

## **SNWA Goal 2 Objective 2.1**

### **CCSD Curriculum Essentials Framework**

#### **English Language Arts**

*It is expected that students will:*

(5)5.6 write short expository text that speculates on causes and effects and offers simple persuasive evidence [NS 5.5.6]

#### **Social Studies**

*It is expected that students will:*

(5)2.9 demonstrate an understanding of supply and demand in a market [NS 3.5.2]

(5)3.26 investigate an economic issue by asking and answering geographic questions about location [NS 4.5.6]

#### **Mathematics**

*It is expected that students will:*

(5)3.3 estimate measures of length, volume, capacity, quantity, and weight, and communicate the degree of accuracy needed and when a more precise measure is required [NS 3.5.3]

**Purpose:** This activity is intended to illustrate the small amount of unfrozen fresh water on earth.

**Time:** 40-50 minutes

#### **You will need:**

- metric tools for measuring capacity - liter, 100 ml beaker, 50 ml cylinder - one set for each group of students
- blue food coloring
- 1 liter container filled with blue-colored water, one for each group of students and one for the teacher
- one dropper for each group of students
- permanent marker for each group of students

#### **Introduction**

1. Give each group of students one 1-liter container filled with blue-colored water. Tell the class that they must imagine that this container of water is going to represent all of the water on earth. Using the permanent marker, ask each student to draw a line on their group's container to mark the portion of the earth's water they think is available for Southern Nevadans to use.

#### **Making Discoveries**

- Lead your class through the following demonstration.
2. Pour 30 ml of the water into a small clear beaker. This represents the amount of fresh water on earth.
  3. About 20 ml of this fresh water are located in icecaps and glaciers, so pour the remaining 10 ml into a small clear cylinder. This represents all the earth's freshwater rivers, streams, lakes and ground water.

4. Use a dropper to take one tiny drop from this water. Release the drop. This is the amount of fresh water available for us to use here in Southern Nevada!

### **Closing**

5. Ask the students to reflect on the activity. How well did they predict the amount of available fresh water? What does this mean for how we use water? Ask the students to write a paragraph in response to: “Why is it important to ‘conserve’ (save) water?” Ask volunteers to share their writing with the class (see Grade 5 - Water, Water Everywhere).

### **Teacher Note:**

Students investigate conservation in the activity “Saving Water” in the following section.



*The teacher should introduce or review the following vocabulary with the students within the context of this lesson.*

**conserve:** to save; to keep from depletion, decay or injury

**fresh water:** inland water that has a low concentration of minerals, salts and dissolved solids

**ground water:** water that is stored in usable amounts in the soil and rock below the Earth's surface

**lake:** a standing body of water surrounded by land

**liter:** 1,000 milliliters

**potable:** suitable for drinking

**river:** a large body of flowing water that receives water from other streams and/or rivers

**salt water:** water that has a high level of dissolved salts (oceans, seas)

**stream:** a body of flowing fresh water



# Water, Water Everywhere

1% of the earth's  
water is fresh  
water for our use

2% of the earth's  
water is frozen in  
glaciers

