NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Aquatic Macroinvertebrates**

We will be collecting and identifying aquatic macroinvertebrates. “Macro” means big and “invertebrate” means they have no backbone. These are often insects at an early stage of life called the larval stage. We will be collecting these for two purposes. First, different types of macroinvertebrates can survive in different aquatic conditions. We will be estimating the water quality of our pond by identifying the critters that live in it. Second, we will be collecting these for later use when we are making fishing lures. Our lures will need to be based on one of these critters.

1. We will be collecting the critters by running water & sediment through some seines (screens). We will be collecting anything that wiggles (and a few that don’t).
2. These macroinvertebrates will be sorted into the ice cube trays. Put all of the same kinds of critters in the same section. If they get “feisty” and start to eat each other, you may need to separate them more.
3. One good specimen of each type of macroinvertebrates should be preserved in hand sanitizer for later use. Take forceps and dip the macroinvertebrates in alcohol then put it into the containers of hand sanitizer. Use the smallest container that the invertebrate will fit into.
4. Identify the macroinvertebrates using the pages provided by Mrs. C.

1. Fill in the Biological Monitoring Data Sheet adapted from Hoosier River Watch (<https://www.in.gov/idem/riverwatch/files/volunteer_monitoring_manual_chap_5.pdf>). This is on the next page. Fill in how many of each taxa of macroinvertebrates were present using hash marks.
2. In the second box from the bottom of each column, write the number of different kinds that you found in the “# of TAXA represented” box.
3. In the bottom box, multiply the number of taxa by the weight indicated.
4. Add up theses weighted numbers for a total and put the total in the “Pollution Tolerance Index Rating” at the very bottom of the page.
5. After collecting from the pond, repeat steps 2-8 for the water samples gathered from the Elkhart River. Use the second data sheet. Mrs. C can give you the monitoring data for the top box on the Data Sheet.



