

Water Quality Worksheet

Surface Water Quality is an important measure of watershed health. Water quality data can be compared to standardized targets or guidelines to help inform on current conditions. Part of environmental monitoring includes identifying changes, so there are certain parameters that are measured regularly. In this activity you will have to acquire a water quality testing kit. The parameters commonly measured to assess water quality are explained below:

Conductivity: The measure of how much electricity the water can conduct. This parameter can indicate high levels of salt, calcium or other factors and is used to identify when further investigation of water quality may be required.

Temperature: Different fish and aquatic species prefer different temperatures, so the temperature of the water can tell us a lot about what might live there. The Temperature can also tell us if a stream gets its water from the ground or from surface water runoff (rain/snow melt).

Dissolved Oxygen (DO) is a measure of the amount of oxygen that is in the water. Aquatic species like fish, insects, or mussels require oxygen in the water to breathe. Low oxygen levels can also indicate high levels of organic pollution.

pH: This is a measure of how acidic or basic something is, using a scale that ranges from 0 (highly acidic) to 14 (highly basic or alkaline) with 7 being neutral. Aquatic organisms need a specific pH to survive, and pH can also influence how toxic pollutants, like heavy metals, can impact freshwater systems.

Complete the table below using data collected during your field trip:

Location: _____ **Time:** _____ **Date:** _____

	Value	Guideline	Did it Meet the Guideline?
Conductivity. ($\mu\text{s}/\text{cm}$)		Under 400 ³	
Temperature ($^{\circ}\text{C}$)		N/A	
Dissolved Oxygen (mg/L)		Over 5.5 ¹	
pH		Between 6.5 and 8.5 ²	
Salinity (%)		Under 0.40 ³	
Total Dissolved Solids (mg/L)		Under 400 ³	

¹Canadian Environmental Quality Guidelines for the protection of aquatic life.

²Provincial Water Quality Objective

³Otonabee Conservation Guidelines