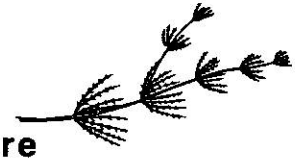

WATER QUALITY

Temperature

Take air temperature and water temperature with the kit thermometer. Is the temperature the same in all parts of the wetland? Record these temperatures in your field notebook.
(Can you invent a way to take the temperature of deeper water?)

This chart shows temperature ranges required by certain aquatic organisms.

Temperature	Examples of Life
greater than 68 F (20 C)	Much plant life, fish diseases, bass, crappie, bluegill, carp, cat fish, caddisfly
55-68 F (12.8-20 C)	Some plant life, fish diseases, salmon, trout, stonefly, mayfly, caddisfly
less then 55 F (12.8 C)	Trout, caddisfly, stonefly, and mayfly

Where does your wetland's water temperature fall in this chart?
What are two aquatic animals which could live at the water temperature of your wetland?

The pH Test

1. Measure pH with the pH tester from your kit. Start by filling both viewing tubes with sample water to the first line.

2. Add 6 drops of pH indicator solution into one tube and twirl to mix. This is your prepared sample.

3. Place the tube of prepared sample into the right opening (nearest the center) of the comparator wheel. The other tube (plain water) is placed into the left opening.

4. Hold the comparator up to the light and rotate the wheel until the color most closely matches the prepared sample. The pH value of the sample can then be read through the window.

5. Record the pH reading in your field notebook.

Note: The test for pH uses the chemical phenol red. It is not highly hazardous; however, as in the use of any chemical you should use care in handling it. When you finish the test you may safely wash the waste down a drain that passes into a sewer or septic system. In the field you should collect it in the waste container and bring it back to your house or school for proper disposal.

Aquatic organisms can only live within specific pH ranges. Here are some:

bacteria	1.0-13.0	bass, bluegills	6.5-8.5
algae, plants	6.5-12.0	snails, clams, mussels	7.0-9.0
carp, catfish	6.0-9.0	trout, insect nymphs	6.5-7.5

Which of the above organisms could live in water with the pH of your wetland?