

Unit 6



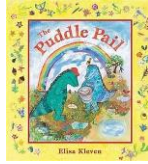
Week 3

## Outdoor Learning Opportunities:

### Macroinvertebrates

Standards:

S.LS.PS.1,2,4,5,7  
SED.SD.BRC.PS.1  
PHD.FM.PS.5  
SS.G.PS.3



#### Materials:

- Small pond nets and strainers
- Tweezers
- Macroinvertebrate field guide or chart
- White plastic tub, white ice cube tray, or white paint tray (easier to see critters when in a white container)
- Hand lenses
- Paint brush, pipette and spoon

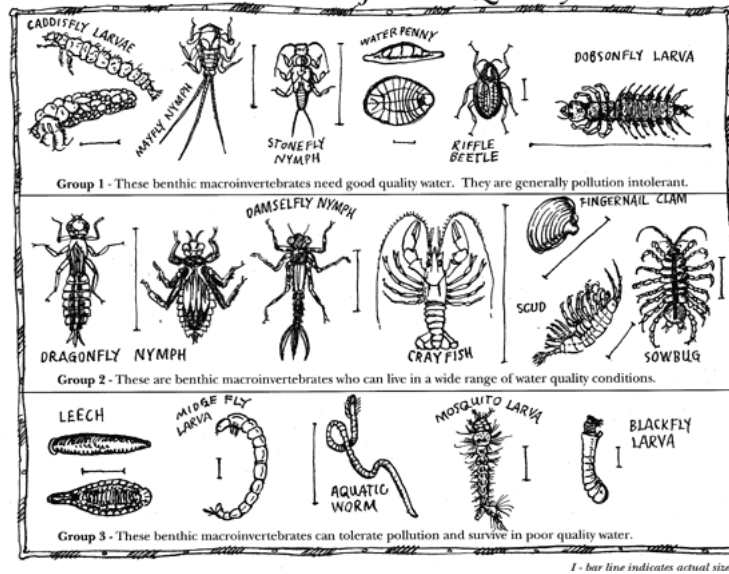
#### Vocabulary:

- Macroinvertebrate
- Dragonfly nymph
- Damselfly nymph
- Blackfly larva
- Caddisfly larva
- Stonefly nymph
- Mosquito larva

Macroinvertebrates are small animals (insect larva, worms, mollusks, etc.) that live in the water. They are just big enough to see with the naked eye. Take out the list of materials and go to a pond where the children can access the shallow part easily. Have the children pick up a stone that's submerged and turn it over. Use a paint brush to brush the bugs into a container of water. Also, they can use a small pond net or strainer to try and catch water bugs by scraping them through the water close to the bottom. Try not to collect too much of the bottom sand. They can sift through the debris to find the critters and place them in the container with water. If the critters are small they can use the pipette and spoon to gather the bug and put it in the ice cube tray or paint tray.

Once they have collected a number of critters, they can use a hand lens to look more closely at the water bugs and try to identify them from the macroinvertebrate chart. They can also determine the quality of the water by what they find. As seen in the chart there are three levels of water from clean to dirty (1 being the cleanest and 3 being the most polluted). After identifying the water bugs, the children can place them back in the water.

## Biotic Index of Water Quality



### Guiding Questions:

- What is a macroinvertebrate?
- What types of critters can we find in a pond or stream?
- How can we tell if the water is clean or polluted by what lives in the pond?