Water Quality Monitoring

South Sound GREEN

Background:

From the salmon who return to local rivers every year to the humans who recreate in our waterways, almost every organism relies on healthy water in some way. The water quality of freshwater environment relies on a variety of factors, but by using hands-on chemical tests, we can measure a series of water quality parameters and make assessments about the overall health of a waterway.

In this activity, students will learn about the significance of water quality parameters, perform safe practices for conducting chemical tests on their own, and recognize the environmental and anthropogenic factors that impact water quality.

Next Generation Science Standards:

- MS-ESS3-3: *Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.***

Learning Outcomes:

- Water quality is influenced by a variety of factors, including human actions within the watershed.
- Students will be able to construct explanations about why water quality conditions are inside or outside optimal value ranges, based on human and natural changes to the environment.
- Water quality both influences and is influenced by the surrounding watershed, however not all correlations imply causations.
- Students will be able to design solutions within their communities to improve local water quality.

Grade Level: 6th-8th

Lesson Leader: SSG educator or teacher w/ training (Sept/ Oct and Feb/Mar)

Materials:

- Water Quality test kits (refer to WQ Manual)
- Safety equipment: gloves, goggles, waste containers, paper towels, etc.
- Water sample
- Data sheets

Career Connections:

- Environmental scientist
- Freshwater technician
- Biologist

**NGSS Components:

Blue (Science and Engineering Practices) = Constructing explanations and designing solutions

Orange (Disciplinary Core Ideas) = Human impacts on Earth systems

Green (Crosscutting Concepts) = Cause and effect

Interested in participating in water quality monitoring? Contact South Sound GREEN at SBishop@thurstoncd.com!