



# Sample *Natural Inquirer* Lesson Plan

## Article: Do What You Water

### Subjects Covered:

- Science-water use, fresh water
- Math- multiplication, addition, estimation
- Reading- comprehension

### Recommended Web Site:

U.S. Geological Survey Water Science for Schools at  
<http://ga.water.usgs.gov/edu/index.html>

### Objectives:

1. Students will be able to analyze and discuss the problems with fresh water use on Earth.
2. Students will be able to formulate solutions for problems with fresh water use.
3. Students will be able to synthesize information from a scientific magazine and discuss the information with peers.
4. Students will be able to estimate personal water use and compare with the class.

### Estimated Time for Lesson:

3-4 class periods

### Materials:

#### Day 1

- Large glass jar
- Measuring cup
- Water
- Teaspoon
- Small glass jar
- Copies of the Facts to the Future *Natural Inquirer*
- Student science journals or notebook paper
- Pencils

#### Day 2

- Paper
- Pencils

#### Day 3

- Factivity questions
- Water estimation guidelines from Factivity
- Poster board or colored construction paper
- Markers, crayons, colored pencils
- Old magazines
- Scissors
- Glue

### Procedure:

#### Day 1

1. Introduce topic by setting out a jar filled with approximately 100 teaspoons (approximately 16.7 ounces or a little over 2 cups) of water.
2. Take a teaspoon and fill it up with water from the jar.
3. Pour the teaspoon into the smaller jar.
4. Ask students what they think the teaspoon of water represents.
5. Once students have started making a few suggestions, discuss with students some of the following facts about water.

- 5.1. Approximately 70 percent of the Earth's surface is covered with water.
- 5.2. Out of all the water on Earth, only 1 percent is useable by humans. (The jar with 100 teaspoons (16.7 ounces a little over 2 cups) of water represents all the water on Earth and the single teaspoon of water in the small jar represents how much water is useable by humans. This is only a visual aid. It is a loose approximation.)
- 5.3. Out of this 1 percent that is useable by humans, some of the water is difficult to access because of where it is located.

6. As a class, begin reading *Do What You Water*. The teachers or student volunteers can read aloud, the following sections: Meet the Scientists, Thinking About Science, and Thinking About the Environment.
7. After reading the Thinking About the Environment section have students break into pairs to read the article *Do What You Water*.
8. While students are reading in pairs, they should write down answers to the reflection questions in their science journal.

## Day 2

1. At the beginning of class, have each student pair up with his/her reading buddy from the previous class.
2. Tell students that they are going to compete in a “Quick Jot.”
3. In order to compete in the “Quick Jot,” students need to brainstorm a list of as many terms, phrases, and ideas as they can remember from the article *Do What You Water* during a 2-minute time period.
4. When the 2 minutes are up, have the students share some of the terms they came up with.
5. Make a list on the board of their responses.
6. Now that students are thinking about the article and what they learned from it, conduct a class discussion using some of the reflection questions.

## Day 3- Day 4

1. As students come into the classroom, hand them a slip of paper with the questions

- from the Factivity and the estimation procedure listed.
2. Students should answer the questions and then estimate their water use.
3. Once all students have finished, create a class water use graph.
4. Discuss the results and have students think of ways to reduce water use.
5. Create “Water Wise” posters using the students’ suggestions and post them in the school hallways.

### Assessment:

Students can be assessed formally and informally during this lesson. Formal assessment can be done by creating a rubric for the posters. For example you might require students to have some of the following: two pictures on the poster, four ideas for reducing personal water use, correct spelling and punctuation, and a sentence or phrase about why water conservation is necessary.

Informal assessment can be done through class discussions, observations of group interactions, and participation.

### Modifications:

- Students that have difficulty reading can be paired with a partner or the teacher may want to assist while the student reads.
- Students that need an extra challenge can work on a PowerPoint® presentation for the class that uses the *Natural Inquirer*, as well as other sources to create an informational slideshow on water use and the water cycle.