

WOW! How Healthy is This Water?

An Introduction to Water Quality Testing

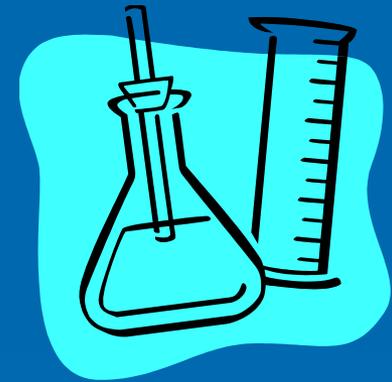


Fourth Grade Students
Forest Ridge Elementary School
Optimum Learning Environments
Charter School

Water Quality Testing

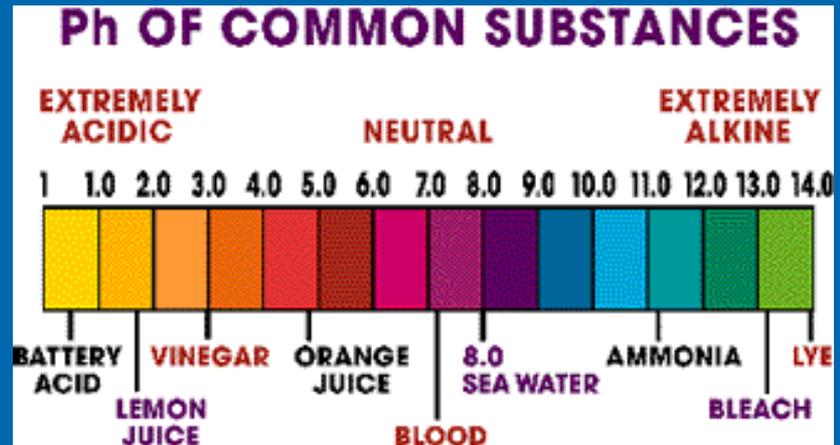
➤ It is important to measure several areas to determine the health of the body of water.

- ✓ pH
- ✓ Turbidity
- ✓ Temperature
- ✓ Macroinvertebrates Survey



➤ The data can be used to monitor the effects of natural changes and human impact.

pH



- pH is a measure of the acidic or basic (alkaline) nature of water.
- A pH range of 6.0 to 9.0 provides protection for the life of freshwater fish and bottom dwelling invertebrates.



- You'll need a pH test kit.
- Follow the instructions to collect your water sample.

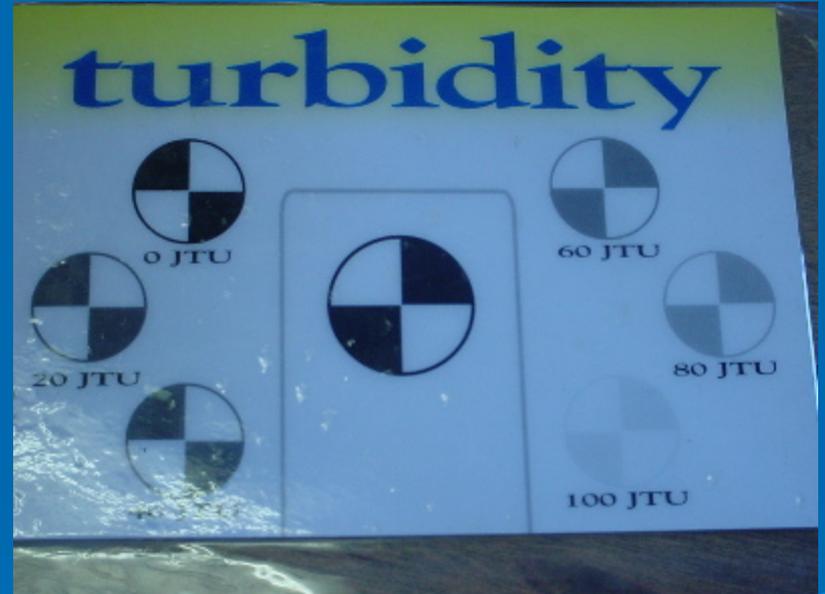
- Add the required number of drops of pH indicator solution.



- Cap and shake your vial.
- Match your sample's color to the pH color chart.

Turbidity

- Turbidity is the clarity or clearness of water. Clearer water lets more sunlight in.
- The acceptable levels for aquatic organisms to survive is 0 to 40 NTUs or JTUs. 0 to 20 is the best!
- You'll need a turbidity test kit.



- Fill your turbidity tube to the line indicated.



- Compare what you see to the icons on the card to find the turbidity level.

Temperature

- It's easy to check the water temperature with a thermometer.



- Let your thermometer rest in the water for about a minute.
- Read the temperature.

Macroinvertebrates

- Macros are little creatures without spines.
- They include insects, snails, clams, and crayfish.
- Scientists look for macros that live in the water.
- The more you find, especially the ones who are intolerant of pollution, the healthier the water is.



Collect Your Critters

- You can use a small net or container to collect near the edge of the water.



- You can use a larger net to collect farther out into the water.

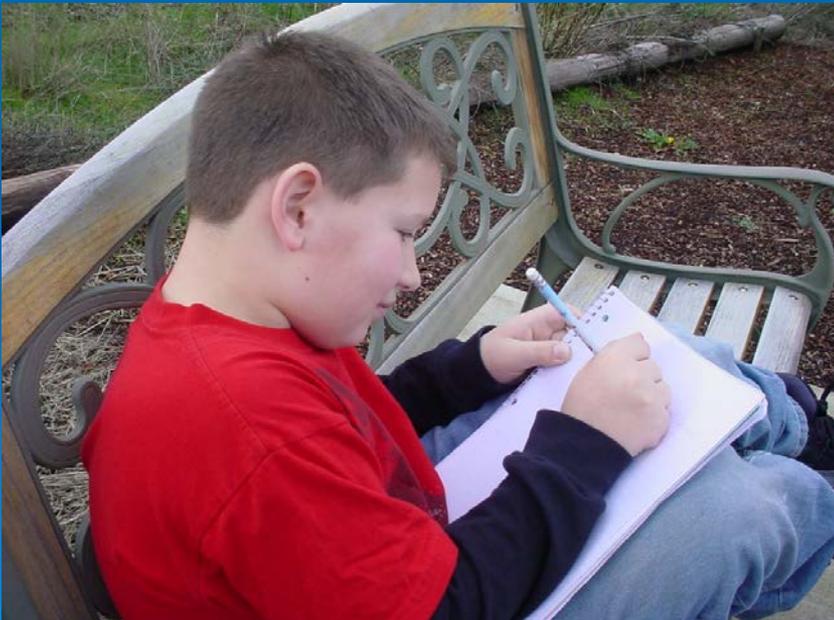
- Pour your water with critters into something shallow.
- An ice cube tray works well.



- Use your eyes.
- Use a hand lens.
- Maybe you can look at individuals with a microscope!

Who's There?

- Use books and resource material to identify your macros.



- Record your data.
- Be sure to list all the types you found.

One More Thing...

- Aquatic life needs dissolved oxygen in the water to survive.
- With an adult to help you with the use of chemicals, there are some dissolved oxygen (DO) kits you could try.
- Colder water usually has more DO!



Now You Can Do Water Quality Testing!

- You've learned to measure several areas to determine the health of the body of water.
 - ✓ pH
 - ✓ Turbidity
 - ✓ Temperature
 - ✓ Macroinvertebrates Survey
- You can use your data to monitor the effects of natural changes and human impact.



H.O.P.E.



- Help
- Our
- Planet
- Earth