Water Conservation in the Garden

Grade: 6

GPS: S6E3: Students will recognize the significant role of water in earth processes.

Essential Question: What is water conservation, and how do we conserve water in the garden?

Teacher Note: This is a lesson plan designed to allow students to work in the garden. Water conservation in the garden can be applying mulch, incorporating compost, building rain barrels, and even planting drought tolerant plants. Use this lesson plans to accomplish the most needed water conservation task in your school garden.

Interest Approach: Post the following excerpt of an article (posted below lesson plan) from the Atlanta Journal Constitution on the smartboard, or hand out copies to students, and instruct them to answer questions at the bottom. Discuss answers with students. Make sure they understand that lack of water in Atlanta means people may have to restrict water use, including water used for cooking, bathing, and even flushing toilets. Businesses and manufacturing depend on water, as well as agriculture. Also mention the ongoing tri-state water battle based on the release of water held in Lake Lanier to down-river sources.

Lesson: Define water conservation to students. Water conservation can sometimes be confusing to students: if water is a renewable resource, and goes through the water cycle, then why does water conservation matter? To illustrate the point, pour two glasses of water. Tell them to imagine it is a hot summer day; the sun is shining, and they've been playing basketball with their friends for hours. They go inside to get a cold glass of water. Now pour one of the glasses on the counter (or somewhere not too messy, but where they can still see the water). Ask students which glass of water they prefer. After they pick the full glass, ask them why. You should receive answers to the effect that the one glass is still full and easy to drink from, whereas the other is spilled all over the counter. Ask students if there is still the same amount of water in each scenario (yes). Explain that this scenario is like water conservation. If we save the water we have, we will have it when we need it, if we don't, we may run out of the water we need to survive on. Relate this back to the AJC article.

Learning Activity: Remind students of behavior expectations in the school garden. Discuss with students ways to conserve water in the garden. Example are listed below. After discussion, explain to students which water conservation project they are going to be doing. Make sure you have appropriate tools and supplies needed. This is a great opportunity to build rain barrels, have students spread much, or incorporate compost into garden beds.

Here are some water conservation ideas from TLC:
http://tlc.howstuffworks.com/home/save-water-garden.htm

Conserving Water in the Garden

1. Use rain water collected in rain barrels.
2. Use grey water that does not have germs or chemicals in it.
3. Mulching locks in moisture.
4. Compost adds moisture.
5. Water before 8am or after 4pm to reduce evaporation.
6. Water near the base of the plant.
7. Take an old plastic bottle. Cut off the base. Bury it next to the plant. Water plants through this funnel to ensure the water goes where it is needed.
8. Remove weeds ASAP. You don't want your carrots competing for water with weeds.
9. Angle garden paths so water stays in the garden.

Check for Understanding: Assign students to write paragraph describing the garden task they completed, and how it relates to water conservation. This should also include what water conservation is, and why it is important.

Posted: 6:42 p.m. Monday, Nov. 26, 2012

Lake Lanier water level sinks to three-year low

Jason Getz, jgetz@ajc.com

Floating docks rest on dry land far from the water due to low water levels on Georgia's Lake Lanier. Lake Lanier is at its lowest level since the historic drought of 2009, when lakeside businesses lost millions in recreation revenue and boaters were unable to launch their crafts.

Lake Lanier near historic low levels

By Pat Fox

The Atlanta Journal-Constitution

Lake Lanier is at its lowest level since the historic drought of several years ago, and if much-needed rain doesn't arrive soon, metro Atlanta could revisit the days of sweeping water restrictions and recreational nightmares.

Monday's reading was 1,057.82 feet above sea level, 13 feet below optimum operating level or "full pool."

The last time Lake Lanier was that low was March 2009, the waning days of a two-year drought that ravaged the state.

The difference this time is that the lake levels have not been consistantly low for a long period and the region is heading into vital winter months when rains traditionally recharge reservoirs in the Southeast.

"(This) is a concern and will require above-average rainfall during the winter and spring to bring the levels back next summer," said Doug Hooker, Atlanta Regional Commission executive director. "A dryer-than-average winter could be especially problematic for both metro Atlanta and our downstream neighbors if we are heading for another drought next year."

An abnormally dry November in Georgia has put strains on the river system including Lake Lanier.

Statewide, this is Georgia's 17th driest year on record, going back 118 years. North Georgia is running about 3- inches below normal rainfall, said Jeff Dobur, senior hydrologist with the National Weather Service

http://www.ajc.com/news/news/lake-lanier-water-level-sinks-to-three-year-low/nTGCd/

1. What is going on in this article?
2. Why is that a problem?
3. How does this fit in with what you know about the water cycle?

Phases of the Moon