Part 2: Macroinvertebrate Card Sort

2.1 Lesson Overview

Wenk Associates

Lesson Summary

In this activity, students analyze and create ways to organize cards representing the macroinvertebrates commonly used to assess stream quality.

Estimated Time

High School: 1-2 45-min class period
Middle School: 2-45-min class period

Driving Questions

What are some ways we can organize living things?
What are some reasons we might want to organize living things?

Necessary Teacher Prior Knowledge

Macroinvertebrates are often used as indicators of water quality because they have the following three traits:
- They spend all or most of their lives in water
- They are easy to collect
- They differ in their tolerance to pollution

This makes looking at their bodies and characteristics a great way to examine form and function. In general, those who are filter feeders and have exposed gills are more sensitive to environmental stress, while those that are air breathers and have hard exteriors are more tolerant to environmental stresses.

If you have never worked with macroinvertebrates, you will want to familiarize yourself with the **2.2a Macroinvertebrate ID cards** ahead of time to assist in grouping and interpretation. To learn more about macroinvertebrates you may wish to look over the following video resources:
- Check out the Video Introduction to Benthic Macroinvertebrates, which focuses on student-friendly language. It can be found at https://www.youtube.com/watch?v=sRoM2LrLO98
- Explore the Video Aquatic Macroinvertebrates and Stream Health to learn about aquatic macroinvertebrates, how to collect them, and what they can tell us about water quality. It can be found at https://www.youtube.com/watch?v=jl22CLf4eLw.

Materials Needed

2.2a Macroinvertebrate ID cards—one set for each table group
2.2b Indicators: Benthic Macroinvertebrates (Student Reading)
2.2c Macroinvertebrate Card Sort Worksheet (Optional - may also utilize a scientific notebook)