

WORKSHOPS DESCRIPTION

RESOLUTION: FROM INTERGALACTIC TO INTRACELLULAR - ADVANCES IN ELECTRON MICROSCOPY

Partners in Science National Conference, San Diego, California
January 15-16, 2010

Please indicate your 1st, 2nd, and 3rd choices when registering online.

Workshops will be open to all high school teacher participants, and if space is available, workshops will be open to university research mentors also. The workshop space will be filled on a first-come/first-served basis.

Workshop 1: "Teaching High School Biology Through a Problem-Based Learning Approach" - Gregory Borman, City College of New York, New York, NY

In this workshop you will have the opportunity to participate in a Problem-Based Learning activity focused around a current issue related to biology. Participants will share their experiences using PBLs, and discuss the benefits and challenges of using PBLs in the secondary science classroom.

Workshop 2: "SMART Boards, Clickers, and Cameras: Oh My!" - Ben Van Dusen and Asher Tubman, South Eugene High School, Eugene, OR

The 21st century has arrived and it has brought more new pieces of technology than you can shake a stick at. If you have ever wondered how to get, install, and integrate an interactive whiteboard, projector, sound system, clicker, document camera, blog, youtube, blackboard, vernier, and online grades in your classroom, then this is the workshop for you.

Workshop 3: "Digital Image Analysis by the Numbers" - Dr. Steven Moore, Science Approach, Tucson, AZ; and Don Adams, Vail High School, Tucson, AZ

In this workshop, NSF- and NIH-funded lessons will be used to teach the basics of digital image analysis as employed in biomedical and remote sensing research. Participants will work with scientific images of sea surface temperatures, nanoparticles, and respiratory tissues. Copies of the lessons and images will be provided..

Workshop 4: "Data Collection and Analysis with Vernier" - Michael Collins, Vernier Software & Technology, Beaverton, OR; and Maureen Daschel, St. Mary's Academy, Portland, OR

This workshop offers participants an opportunity to use the highly portable LabQuest interface, the latest release of Logger *Pro* software (LP 3.8), and sensors to perform many labs common to high school science classes. These tools will greatly enhance many of the labs your students perform, inspiring them with hands-on technology and allowing them to more deeply investigate, explore, and demonstrate understanding of scientific concepts. Whether you are a seasoned sensor veteran or newcomer to data collection, this workshop will help invigorate and foster possibilities for your students' learning.

Workshop 5: "Phenom'inal Images! (The desktop Scanning Electron Microscope, The Phenom)" - Mike Blok, Beaverton High School, Beaverton, OR; and Keith Grosse, Lake Oswego High School, Lake Oswego, OR

Digital images for everyone! Use the SEM - Phenom touch screen, load the sample and seconds later . . . images with magnifications up to 20,000X can be yours on a thumb drive! Participants will get SEM time, a thumb drive with images, and ideas for how to get an SEM in the classroom! (<http://www.fei.com/products/scanning-electron-microscopes/phenom.aspx>).

Workshop 6: "General Atomics Fusion Education Program" - Rick Lee, Fusion Education Coordinator, General Atomics, San Diego, CA

The General Atomics Fusion Education Program (<http://fusioned.gat.com>) helps to promote an increased understanding of gaseous plasma and high temperature fusion sciences at the elementary through college level by providing exciting workshops and tours for teachers. We offer you a fascinating workshop and tour using the nation's largest magnetic confinement fusion device as the centerpiece. Materials will be provided to each participant for use in their classroom.
