Teaching Science Outdoors:
Designing Outdoor Inquiry with Elementary School Teachers

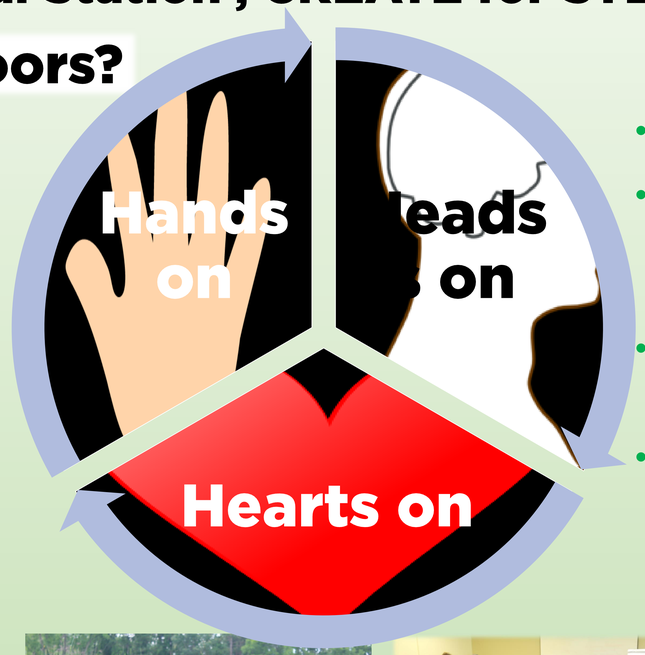
Kara Haas[1], Renee Bayer[2], Tali Tal[3]
W.K. Kellogg Biological Station[1], CREATE for STEM Institute[2], Technion[3]

What is Teaching Science Outdoors?

- Week long PD for 15 teachers in school teams
- Outdoor, inquiry-based, place-based investigations
- Collaborative learning strategies
- Technology: google site & apps on ipad/smartphones

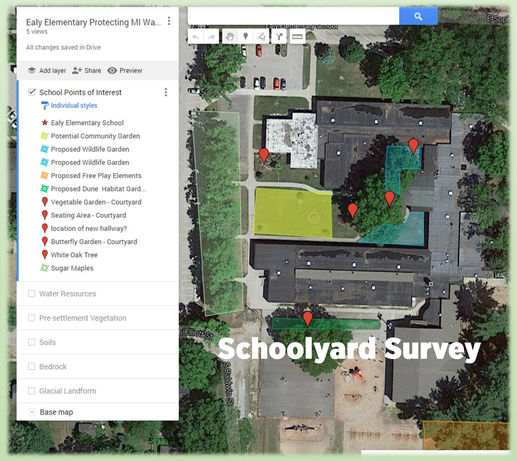
Goals

1. To increase the ability of teachers to use the outdoor environment to teach science
2. To develop curriculum and learning experiences that develops students' knowledge of habitats through place-based, hands-on, experiences in the outdoors
3. Use the Next Generation Science Standards as guidelines
4. Establish long-term relationships with teachers



School Year Activities

- Quarterly Webinars
- **K-12 Partnership Workshops (spring, fall, summer):** faculty, graduate students share passion & knowledge of current science topics.
- **Schoolyard Surveys:** Kalamazoo Nature Center & KBS ecologists and educators
- **Improvement Grants**



Results

- 48 K-5th grade teachers trained from 13 districts: Detroit, Midland, Whitehall, Kalamazoo and Barry County schools!
- Increased elementary teacher participation in K-12 Partnership

"I learned the importance of quiet observation time before starting an outdoor activity to decrease the novelty space and allow students to get their brains and bodies ready. I learned the importance of collaboration with peers and how easy it is to enhance curriculum we currently have to allow us time to explore and learn outdoors. I hadn't had much experience with NGSS science standards yet, so it was very helpful and beneficial to dive into the standards and create lesson and presentations based on those standards and the information related to them. I also liked how we related things to Heart of the student, and took into account their emotional well-being along with the academic content and effects on the environment (An)."

Next Steps

- Collaborating with Christina Schwarz and Rachel Larimore, proposal submitted for NSF DRK12 funding
- Partnership with MSU Extension Tollgate Farm & Education Center, to offer TSO in SE Michigan, submitted eXtension Innovation grant

Learn more: http://www.kbs.msu.edu/outreach/elementary-teacher-program/

MICHIGAN STATE UNIVERSITY
@KaraHaaSciEd
karahaas@msu.edu
W. K. Kellogg Biological Station
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