You are cordially invited to attend

**Wednesday, April 18, 2018**
**12:00 pm - 1:00 pm**
252 Erickson Hall
Michigan State University
Light refreshments provided

**Barbara Hug**
Associate Professor, Dept. of Curriculum & Instruction
University of Illinois Urbana-Champaign

**Using ecosystem models to examine students' developing understanding of vector-borne disease**

**Abstract:**
The Next Generation Science Standards emphasize the interconnected nature of scientific practices, crosscutting concepts, and disciplinary core ideas. As part of a curriculum development/professional development project, we have developed a curriculum unit that weaves together these three dimensions of science learning as students explore the dynamic nature of ecosystems and interactions of organisms within the ecosystem. The unit, titled, "Why are these kids getting sick and how can I avoid getting what they have?: Ecosystems, climate change and me" brings a novel approach to teaching ecosystem biology and disease in two ways: 1) it emphasizes the connections between disease and ecosystems/ecology concepts and, 2) it highlights the role of human impacts on ecosystems using the spread of disease as a contextualizing example. In this talk, I present the framing of the curriculum unit and highlight case studies of student learning documented through the development and revision of ecosystem models, and a final capstone project.

**Barbara Hug** is a Teaching Associate Professor in the Department of Curriculum and Instruction at the University of Illinois Urbana-Champaign. Dr. Hug’s teaching and research is informed by her science and science education background. Current projects, supported by NSF, NIH and the state of Illinois, are focused on curriculum and professional development that bring together teachers, University scientists and science educators to address the new science standards. With the adoption of the Next Generation Science Standards, new curriculum materials and professional development that support teachers as they make the necessary instructional shifts are essential. Dr. Hug is interested in understanding the supports that are needed by both teachers and students as they engage with the new standards.

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