



My nature connection

WATER COST WHIZ KIDS

GRADES: K+
TIME: 20 min.

The True Cost of Food

Food is great! It's tasty, filling, and we can't live without it. But producing food takes energy and water, uses up land for production, and creates wasteful byproducts. In this activity, we'll focus on water usage.

HOW MUCH WATER DO WE USE?

Think about your last meal. How much water do you think was used to produce all the food you ate? The amount of water used to grow food is called the water cost. Water cost varies between different types of food. For example, a pound of beef takes 18,000 gallons of water to produce, and a pound of wheat takes 25 gallons of water to produce.

The average person in the United States consumes about 924 gallons worth of food per day, or about 308 gallons per meal. As a country, we consume 30.3 billion gallons of water per day on food alone!

The world is covered in water, but only 3 percent of it is fresh water. Unlike saltwater, freshwater is the only type of water that we can consume and is the water that plants need to grow. When water is used to produce food, it is taken from natural environments like lakes and rivers, which can negatively impact the animals and plants that live there. Practicing water conservation or using less water can minimize water pollution and help us be better equipped to handle droughts.

WHAT YOU'LL NEED

- Paper
- Pen or Pencil
- Calculator (optional)

MEAT

Meat needs more water to produce than fruits, vegetables, and grains because animals like cattle and pigs eat large amounts of grain and vegetables before they are slaughtered for their meat.

All of the water it takes to produce the food that animals consume contributes to the meat's total water cost.



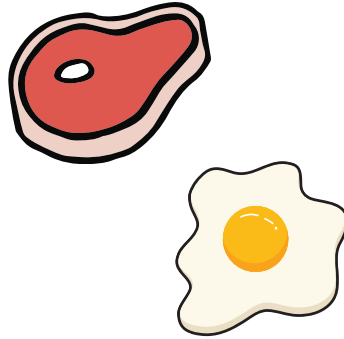
WATER COST CALCULATOR



Check out the table below to see how much water it takes to produce different food items. The water cost of each item is based on the recommended serving size.

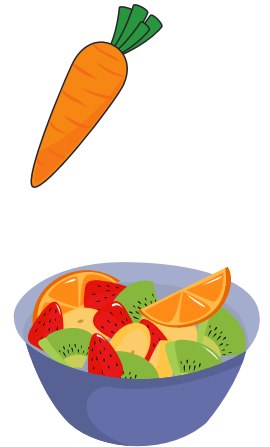
Meat and Protein

Beef = 337 gal
Chicken = 89 gal
Pork = 109 gal
2 Eggs = 99 gal
Veggie Burger = 6 gal
Hot Dog = 325 gal
Bean Burrito = 125 gal
Peanut Butter = 15 gal



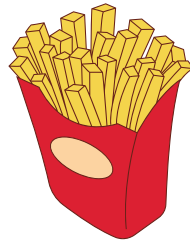
Fruits and Vegetables

Broccoli = 11 gal
Apples = 10 gal
Carrots = 6 gal
Tomatos = 8 gal
Peaches = 46 gal
Garden Salad = 15 gal
Fruit Salad = 25 gal
Avocado = 110 gal
Baked Beans = 65 gal
Watermelon = 100 gal
Vegetable Stir Fry = 45 gal



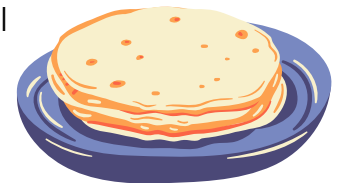
Snacks and Sides

Yogurt = 48 gal
Popcorn = 20 gal
French Fries = 15 gal
Slice of Cheese = 56 gal
Almonds = 80 gal
Crackers = 20 gal



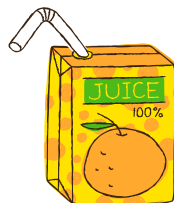
Grains and Pasta

Pasta and Tomato Sauce = 55 gal
Two Pieces of Bread/Bun = 20 gal
Pancakes = 45 gal
Tortilla = 20 gal
Mac and Cheese = 110 gal
Cereal with Milk = 68 gal
Lasagna = 135 gal
Rice = 25 gal



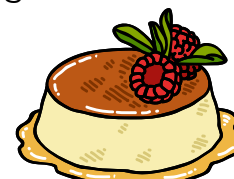
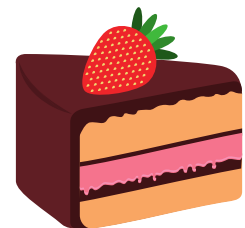
Beverages

Fruit Juice = 47 gal
Milk = 48 gal
Soy Milk = 40 gal
Soda = 10 gal
Water = 0.0625 gal (8 ounces)
Coffee = 37 gal



Dessert

Cake = 90 gal
Cookies = 55 gal
Ice Cream = 150 gal
Apple Pie = 90 gal
Milkshake = 95 gal
Flan = 50 gal



MEAL PREP CHALLENGE

Can you create a water-saving meal? Use the cost calculator on the previous page to put together a meal that meets a water conservation goal. For an extra challenge, complete these challenges without using a calculator.

1. Create a meal that you would enjoy and uses less than 300 gallons of water. This meal must include at least 1 item from each of the six categories.

Meat or Protein:

Snack or Side:

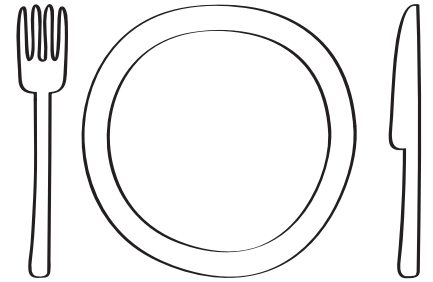
Fruit or Vegetable:

Beverage:

Grain or Pasta:

Dessert:

Total cost of Water (in gallons):



2. Create a vegetarian meal (No meat) that uses less than 200 gallons of water to produce. This meal must include at least 5 items from 5 different categories.

Meat or Protein:

Snack or Side:

Fruit or Vegetable:

Beverage:

Grain or Pasta:

Dessert:

Total cost of Water (in gallons):



3. Create a vegan meal (made with zero animal products) that uses less than 150 gallons of water to produce. This meal must include at least 5 items from 5 different categories.

Meat or Protein:

Snack or Side:

Fruit or Vegetable:

Beverage:

Grain or Pasta:

Dessert:

Total cost of Water (in gallons):



CONNECTING WITH QUESTIONS

- Would adopting a vegan or vegetarian diet reduce the amount of water you use?
- How do you think this activity will impact your food choices in the future?
- What are some other ways you could reduce the amount of water you use?