

Center for Science and Technology (CSTE) 2017 Fall Lecture Series



Scientific Modeling for K-16 Earth Systems Education: Theoretical Perspectives and Empirical Insights

Cory Forbes

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Cory Forbes is an Associate Professor of Science Education, Director, Nebraska Collaborative for Food, Energy, & Water Education (NC-FEW), and Coordinator, IANR Science Literacy Initiative at the University of Nebraska-Lincoln. His work focuses on supporting and studying teaching and learning about Earth systems across the K-16 continuum through innovative curricular and instructional interventions, including teacher education and professional development, curriculum development, and assessment.

10:00 – 11:00am Visit with Graduate Students (Benjamin Bldg, Room 2226)

3:00 - 4:00pm Distinguished Lecture (Benjamin Bldg, Room 2226)

Light refreshments will be served.



Photo Credit: Morgan Speihs



For the past 5 years, our research team has been engaged in research and development to support and understand elementary students' use of models to reason about Earth systems in the United States and Germany. In this presentation, I share empirical results and theoretical insights from this work, as well as its more recent progression spanning multiple new externally-funded projects to focus on scientific modeling across K-16 settings. In particular, I will discuss evolution of a 3-dimensional learning performances framework reflecting scientific modeling practices, epistemic dimensions of scientific modeling, and core disciplinary concepts. The presentation also focuses on early-stage elements of this research program focused specifically with the use of computer-based modeling tools to support students' systems thinking about water systems and climatic phenomena.

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