

Macroinvertebrate Simon Says

GRADE LEVEL:
K-12

SUBJECT AREAS:
Science

DURATION:
15-20 minutes

SETTING:
Classroom
Outdoors

**LINK TO THE UTAH
CORE CURRICULUM:**
Science –

Kindergarten
Standard 2

Fourth Grade
Standard 5

PURPOSE: To introduce students to the adaptations of macroinvertebrates and their feeding habits.

SUMMARY: Students will learn the unique adaptations different macroinvertebrates have and their feeding habits through a dramatic “Simon Says” game.

BACKGROUND: The macroinvertebrates we will cover can be classified into four groups depending on their feeding habits. They are shredders, collectors, scrapers (or grazers) and predators.

Shredders are those organisms which chew on intact or large pieces of material. Leaves, needles, flowers and twigs fall from the trees and shrubs on shore into the water serving as the most common food for shredders.

Collectors acquire and ingest very small particles of organic matter. They eat the organic matter suspended in the water by catching it with nets or other adaptations. Often they eat fine organic matter that has fallen out of suspension onto the streambed (substrate).

Scrapers (also called grazers) remove and eat the algae growing on rocks in shallow water.

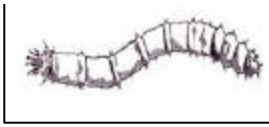
Predators are organisms that prey on other organisms. They pierce prey with a special mouthpart called mandibles and feed upon them as living animals.

MATERIALS: None needed, but pictures of the macroinvertebrates are helpful.

***See Appendix for Pictures**

PROCEDURE:

1. Divide the students into six groups. Dragonflies, Craneflies, Blackflies, Mayflies, Stoneflies, and Caddisflies.
2. Explain the different feeding habits of each group, and assign them an action.



- a. DRAGONFLIES are predators; they have long mouthparts that extend to catch prey. For their action, have the students put their hands to their mouths with their elbows tucked down in front of them. To mimic eating, have the students straighten their elbows and make an upward scooping action.
- b. CRANEFLIES are collectors. They wiggle around until they find a place to feed. The action should be like a wiggly walk.
- c. BLACKFLIES are also collectors, but they collect with a large net-like feature on their head which they use to gather food. They can lower it down to their mouths to eat. The action should be placing your hands above your head, and lowering them down to your mouth.
- d. STONEFLIES are shredders. They wait for leaves or other debris to fall into the water, then they tear off small pieces to eat. The action should be similar to tearing up a piece of paper.
- e. CADDISFLIES AND MAYFLIES are scrapers; they scrape algae off of rocks and sticks. Their action should be similar to scratching someone's back.

3. After each group has learned their action, have them act out their part at the same time for one minute.
Remember to set boundaries.

4. Then test the students on all of the feeding habits by playing "Simon Says" with the action. (Example: Simon says act like a blackfly. Everyone should have their hands above their head.)

EXTENSION: Now that the students know all about macroinvertebrate adaptations, follow with the Aquatic Research Activity.

