dynamics, encouraging student-centered learning. Participants will utilize the 4C's (communication, critical thinking, collaboration and creativity) while engaging in tech-based learning stations suitable for K-5 classrooms, through experiences with robots and coding.

Audience: Grades K-5 Teachers

Facilitator: Juli Gilbert, Henry County Schools Instructional Technology Specialist

Location: East Lake Elementary, Room 104

Time: 8:30 - 11:30

Picture Perfect Science

The award-winning NSTA Press® Picture-Perfect Science program provide easy-to-grasp background in Physical Science, Life Science, Earth and Space Sciences, and Engineering Practices. Step-by-step teaching notes, student pages, internet resources, assessments, suggestions for further inquiry, and more books to read are also included...everything elementary teachers need is at their fingertips! Participants will explore the features of ready-to-teach elementary science lessons designed to help K-5 teachers integrate science and reading in an engaging, kid-friendly way.

The Picture-Perfect Science program incorporates picture books, the 5E Model, inquiry, and engineering.

- **The 5E Model** - Picture-Perfect Science lessons are written using an easy-to-follow learning cycle format for teaching inquiry-based science. The BSCS 5E model (Bybee 1997) allows students to construct their own understanding of scientific concepts as they cycle through the following phases: Engage, Explore, Explain, Elaborate, and Evaluate.
- **Inquiry** - Inquiry learning contributes to better understanding of scientific concepts and skills. Within an inquiry-based lesson, students work collaboratively to brainstorm questions, design procedures for testing their predictions, carry out investigations, and ask thoughtful questions about other students' conclusions.
- **Engineering** - Many lessons in the Picture-Perfect Science books engage students in engineering practices, such as defining problems, developing and using models, and designing solutions. Participation in these practices helps students understand the work of engineers, as well as the links between engineering and science.

Audience: K-5 Science Teachers

Facilitator: Dr. Sally Creel, Picture Perfect Science Consultant

Location: East Lake Elementary, Media Center

Time: 8:30 – 11:30

Time: 12:30 – 3:30

Teachers interested in participating must register via PDEExpress by Friday, March 10, 2017.