

*Learning about versus
figuring it out:
Engaging students in the practice of
modeling in the science classroom*

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SAEC 1151
1pm lecture, 2pm reception

Abstract:

Based on emerging views of student learning and more updated views of the scientific enterprise, teachers are now being asked to create classrooms that are inclusive and intellectually expansive spaces: classrooms where students are the agents of their own learning and the teacher acts as a guide, carefully choosing experiences, investigations and analytic approaches that will bring students into making sense of the natural world by developing models and explanations. In other words, the 21st century classroom should no longer be governed by a simple, transmissionist model of learning. In my work, I instantiate these ideas in curriculum and teacher professional development using the practice of modeling as an anchor. In this talk I will provide the empirical and theoretical justification for this approach and exemplify it by showing classroom video excerpts and describing the tools we use to design curriculum in K-12 settings.



Cynthia Passmore is a professor specializing in science education at the University of California, Davis School of Education. Her research focuses on the role of models and modeling in student learning, curriculum design and teacher professional development. She investigates model-based reasoning in a range of contexts and is particularly interested in understanding how the design of learning environments interacts with students' reasoning practices. A former high school science teacher, Cynthia completed her doctoral work at the University of Wisconsin, Madison.



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