

Science Education Colloquium and Interactive Workshop (2)

Hosted by the Center for Advancing Mathematics, Science, and Engineering Education (CAMSEE) and the UC San Diego Education Initiative

Active Learning and Assessment: Using Scientific Modeling



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Thursday, February 19, 2015

Natural Sciences Building (NSB) Auditorium – 1st Floor

4:00pm - 5:30pm

Register at educationinitiative.ucsd.edu by *Wednesday, February 18, 2015*. Everyone is welcome to this workshop, including those who were not able to participate in the [January 29 event](#).

We invite you to participate in a workshop about developing and implementing learner-centered instructional materials, teaching strategies, and assessments in both small and large STEM enrollment courses. An earlier workshop focused on strategies for creating learner-centered classrooms so that all students have the opportunity to learn. We engaged in an active learning strategy that used a simple case of bacterial resistance to teach students how to construct arguments using claims, evidence and warrants (reasons). Students can construct arguments in many different courses via variety of in class activities and homework.

In this workshop, we will use modeling as a science practice to engage students in active learning in class and as an assessment tool to demonstrate their achievement of learning objectives. We will work together on model-based instruction via an interesting case that provides everyone a short reading for background information. Groups will participate in a modeling activity and then write the learning objectives and assessment questions for this activity. We will continue to address how to actively engage students in cooperative groups to create scientific models.

Diane Ebert-May provides international leadership for discipline-based biology education research that integrates life sciences and cognitive science. She promotes professional development, assessment and improvement of faculty, postdoctoral scholars, and graduate students who actively participate in creative research about teaching and learning in the context of their scientific discipline. She teaches plant biology, introductory biology to majors in a large enrollment course, and a graduate /postdoctoral seminar on scientific teaching. Her plant ecology research continues on Niwot Ridge, Colorado, where she has conducted long-term ecological research on alpine tundra plant communities since 1971. She is an AAAS Fellow in the Biological Sciences. Her recent awards include the US Professor of the Year Award for Michigan from the Carnegie Foundation/CASE (2011) and the Education Award from the American Association for Biological Science (2012). She earned her BS from University of Wisconsin, Madison (Botany), MA and PhD University of Colorado (Ecology and Evolutionary Biology). ([Learn more](#))