



# Turbid Waters

## Pre-class Activity



**Introduction:** This activity will stress the importance of water, help students recognize potential sources of water pollution, and implications of pollution on the health of our waterways.

**Directions:**

1. Pre-class: Students will pretend to be hydrologists and will analyze some water samples to attempt to determine the quality of the locally collected water sample.
2. Divide students into teams and have each team bring one clear jar of water to class. Encourage them to reuse a pasta sauce jar. Assign each team to bring tap water, filtered refrigerator water, gutter water, water from the sidewalks, water from the lawn/garden, local pond/ river water, etc. (Or the teacher can collect the water samples).
3. Have students make observations about each water jar, such as the turbidity of the water (the visibility of the water). Have the students discuss the quality of each water jar and draw conclusions from what they see:
  - a. Note clarity, color, odor, and the presence of any suspended particles or surface film.
  - b. What is the water source? (Where did it come from?)
  - c. Is this water treated? Where and How?
  - d. Do they think this water is healthy? (Why or why not) What makes water healthy?
  - e. What type of things do you think contaminate this water source? List some naturally occurring and man-made contamination sources.
  - f. Do you see any living organisms in the jar?
  - g. What are the negative effects of water pollutants on aquatic ecosystems?
4. If the school has water quality testing kits, they can run the tests for each sample. (Many aquarium testing strips sold in stores test for these characteristics). Students can interpret and evaluate test data and draw conclusions as to the origin of a contaminant in their water samples. What do results of the chemical tests tell us about the health of a waterway? Ask questions about why one result might be different than another. Have them fill out the data table:

Group #	Water sample	Physical characteristics		Chemical characteristics			Biological characteristics
		Turbidity	Appearance	pH	Dissolved Oxygen (ppm)	Salinity (ppt)	
1	Tap water						
2	Pond water						

**Conclusions:** Explain what water quality is. Which water jars are examples of good and bad water quality? What might be a cause of “bad” water quality?

**Advance:** How would scientists/engineers be involved in regulating water quality? As a class, list at least five reasons on the board. Have students research a body of water in your community that has had past water quality issues. For example, have students find a magazine article about a large fish kill or an industry that has polluted a local stream. Have them determine what environmental scientists/engineers have done to help the water quality of that water. Do a trip to your local drinking water source and have a talk with a water quality engineer from your local Department of Natural Resources to discuss the health of your local waterways.



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## Post-class Activity



**Directions:** Using what you learned about water testing in Turbid Waters class at Driftwood, complete the map below. For the bolded boxes, write what the term tests, why it's important to test, and how each test could relate to others.

