



Thank you for teaching about the watershed! If you have any questions, please don't hesitate to contact us at our office or by phone.

## Critter Dipping

*The goal of this activity is for students to understand some big scientific words, to see and identify some critters that live in the watershed, and to understand what those critters can tell us about the health of our ecosystem.*

*Duration: 0.5-1 hour*

### *Preparation:*

- *Critter dipping nets*
- *Small containers for students*
- *Large clear container*
- *Identification charts*

Explain to the students that today we are looking at **benthic macroinvertebrates**. Ask if anyone has heard this big scientific term before. Have the students repeat the term a few times so they can say it properly, then break down the word for them. It means: *benthic- living on the bottom of a body of water (explain that the bottom is called the benthos); macro- big enough to see with the naked eye; invertebrate- (ask if anyone knows what vertebrae are. Talk about animals that have a backbone being called vertebrates, and see if they can guess what an invertebrate is) an animal that does not have a backbone (for example, insects), and discuss exoskeletons. So when we say benthic macroinvertebrates, we just mean all the aquatic insects and critters living on the bottom of our rivers and ponds!*

Now explain that these critters are **bioindicators**, which means that they are living creatures that can tell us about the health of the environment! Get the students to repeat this word to you a few times as well. Some insects - like mayflies and caddisflies - cannot tolerate pollution, so if we find them it means our water is very clean and healthy! Other critters - like leeches – can live in very polluted water, so if we find them it means the water isn't very clean! We are going to look for critters, use our guides to identify them, and then use them to figure out how clean our water is!

### **The Rules:**

- Students wearing rubber boots are permitted to walk into the water up to **ankle deep**; No deeper!. Students without boots must critter dip from the edge without getting their feet wet.
- Each student will have a net. They must be gentle with their nets; it's a very exciting activity, but they break very easily.

- The best technique is for students to take their net and **gently** bump or scrape the bottom of the pond, then swish their net just above where they scraped. This dislodges the best critters from where they are sitting on the bottom.
- Students will have small plastic containers that they can fill with water and put their findings in to bring back to you.
- All critters found will go into the large clear container so that everyone can look at them and learn about them.
- Students **MAY NOT** run back to the clear container and dump their whole net in. Really stress this. They get very excited and just want to throw everything in, but this ruins the clear container so that we can no longer see what is in it because it is full of muck and junk. Repeat this one a few times and get them to repeat it back to you.
- Instead, students must use their fingers to gently pick up the critter in their net or small container and place it into the large container. If they don't want to touch them, you can do it or they can get a friend to do it.

Critter Dipping wrap up: With about 10 minutes left, have the students clean their nets and return them to the net bucket. Then have them crowd around the large container, and talk about your findings. Pick up any cool critters, identify them, talk about any fun facts, and discuss what these critters indicate about water quality. The internet is a great resource for identification charts, fun facts about the critters, as well as their pollution tolerance levels and what they indicate about water quality.