RESOURCES

TITLE | FACILITATING INQUIRY

CATEGORY | Garden Educator Training

SUB-CATEGORY | Learning & Teaching Outdoors

OVERVIEW | This document outlines a training for garden educators on the importance of facilitating inquiry in the garden as a fundamental science skill for students to master and for educators to practice embedding in lessons.

Training Rationale:

Inquiry is a critical skill for students to develop in science classes. Inquiry encourages students to ask questions, design experiments and examine results, all of which increase students' natural curiosity and comfort with a scientific mindset. In short, how students learn is just as important as what they learn.

Suggested Time of Year:

September/October. We suggest offering this training early in the school year.

Suggested Workshop Length:

3 hrs

Training Objective:

Educators will be able to define inquiry, describe the inquiry process, and apply inquiry strategies to improve lesson plans.

Training Overview:

In this training, educators will investigate the importance of effectively facilitating inquiry in the outdoor classroom. Inquiry is an approach to learning that involves a process of exploring the natural or material world, asking questions, making discoveries, and testing those discoveries in the search for new understanding.[1] During this training, educators should both participate in authentic inquiry experiences and learn the rationale behind the inquiry process. Education Outside believed that students learn best through lessons that prioritize exceptional hands-on, inquiry-based, experiential learning methods. From this type of learning, students are able to see science as happening in the world around them and identify it as a part of their lives.

Activity Ideas:

- Use the BEETLES Professional Learning Sessions, especially Promoting Discussion and Questioning Strategies.[2]
- Have instructors form small groups to read and discuss the Exploratorium articles referenced below[3, 4] using a jigsaw. A jigsaw is a way to break up learning a topic into smaller pieces and makes learners dependent on each other for success. In this example, we would suggest that the whole group split into smaller pairs or trios and divide up sections of the articles. They would have time to read it on their own, discuss it, and then teach it to the larger group.

- Have instructors visit a physical space (i.e. a museum, park, zoo) and explore what exhibits or things sparked curiosity for them by examining what they saw and heard and what it made them think of.
- Have instructors look at a lesson plan and redesign the lesson plan to incorporate the inquiry framework.

Assessing Understanding:

- Exit Ticket: Have instructors define inquiry and explain how they will incorporate an inquiry framework into an upcoming lesson.

References:

1. Exploratorium, Institute for Inquiry. *What Is Inquiry?* Retrieved from https://www.exploratorium.edu/sites/default/files/pdfs/ifi/What-is-Inquiry.pdf.
2. Regents of the University of California, the BEETLES Project, 2019. *Questioning Strategies.* Retrieved from http://beetlesproject.org/resources/for-program-leaders/questioning-strategies/
3. Exploratorium, Institute for Inquiry. *What is Inquiry?* Retrieved from https://www.exploratorium.edu/sites/default/files/pdfs/ifi/What-is-Inquiry.pdf.
4. Exploratorium, Institute for Inquiry. *Structure for Inquiry.* Retrieved from https://www.exploratorium.edu/sites/default/files/pdfs/ifi/InquiryStructure.pdf

Additional Resources:

- BSCS (2006). "Why Inquiry Matters." Retrieved from http://www.virginia.edu/blandy/blandy_web/education/Bay/Why_Inquiry_Matters_BSCS.pdf. Accessed April 2019.