

## AFTER 2: Insect Collection in the schoolyard

**After** your visit to complement the insect collections and investigations conducted at Blandy. Students carry out explorations to determine what insects can be found in their schoolyard. Students can learn how to use identification tools to figure out the insect diversity of their school and contribute to community science.

### **Background**

A bioblitz is when a group tries to find and identify as many organisms as possible over a short period of time. There are several opportunities for your students to contribute to be citizen scientists as they learn about the insect world. The Xerces Society has some great tips for contributing to citizen science. <http://www.xerces.org/citizen-science/> If you, your students, or parents took any photographs of insects, consider sharing them on social media! #blandynature

### **VA Standards Addressed**

Science (2018): 2.1 b, f; 2.4; 2.7; 3.1 b, c, f; 3.4; 3.5

Mathematics (2016): 2.15; 3.15

### **Materials**

- Timer
- Devices with which to photograph (with iNaturalist Seek app installed, optional)
- Tools for finding/capturing insects: white sheets, nets, collection containers (re-use baby food jars or other small jars with holes poked in lids), etc.

### **Lesson Preparation**

1. If using, download the iNaturalist Seek app to the devices the students will be using. Practice using it a few times yourself. This app tries to identify the organisms in the camera's view. Observations can also be posted for later identification.
2. Scope out possible locations for finding insects. Take note of any potential hazards.
3. Make note of the date and weather conditions for future analysis.

### **Instructional Strategy**

1. Inform students that they will be learning outside today, and that they are expected to use their classroom rules, not recess rules. Emphasize that insects are animals, and they should take care to not harm them.
2. There are several ways to capture insects. Choose the strategy(ies) that best suits your location, timing, and materials. We recommend setting a timer to limit the collection:
  - a. Place a white sheet under a shrub in the schoolyard. Use a wooden stick or dowel to gently shake the shrub. Slower moving insects should fall to the sheet. Place insects in small jars for observing, identifying, and taking photographs.
  - b. Use nets to capture flying insects.



- c. Look under rocks, logs, and even human-made objects, or leaf litter for insects.
  - d. Black lights can be used to find caterpillars in the dark.
  - e. Moths and other nocturnal insects are attracted to light. Hang a sheet near an exterior light overnight to see who visits.
  - f. If there are enough devices, photograph insects instead of collecting them.
3. Help students collect insects using your preferred method, and place them in containers.
4. Once collected, have students draw/photograph the insects while they make observations. Guide them with inquiry questions such as:
  - a. What do you observe?
  - b. Why is the insect moving like that?
  - c. Can you see all the body parts (head, thorax abdomen?)
  - d. How many legs are on the insects?
  - e. Are there creatures in or on the sheet that are NOT insects?
5. If using Seek, students can use the app to attempt to identify their organisms. If no identification is offered, upload the photo for crowdsourced identification.
6. When all organisms have been documented, return them back to their habitat. Remind students that these living creatures have a job/function in their environment, and students need to return the insects as close to their home as possible.
7. Inside, analyze the data.
  - a. Sort the insects into groups based on a physical feature and then graph and compare. For example, a bar graph could highlight different wing or leg types.
  - b. If doing this with multiple classes (or at different times), compare student findings between classes. Does weather seem to make a difference?

### **Extensions**

1. Use photographs and identification to create a field guide to the insects of your schoolyard.
2. Collaborate with the art teacher to have students re-create the organisms and their habitat, combining them to create an ecosystem.
3. Track when insects are seen (<https://xerces.org/citizen-science/>)
4. Use [https://www.inaturalist.org/pages/seek\\_app](https://www.inaturalist.org/pages/seek_app)

