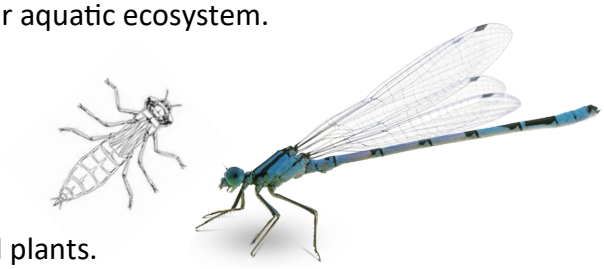
Kankakee County Soil and Water Conservation District

Water Quality and Bioindicators CONSERVATION KIT

Have you used water today? We all use water for drinking, washing, cleaning, and cooking. We also rely on water for things often overlooked, like farming and producing food, generating electricity, fighting fires, and recreational activities. A healthy watershed is vital to each and every one of us!

Rivers, streams, and ponds not only provide many of us with the water we use everyday, but house incredible biodiversity that often goes unnoticed. Insects, insect larvae, mollusks, snails, and other invertebrates are a part of these aquatic ecosystems. Many invertebrates are considered 'bioindicator' species, indicators of good water quality, and the basis of the aquatic food chain.

Spend time along the water and in the lab investigating the invertebrate species in your river, stream, or pond, and discover what they have to say about the health of your aquatic ecosystem.



Equipment Included:

1. A kick net for collecting benthic invertebrates.
2. A dip net for collecting pelagic invertebrates.
3. Containers, labels, and markers for sampling and collection.
4. Student macro lenses to view aquatic macroinvertebrates and plants.
5. Petri dishes, tweezers, and plastic transfer pipettes for viewing aquatic macroinvertebrates and plants.
6. 5-in-1 test strips to test water for free/total chlorine, hardness, alkalinity, and pH.
7. Nitrate, nitrite, and ammonia test strips.
8. Thermometer, ping pong balls, stop watch, etc. for collecting data on physical characteristics.
9. Aquatic invertebrate identification guides.
10. Clipboards for on-the-go data collection.
11. Educational resource binder and data collection sheets.
12. Plastic storage containers with lids.

With the Water quality & bioindicators Conservation Kit, your students will be able to:

Analyze water chemistry: chlorine, hardness, alkalinity, pH, nitrates, nitrites

Explore aquatic biology and ecology: collection and identification of macroinvertebrates, invertebrate lifecycles, aquatic and riparian ecosystems, food webs, and more!

Investigate water quality: determine the health of your river or stream by learning about bioindicators, species abundance, and diversity

Discuss watersheds and conservation: erosion, nutrient runoff, conservation in agriculture, dead zones (hypoxia), algal blooms

Learn about careers in geology and conservation!