

Educator Field Day - Long-term Ecological Research program – **WEDNESDAY**, September 11, 2019**Soil Health**

8:00am **Arrivals and breakfast** **Kellogg Farm Classroom**8:15am **Welcome, introductions and goal setting****Kara Haas**, KBS Science Education and Outreach Coordinator, [@KaraHaaSciEd](#)*Educators will participate in an activity to get to know each other. We will set a Driving Question for the day as well as personal learning goals. DQ boards are a tool for visually organizing student ideas. [NSTA Article, "The Activity Summary Board"](#).*8:30am **Plenary talk: 'What is Soil Health?'****Dr. Sarah Evans**, Asst. Professor, Integrative Biology & Ecology, Evolutionary Biology, and Behavior (EEBB), MSU, [@evanssarahe](#)*What is soil health? Sarah will share a definition of soil health, from a microbial perspective, and soil's importance not only to farming but to us all.*9:30am **Break and travel time**9:40am **Group picture**9:45am **Tour of the Kellogg Farm****Dr. Brook Wilke**, Kellogg Farm Manager [@msu_kelloggfarm](#), and **Lindsey Kemmerling**, Graduate Student, [@lrkemmerling](#)*The Kellogg Farm is home to a pasture-based dairy and about 300 cows. As you tour the Farms barn and pasture-lands, learn about manure management and its effects on health, both of humans, cows, microorganisms and soil. You will also be introduced to an activity that uses aerial photos and maps to tour the farm and generate questions and ideas about soil and water quality considerations on a farm.*10:15am **Tour of the Long-term Ecological Research site****Dr. Sarah Evans** and **Corinn Rutkoski**, Graduate Student*Educators will receive a tour of the Long Term Ecological Research (LTER) Site at KBS and learn about the research taking place. Tour will include some hands on demonstrations and activities, including sampling soil for fine roots and exploring the legume-rhizobia mutualism in soybean agricultural systems.*11:00am **Break and travel time**11:15pm **Cross-site LTER talk****Nick Oehm**, FCE LTER Education and Outreach Coordinator*Via video conferencing we will talk with scientists from the [Florida Coastal Everglades](#) (FCE) LTER and get an overview of their soil research. We'll also learn more about the global citizen science project: [Teatime4Science](#), which is a soil health project that involves burying tea bags and measuring decomposition rates. Lunch will be served in the classroom.*

12:15pm **Lunch**

1:00pm **[Teatime4Science](#) data and protocol**

Lindsey Kemmerling and **Corinn Rutkoski**

Speakers will share their experiments in the LTER MCSE site looking at soil decomposition rates. They will bring experimental samples and data from their experiment, and also have educators measure the tabs themselves and collect data.

2:15pm **Connecting soil health research to your students** (snack available)

Kara Haas and **[Dr. Liz Schultheis](#)**, Postdoctoral Researcher [@Data_Nuggets](#)

Educators brainstorm ideas of what they can bring back from the day and use with their students. Break participants up by their audience (informal, middle school, high school, extension, etc.) for reflection. Explore and discuss materials in binder and from the day.

2:45pm **Evaluation**

3:00pm **Adjourn**