Exploring Science Field Trip
Extension 2: Introduction to Microscopes and Scientific Observation

Setting: Classroom
Grade: 1st grade – 3rd grade
Time: 35-45 minutes

Overview
Students will understand how to use a microscope and practice using one
Students understand the importance of scientific observation
Students will understand the microscope as a tool for observation
Students feel comfortable asking specific and scientifically-based questions
Students feel comfortable making and recording in-depth observations about their specimen

Materials
- Microscopes
- Journal for each student

Engagement and Explanation
1. Go over the definition of Macroinvertebrate (5 minutes)
   a. Students will be observing macroinvertebrate specimens
   b. If you chose to look at other specimen/materials, here is the time to go over the background information
2. Demonstration of using a microscope and handling microscope with care
3. Split up students into small groups if there are not enough microscopes for each student
4. Give students time to observe their specimen (10-20 minutes)
5. Have students share the observations they are making
6. Introduce I notice, I wonder and it reminds me of as a way to talk about making observations (10 minutes)
7. Have students write/draw in their journals something they notice, wonder and reminds them of/students can draw if they want (10 minutes)

Evaluation
Students should be familiar with how to operate a microscope and know how to handle it with care. Students should have written an example of I notice, I wonder and it reminds me of in their
journals. Educators can also evaluate by checking in with students and asking questions about what the students see/observe.

**Resources:**
1. I notice, I wonder and it reminds me of
2. Four Criteria for Questions

**Standards:**
*Science Learning Standards for Elementary School*

**P-2nd grade**

**P. Life Sciences:**
P-LS1-1. Observe familiar plants and animals (including humans) and describe what they need to survive.

**2. Interdependent Relationships in Ecosystems**
   2-LS4-1. Make Observations of plants and animals to compare the diversity of life in different habitats

**ELA:**
   KW6, 1W6, 2W6. Develop questions and participate in shared research and explorations to answer questions and to build knowledge.

**3-5th grade**

**3. Inheritance and Variation of Traits: Life Cycles and Traits**
   3-LS3-2.Use evidence to support the explanation that traits can be influenced by the environment

**ELA:**
   3W6, 4W6, 5W6. Conduct research to answer questions, including self-generated questions, and to build knowledge through investigating multiple aspects of a topic