

SNWA Goal 1 Objective 1.2 **Goal 2 Objective 2.2**

Nevada State Standards

Science

20.5.3 Students will be able to describe and compare the components and interrelationships of a simple system.

Purpose: This activity can be used to assess prior knowledge about where our water comes from. What path does it take to get to us?

Time: 45-50 minutes

You will need:

- glass of water
- drawing paper
- pencils
- crayons
- poster paper (2)
- copies of student worksheet (for extension activity)

Introduction

1. Fill a glass of water from the classroom drinking fountain, or let the children watch you fill a glass at the drinking fountain in the hallway. Where did the water come from? How did it arrive at the fountain you used?

Making Discoveries

2. Give the class 3 to 5 minutes of quiet time to think about how the water was able to come to the fountain. Ask students to draw and label in their notebooks a “water map” of the water’s journey from its starting point all the way to the fountain.
3. As students complete the task, encourage them to share their drawings and ideas with other members of their working groups. Individual students may wish to make changes or add to their own drawings. Tell the students that each group will be given a chance to share with the rest of the class its ideas about how the water traveled to the fountain.
4. Assessment Opportunity—You might use this time to assess individual and class understandings about the water system. You might also use this opportunity to assess some student process skills. (See assessments paragraph in “How Can We Learn About Water?” in the introductory section.)

Did the student

- ◆ draw Lake Mead?
- ◆ indicate wells of some kind?



- ◆ show reservoirs/storage tanks?
 - ◆ show that pipes are used to transport water?
 - ◆ show water treatment facilities?
 - ◆ show some indication of the water cycle?
 - ◆ label his/her drawing?
 - ◆ talk about the drawing with others?
 - ◆ change the drawing as new information was added?
5. Record students' ideas on large chart paper for reference over time. Ask students for questions that still remain and record the questions on a separate Research Board. As students think of other questions, they may add them to the Research Board.

Closing

6. Continue the discussion
- How could we discover more about where our tap water comes from?*
- Who helps water get to our homes?*
- Are there any rules about using water?*
- How could we find out?*

Extension

1. Students work independently or in groups to complete the Las Vegas Valley Water System worksheet. Compare answers and discuss with the whole class.

Teacher Note:

It can take several days for water to reach a person's tap from Lake Mead. Water from the lake travels through a giant intake leading to the Alfred Merritt Smith Water Treatment Facility. After an hour at the treatment plant, water is directed through a pipeline at least six feet in diameter by pumping stations. Each station guides water in different directions. There are several pipelines which deliver water to different parts of the valley. From those lines, pump stations direct water through smaller pipe systems running directly to residents' homes.

Several reservoirs along the way hold water temporarily. The reservoirs also act as emergency storage facilities. In case of emergencies, water from reservoirs could last from two to five days.

The Southern Nevada Water Authority provides water to the valley's different jurisdictions. To help keep track of which municipality receives water, water is diverted to different areas by using "rate of flow" stations. These stations act as water meters for different cities, keeping track of each area's water consumption.