



EVERGREEN

Teacher's Corner Lesson Plans

*Helping Teachers and Students Make the Most of
their Outdoor Classroom*

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Insect Collecting: Suck-a-Bug*

Teaching in the Outdoor Classroom Institute

Grade level: 4

Provincial curriculum links: Ontario

Subject: Science and Technology

Keywords: arthropod, insects, aspirator, community, habitat, classify, investigate

Description

Many insects can be observed on the school ground and nets work well for large insects, but tiny ones often go unnoticed. One way to catch these small insects is with a Bug Sucker, also called a pooter or aspirator.

Curriculum Framework

Topic: Life Systems

Strand: Habitats and Communities

Specific Lesson Goals:

- Classify animals observed in local habitats by similarities and differences
- Compile data gathered through investigation to record and present results

Preparation

Preparation Time:

- 30 minutes (to make the aspirator)

Length of lesson:

- 30 minutes-1 hour to collect and observe insects

* This exercise is adapted from *Teaching in the Outdoor Classroom*, Evergreen/TDSB Summer Institute, 2007, 82 pages.

Resources required:

- Small plastic containers, clear if possible (film canisters are the perfect size but you can use small plastic herb bottles, small butter dishes or plastic test tubes)
- plastic drinking straws or flexible plastic tubing (tubing works better, but is a little more expensive)
- modeling clay
- netting or gauze
- tape
- awl
- ice pick or drill (for adult use)

Procedure

1. Clean a small (preferably clear) plastic container and remove the label if it has one. Clear containers
2. Allow for observation without opening the container.
3. You can create a "window" in a film canister by cutting out a section and replacing it with clear plastic, (overhead transparency). Make sure to seal the edges of the window with glue to keep air from entering.
4. Tape a piece of netting or gauze over one end of the drinking straw or tubing.
5. The netting or gauze is very important - it keeps you from sucking the insect into your mouth!
6. Use the awl or ice pick to make two holes in the top of the container. If possible, use a drill to make holes in the lids ahead of time
7. Insert the straw or tubing through one of the holes so that the gauze end is down in the container and the uncovered end is sticking out of the top
8. Insert the other straw or tubing through the other hole.
9. Finally, seal both holes with a bit of modeling clay, but be careful not to pinch off the tubing.
10. When you suck on the straw with the gauze on the end of it, you create a vacuum. Use this suction to capture small insects.
11. Gently place the end of the straw without the gauze next to a small ant or other creature, and suck on the other straw. The suction will pull the insect into the container, where you can safely hold and observe it.

Educator Notes

- It takes a little practice to be able to keep the straw next to the insect while sucking on the other end. This is why the flexible tubing is better: It can be longer and is more flexible. However, straws are inexpensive and easy to obtain. Children love practicing their bug-sucking technique, and usually spend quite a while working on it.
- Do not use the bug sucker for large insects such as bees and butterflies. They can't fit up the tube, and the suction may damage their wings.
- Also, avoid using the bug sucker with "true bugs" (Order Hemiptera), such as stinkbugs; when sucked up a tube, they can spray irritating odors that leave a bad taste in your mouth.
- An aspirator is a handy device for collecting small, delicate or active insects from under rocks or bark or for removing them from your collecting net.

References/Resources

Adapted from <http://www.unctv.org/ibworkshop/lessons/images/SuckABug.pdf>