



Theme: Water (grades 9-12)

Sub Theme: Global Issues Awareness

Post Visit Activity #1:

Post-Water Usage and Alternative Water Sources

Overview:

In this activity, students will learn about global and local water issues. Students will have the opportunity to explore where water comes from in Southern Nevada. They will also study water conservation policies implemented in Southern Nevada and develop future policies concerning this issue.

Objectives:

- Students will learn about water usage nationally and locally
- Students will examine water conservation policies implemented in Southern Nevada
- Students will explore alternative ways for Southern Nevada to get water and what environmental, economic and social impacts these alternatives might have
- Students will understand the effects of water conservation
- Students will predict possible outcomes and develop future policies for local or regional issues

Materials:

Access to internet

Papers

Pens

Article: "Water Conservation, Not Desalination"

Background:

Since the population in Southern Nevada has exploded in recent years, the Southern Nevada Water Authority's job is to provide clean water to businesses and residents. Currently, Southern Nevada receives a majority of its water from the Colorado River. In recent years, the amount of water in the river has decreased. In addition, Southern Nevada is in a drought. Conservation efforts have saved millions of gallons of water but alternative water sources are being examined for possible usage.

A project that is in progress is brining water from Northern Nevada to Southern Nevada. Many Nevadans have stated that the water should not be pumped from underground water sheds in Northern Nevada. Although everyone agrees that Nevadans need more water, there are disagreements on how this should be done. An idea that has been discussed, but not implemented, is pumping seawater from California. The salt water would have to be desalinated before doing so. There is a lot of debate around the world about this issue. People question how effective the process of desalinization is in terms of cost efficiency. They also have concern as to whether or not it is a detriment to the environment. In doing this activity, students will gain an understanding of the amount of water used, on average, in the United States. Then, the students will learn how these statistics relate to Nevada. Third, the students will have the opportunity to explore water conservation initiatives that are being implemented in Southern Nevada. Lastly, the students will have the opportunity to research alternative ways to bring water to Southern Nevada.

Activity:

Allow the students time to read the article "Water Conservation, Not Desalination." Have the students answer the questions provided. Links to websites are listed in order to research the questions in more detail. It is up to the teachers to allow students to use additional resources.

Assigned Article:

"Water Conservation, Not Desalination"

Food and Water Watch blog, May 3, 2007

<http://www.foodandwaterwatch.org/blog/archive/2007/05/03/water-conservation-not-desalination/view>

Supplemental Websites:

- www.nytimes.com
- Gulfnews.com
- <http://resources.ca.gov/ocean/97Agenda/Chap5Desal.html>
- <http://en.wikipedia.org/wiki/Desalination>
- http://americacityandcounty.com/mag/government_water_issues_prompt/
- <http://www.nrdc.org/water/conservation/fcawater.asp>

Questions:

1. According to the USGS, the highest percentage of water is allocated to what industry?
2. According to the USGS, the lowest percentage of water is allocated to what industry?
3. Give one solution for the following: How can utilities that provide us with power consume less water during the energy-making process?
4. In your opinion, should agricultural crop irrigation use less water? How can farmers do this? Would the cost be too great for them?
5. Name one environmental effect of desalinization.
6. In your opinion, should Nevada develop desalinization technology?
7. Explain one issue or hurdle that the state of Nevada might encounter if they were to think about developing a desalinization process in California and pumping the water to Nevada?
8. In your opinion, should people in general conserve more water?
9. List one alternative to the water shortage in Nevada.

Discussion:

As a group, discuss the correct answers to the questions assigned, after the papers have been completed. Questions 6 through 9 should invoke a great deal of class discussion.