



Lesson: What's Your Water Footprint?

Time: 45min

Common Core:

Next Generation Science Standards

NGSS.K.ESS3.3

Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.* [Clarification Statement: Examples of human impact on the land could include cutting trees to produce paper and using resources to produce bottles. Examples of solutions could include reusing paper and recycling cans and bottles.]

Objectives:

To learn about the water available to us on Earth.

To highlight the different amounts of water it takes to produce certain goods and services that we encounter daily.

To realize how our everyday choices and purchases play a role in the amount of water we are using.

To learn how to conserve water by being more aware of the things we choose to buy and use.

Key Words: Water footprint; Conserve; Reuse

Resources:

- PowerPoint - 'What's Your Water Footprint?'
- Multiple bags with a few cotton balls inside each bag
 - Each bag will represent 1lb of cotton
- Multiple pieces of plastic items
 - Each item will represent 1lb of plastic
- Several sheets of paper
 - Each sheet of paper will represent 40 sheets of paper
- Several chocolate bars
- Several T-shirts
- Several pairs of jeans

Class Activity

Intro

Many of the items we purchase and use on a daily basis require a significant amount of water to produce, whether it's to create materials, to run machines, or to generate power and energy. In this activity, groups will be able to view selected products (that are usually laying around homes), and work together to estimate how much water went into creating the product. They will



then create a list and “shop” for a combination of items, but with the goal of “purchasing” a combination which uses the least amount of water total.

Purpose

To showcase how our everyday choices and purchases play a role in the amount of water we are using.

Activity

Divide the class into groups. Ask the groups to estimate how much water it takes to create each item (from the Resource list above). The groups will then “buy” 3 items, with the goal of buying a combination which equates to the least amount of water used.

Include different “stores” around the classroom, and lay out one type of product per store.

Each group can shop for their 3 items, and set them at their table.

Show powerpoint ‘What’s Your Water Footprint?’

Go back to the powerpoint slides and use the information to calculate the actual amount of water used for all their items.

Concluding discussion:

How different were your predicted numbers from the actual numbers?

How might knowing some of these numbers affect what you choose to buy in the future?

What are some other ways we can reduce our water footprint?