

Water quality: STATIONS

- 1) Have a sheet of loose leaf paper ready to record your answers for each station.
- 2) You may use the chart below to record the 1st question at each station.
- 3) Use complete sentences and proper punctuation when answering each question.

Indicator	What is it?	Why is it important?	Acceptable level/condition
Dissolved O ₂			
pH Level			
Bio-Indicators			
Turbidity			
Temperature			

Station 1: DISSOLVED OXYGEN

1. Does cold water hold more or less dissolved oxygen than water?
2. What are 3 factors that influence dissolved oxygen levels? Explain how each factor impacts the water system.
3. High turbidity in a local pond has caused a decrease in ability for plants to do photosynthesis as well as increased the temperature of the water. Hypothesize the most likely outcome for organisms that live in that water system and formulate 2 options to reverse the current effects of the high turbidity.

Station 2: pH LEVELS

1. What causes water to become too acidic? WHY?
2. What causes water to become too basic (alkaline)? WHY?
3. Create a diagram that compares and contrasts the ideal living conditions of a swamp creature versus an average aquatic fish. In your diagram, be sure to include at least 3 points/ideas in each category.
4. Explain how the pH level of a water system can influence the types of organisms that live in that entire ecosystem.

Station 3:
BIO-INDICATORS

1. What makes trout a bio-indicator?
2. Does a high level of algae always indicate an unhealthy water system? Why or why not?
3. Create a procedure (at least 5 steps) using bio-indicators that you could do to determine the health of a body of water or an ecosystem.

Station 4:
TURBIDITY

1. What are 2 causes of increased turbidity?
2. Explain how the level of dissolved oxygen in the water can decrease with high turbidity.
3. Construct a visual representation of 3 glasses of water: Glass A has high turbidity, Glass B has mid-level turbidity, Glass C has low turbidity.
4. Use the following terms below to construct a "Connections Map" by drawing lines between those that can be connected AND writing/describing HOW they are related on each connection line.

Photosynthesis high turbidity dissolved oxygen sediment algae

Station 5:
TEMPERATURE

1. List 3 other indicators that are affected by temperature.
2. Why is cold water better for aquatic life than warmer water? Explain.
3. Construct a graph that shows show temperature is related to dissolved oxygen levels. Be sure to 1) label all parts of your graph and 2) provide a description of how each variable (temperature or dissolved oxygen) changes as it relates to the other.

