

Water Use Lesson Plan (K-5)

Green Oceanside lesson plan on the importance of water in our everyday lives



LESSON OVERVIEW:

The Green Oceanside team invites teachers to utilize this lesson plan to teach students about the importance of water in everyday living. Students will learn the ways in which water is used at home, collect data to determine actual water usage within their homes, and think of ways to conserve water.

This lesson plan was created from multiple sources to target 3rd through 5th grade students but can be adapted for all ages. Page 3 of this plan includes background information and reference links for related topics.

Total Time for Lesson: Day 1- 30 minutes; Day 2- 60 minutes

DAY 1 PROCEDURES:

1. Introduce the lesson by showing the students a container of water and asking them what they think you will use it for. Allow them to share only a few of their ideas. Explain that you could do many different things with that water.
2. Think/ Group Share: Have the students generate lists, independently, of all the possible uses of water. After approximately ten minutes, ask the students to share some of their ideas. A class list can be generated and students can continue adding ideas to their lists.
3. Data Collection: Compliment the students on their good thinking of uses of water. Explain that over the next week, they will collect information about where, when and how they actually use water at home. Ask students to download the Personal Water Use Chart and go over the directions with the students.

DAY 2 PROCEDURES:

1. After they have tallied their water use over one week, ask the students if they used as much water over the 7-day period as they expected. Allow students to share their experiences.
2. Discussion: Lead the students in a discussion about where, when, and how water was used. For example:
 - o Did you use water in any manner that was not listed on the data collection sheet?
 - o Did you use more or less water than you expected?
 - o If you knew you would not have enough water, which activities would you eliminate, and why?
 - o Did you use water unnecessarily?
 - o Do you think you used water wisely?
 - o How could you use less water and still do all of the activities listed on the data collection sheet?
3. Explain that it is important to conserve water whenever possible so that there will be enough clean water for when we need it. Ask the students to write down ways they can conserve water.
4. Discuss “virtual” water- i.e. the water used to produce the food, home goods, and electricity we use. (See page 3 of this plan for more info.) Have students calculate their water footprint at <https://www.watercalculator.org/>.
5. Have students share their results and answer what activities they think are the biggest water users in their daily lives. Ask them if they have any additional thoughts about how to conserve water after completing the calculation.

OPTIONAL PERSUASION POSTER:

Tell the students that since they had so many good ideas for conserving water, it would be helpful for them to share their information with others so that even more people can conserve water. Explain that it is called persuasion when you want to convince other people to do something. Explain that they will be creating a poster to persuade people to conserve water. They must choose one method of water conservation and their poster must show and tell this concept. Ask a few students to share ideas of what could be done. (for example: Write “turn off the water while you are brushing your teeth” and draw a picture of someone brushing his/her teeth with the water not running at the same time.)

Give the students ample time to complete a poster using their preferred art utensils.

What is Virtual Water?



Virtual water, also called “embedded water” or “indirect water,” is the water “hidden” in the products, services and processes people buy and use every day. Although virtual water goes unseen by the end-user of a product or service, that water has been consumed throughout the value chain, which makes creation of that product or service possible.

For the purposes of Water Footprint Calculator, virtual water is used interchangeably with indirect water. Conceptually, both mean the water consumed at every step in a value chain of a given good, service or process.

By contrast, direct water use is the water that is seen, felt and used in a given time and location to produce an item or service (think “tap water”). Another way to envision direct water use is that it is the water necessary to carry out an operation or activity. In other words, at any given point in time in the creation of a product or service, it is the water used in the specific activity that comes directly from a pipe or spigot. For instance, a microchip manufacturer who uses highly distilled water in its process, or a beverage bottler that cleans bottles, are both directly using water in their operations. When taken together, all the steps in which direct water is used add up to the total water required to get a finished product to consumers. That total can be considered virtual water content.

Virtual Water and Direct Water: Examples and Differences

Water for Pasta

To make a bowl of pasta, water is required to boil the dry pasta in the pot – this is direct water use for the person eating that pasta at home. In order to produce the pasta, water is required at many steps along the value chain, and when the water used at those steps is added up, it makes up virtual water content for that pasta. Some of these steps include: water to grow the wheat; water to produce the fuel for machines to harvest the wheat and transport the pasta to the store; and water to create the electricity for processing the wheat into flour and pasta. ([Learn more about Food’s Big Water Footprint.](#))



Water for Jackets

When a person wears a nylon jacket to the point where it gets dirty, water is required to clean it in a washing machine – this is direct water use for the person who wore the jacket. In order to produce the jacket, water is required at many steps along the value chain, and when the water used at those steps is added together, it makes up virtual water content for that jacket. Some of these steps include: water to drill, produce and refine the oil and natural gas that makes nylon; water to make the electricity for manufacturing the jacket; and water to produce the fuel that moves vehicles and transports the jacket to the store. ([Learn more about The Hidden Water in Everyday Products.](#))

