

## CHEMICAL WATER QUALITY TESTING

**Purpose:** In this investigation students will perform various water quality tests on a nearby water source to determine the water quality.

### Background Information

The amount of freshwater on the planet exists in the atmosphere, under the ground, frozen in glaciers and icecaps, and in rivers, lakes, streams, and creeks. All of these sources amount to about 3%. The amount of clean freshwater that we can easily obtain is an extremely small amount, less than 1%. It is important that we be sure the water we use is clean because so many people, animals, and plants rely on fresh water for survival. To be sure water is clean chemical testing can be performed on water samples to determine the quality of the water.

### Procedure

1. Using the score sheet provided, rank each test conducted poor, fair, good, or excellent
2. Answer the conclusion questions on the back of your water quality test results sheet.

### Conclusion Questions

1. Was there any pattern to the differences in the test results? Explain.
2. Did the test results seem to correspond to land-use? Explain
3. Do the results indicate important water quality issues facing your community and the entire watershed? Explain.
4. Why is the dissolved oxygen so important to aquatic ecosystems?
5. What might be some causes for lowered dissolved oxygen concentration?
6. Can cold or warm water hold more dissolved oxygen?
7. What is the pH of your water sample? Is this basic or acidic?
8. What are some factors that can affect the pH of the aquatic environment?
9. List three things that can lead to turbid water.
10. What are two sources that can cause excess nitrates in the water?
11. What will a negative test result for the coliform test show about the water from the creek?