

Grade Level:
 6th Grade

Subject:
 Science

Exhibit:
 #10 Water Management

**Approximate
 Time Frame:**
 2 hours

Materials:

- jug to represent water
- water
- small cups
- ball of yarn
- food coloring

Lesson Plan - "Who Gets It?"



Science TEKS:

- 6.3C Represent the natural world using models and identify their limitations.
- 6.9C Research and describe energy types from their source to their use and determine if the type is renewable, non-renewable, or inexhaustible.
- 6.14C Describe components of the atmosphere, including oxygen, nitrogen, and water vapor, and identify the role of atmospheric movement in weather change.

Related TEKS: Social Studies, Geography, Environmental Science

Vocabulary of Instruction:

- | | |
|---------------------|------------------------|
| watershed | point source pollution |
| non-point pollution | flood |
| drought | water rights |
| water restrictions | water management |

Advanced Preparation:

Label one jug "water"

Instructional Procedure (5 E)

Engage:

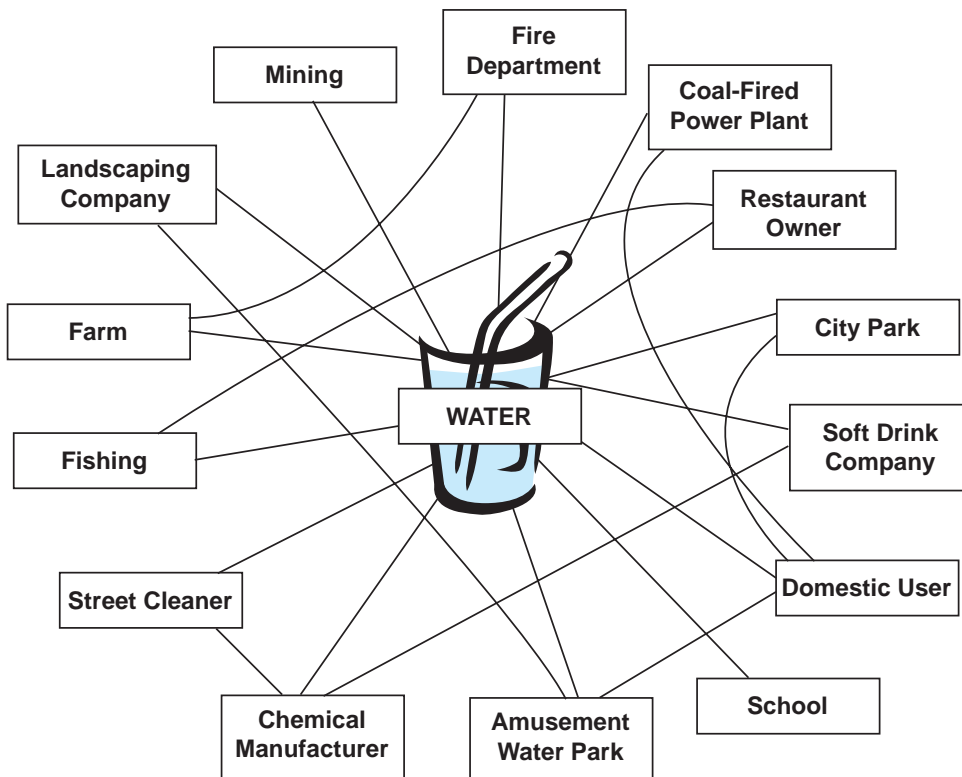
The teacher will begin the lesson by passing out small cups of cool drinking water to only a small part of the class. Only about every other student should get a cup of water. Tell the students that they are free to drink their water. The rest of the students may say something like, "hey, why don't I get one".

The teacher will question the students who did not get water.

Possible questions may include:

What did you notice? How did it make you feel not to get water? Why do you think that you deserve to have water? If I only had this one bottle of water to pass out, how could I have done things differently in order to satisfy everyone? Who should decide how I pass out the water next time?

Explore: Arrange the chairs in a circle. Label a Water jug "El Paso Water." Hand out the various "Water User Cards" to the students and have them sit in groups and discuss and record the importance that water plays in running their establishment.

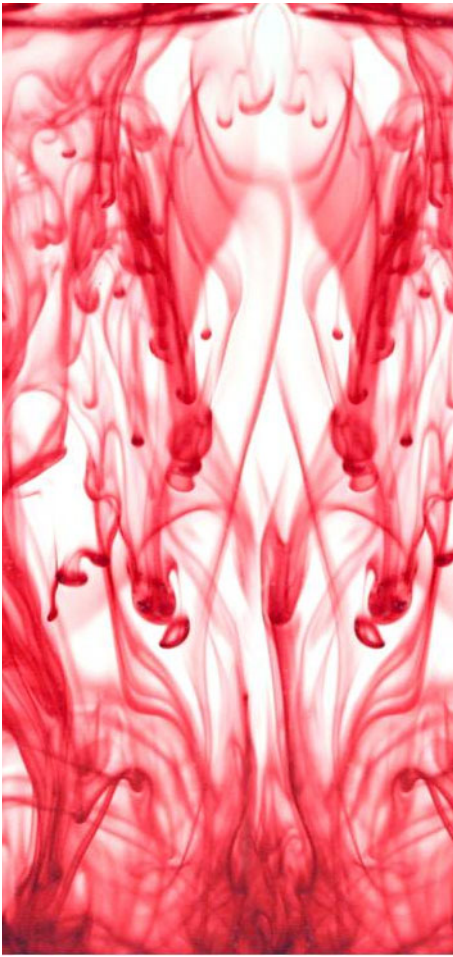


WATER WEB

Explore:

Students will be holding on to a piece of the yarn and throwing the ball of yarn to someone else in the group who represents an entity or area of industry that they will deal with. This should eventually form a web. This represents the various ways in which we rely on each other for services. Discuss the need for sharing and saving clean water.



**Explain:**

The students will get back into their groups of 4-5 students and discuss the importance of water management in El Paso. Each student will have one of the following tasks:

Recorder (records discussion)

Supervisor (encourages participation from every member)

Presenter (presents the outcome of the group to the class)

Timer (makes sure that all participants are on task on a timely manner)

Your group represents the El Paso Public Service Board and you are all in charge of two main issues.

- **Laws:** First, your group will draft three laws that will conserve water for El Paso.
- **Water Restrictions:** Second, your group will decide who gets what percentage of El Paso's water supply and discuss in as a council why you have decided in such a way.

Elaborate/Extend:

Each group will present their laws and water rights to the class.

Not all groups will be identical which brings up the issue of debate and differences between communities in El Paso.

Evaluate:

The teacher will demonstrate in front of the class how one drop of food coloring represents a source of pollution.

The students will reflect in their Science Journals individually.

1st Explain in your own words how this point source pollution might affect water rights as well as the restrictions that you came up with.

2nd Explain in your own words how a severe flood in El Paso might affect water rights and restrictions.

3rd Explain how a drought might affect the water rights and restrictions.

Landscaping
Company

Mining

Fire
Department

Coal-Fired
Power Plant

Restaurant
Owner

City Park

Soft Drink
Company

Domestic User

Amusement
Water Park

Chemical
Manufacturer

Street Cleaner

Fishing

WATER USER CARDS

School

Farm