

Water Audit

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Summary: Students conduct a home water audit and compare and contrast results with and without the implementation of water conservation practices.

Objectives: Students will:

- provide a rationale for implementing home water conservation measures.
- describe the benefits of at least five home water conservation practices.
- recommend water conservation strategies to be implemented within their own homes.

Materials

Conserve Water! Student Copy Page

Water Audit Data Sheet I Student Copy Page (one copy per student)

Water Audit Data Sheet II Student Copy Page (one copy per student)

Activity

Day 1

1. Organize students into cooperative learning groups.
2. Have each group list all the ways they use water in a 24 hour period inside and outside their homes.
3. Record their ideas on the board.
4. Hand out the Water Audit Data Sheet I Student Copy to each student.
5. Ask students to review the sheet.
6. Ask them to record on the sheet in Column A by each water use the number of times they believe they conduct that activity in a 24 hour period.
7. Instruct them to record the number of times they actually conduct each water use activity over the next 24 hours in Column B of Water Audit Data Sheet I.

Day 2: Class discussion

8. Have students compare the number of gallons they predicted with their actual use. Did they use more water than they guessed? Less? Were students surprised by the amount of water they used?
9. Ask students if they know of any ways to reduce the number of gallons of water they use. Do their parents frequently ask them to turn off the shower? Why? Is water free, just because it flows freely from the faucet?
10. Do students believe that using water resources wisely makes sense?
11. Ask students to suggest some water conservation practices. List on the board.
12. Hand out Water Audit Data Sheet II Student Copy Page. Transfer the numbers from Column B on Data Sheet I to Column B on Data Sheet II. Have students calculate the total amount of water they would use in a 24 hour period using the water conservation values in Column C. Direct students to compare the total number of gallons on Data Sheet I to the total on Data Sheet II.

Wrap Up

Respond to the following questions related to water conservation practices:

1. How does water consumption change if you implement water conservation measures? How many gallons of water would you save? Will you be more careful about your use of water after seeing how much you can potentially save?

2. Which conservation measures would be the easiest to institute? Which practices would be the most difficult? Why?

3. If you were only allowed 30 gallons of water per day, what would be your highest priority water uses?

4. Select three of the water conservation practices that you think are fairly easy to use. If you were to apply these three practices routinely, how many gallons of water would you save each month? If every member of your family consistently employed these practices, how many gallons would be saved per month within your own household?

5. Is it a good idea for a school, business, or hospital to conduct a water audit? Why would a water audit be beneficial for these institutions?

6. Write a set of at least five recommendations or suggestions for your family based on your home water audit. Think of short and long term actions. For example, for long term actions, you may suggest that low flow showerheads be installed or water saving appliances purchased when the current ones no longer function.
