

Chapter 1. What is Water Quality?

Lesson 2. Water Quality is a Relative Term

Overview: To appreciate the importance of water quality, we must understand what water quality is. This lesson presents an overview and general principles of water quality.

Purpose: The purpose of these activities is to introduce students to water quality, and cause them to think about its importance.

Ideas Taught:

- Water quality is a relative term.
- The intended use determines whether a water supply is of acceptable quality.

Materials Needed:

- Several quart mason jars or clean mayonnaise jars filled with water
- Pepper
- Salt
- Dishwashing detergent
- Sand
- Toothpicks
- Goldfish
- Large stone that will fit into the jars
- Food coloring

Procedure:

1. ____ The purpose of this lesson is to illustrate the complexity of water quality issue, depending on your intended use of the water. quiz the class about their perceptions of water quality. Ask them what they think it means. Ask them what they think makes poor quality water.
2. ____ Add one contaminant (from the list of materials above) to each water filled jar. Explain that each jar contains water of a different quality, but none of the water is "bad", unless it is unsuitable for your purpose.
3. ____ Ask for a use of each water sample, for which each sample would be considered "good". List as many as possible on the board.

For example, a water skier might not like a rock in the middle of a lake, but a muskrat might consider it a good place to rest. Similarly, if we want to wash some dishes, soap will improve the quality of the water for that use. In contrast, if we wanted a drink, the soap would not be a welcome addition. A goldfish might like the water just the way it is, but we are not likely to want to drink water with a goldfish in it.

Lesson Learned: Water quality is defined by several factors: type of contaminant, effect of the contaminant on human health, and length of time required for this effect to become evident. Activity 3 illustrates ways we can define water quality.

The lesson above was adapted from "*What is Water Quality? A Resource Guide for 4-H Leaders and Teachers*," 80 pages of activities and experiments related to water quality. (\$5.00) Order from the Montana 4-H Program at Montana State University-Bozeman. Phone 406-994-3501.