$\qquad$ Period: $\qquad$

## Understanding Water

## Water Cycle

1. "Did you know that the water you drank this morning might have been the same water a dinosaur drank millions of years ago?" Using your reading, explain how this could be possible?
2. Fill in the table using the reading and color and label the diagram.

| Step | Explain what happens? |
| :--- | :--- |
| Evaporation |  |
| Transpiration |  |
| Condensation |  |
| Precipitation |  |
| Runoff |  |
| Groundwater |  |



## Earth's Water Supply

1. How much water is salt water? $\qquad$
2. How much water is fresh water? $\qquad$

- How much is ground water? $\qquad$
- How much is lakes and rivers? $\qquad$
- How much is glaciers/ice? $\qquad$
- How much is water vapor? $\qquad$
Color and fill in the key

Water on Earth


## Freshwater on Earth



## How much water does it take?

1. What activity takes the most water? $\qquad$
2. What activity takes the least water? $\qquad$
3. Sandra wants to give a recommendation to her friend about how to conserve water. What could Sandra recommend in each of these areas of the house?

Outside: $\qquad$

Bathroom: $\qquad$

Kitchen: $\qquad$

## Water Pollution

What is the greatest source of water pollution today? And how can we prevent it?

## Understanding Water

## By Water Education Foundation

## Water Cycle

Did you know that the water you drank this morning might have been the same water a dinosaur drank millions of years ago? Or it may have been the same water that supported Columbus' ships on the sea. There is the same amount of water on Earth today as there has always been. The water keeps moving around in an endless cycle called the water cycle.

Water itself is the only substance that exists in liquid, gas and solid form the keys to the water cycle. Here's how the cycle works:

Water evaporates from oceans, rivers and lakes (water in its liquid form). This means that water changes from a liquid to gas and rises into the air. Water can also can evaporate from plants. This is called transpiration. Water then condenses (condensation). This means that the gas water (water vapor) cools down and turns back into tiny liquid drops forming clouds. When there is too much water for the air to hold, the water falls back to earth because of gravity in the form of rain, snow, sleet, or hail. This is called precipitation. As the water hits the earth, some of the water runs off on the surface of the Earth. This means that the water flows over the Earth in streams and rivers. Some of the water also soaks or infiltrates into the ground to become groundwater. Groundwater can also flow underground. Eventually, runoff and groundwater makes it to lakes and oceans where the cycle starts over again


## Understanding Water

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## Earth's Water Supply

Of all the water on Earth, only a small amount is available for us to use. It's true!
$97.2 \%$ of the Earth's water supply is salt water.

Only $2.8 \%$ is fresh water

Of the total supply of water on Earth,

- 0.6\% is groundwater (we can use some of this water)
- 0.01\% is in lakes and streams (we can use some of this water)
$\cdot 2.2 \%$ is in glaciers and icecaps
$\cdot 0.001 \%$ is water vapor, rivers and lakes and the process begins again.



## Understanding Water

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## How Much Water Does it Take?

- Brush your teeth? - 2 to 5 gallons
- Wash the car? - 50 gallons
- Use the dishwasher? - 8 to 15 gallons
- Flush the toilet? - 1.5 to 4 gallons (each flush)
- Take a shower or bath? - 17 to 24 gallons
- Run the washing machine? -35 to 50 gallons (each load)

It's important that we all work to save water. About half the water we use each year is used outdoors - watering the garden and lawn, filling the swimming pool and washing the car. Ways to reduce your water use outside include using a shut-off faucet when washing the car and landscaping with plants that use less water.

Indoors, most of the water a family uses is in the bathroom. Saving water is important. In the bathroom, the easiest way to save water is to shut off the faucet while you brush your teeth or take shorter showers and not using the toilet to flush trash. Installing low-flush toilets and low-flow showerheads can also help save lots of water. An ultra-low-flush toilet uses just 1.5 gallons per flush compared to 4 gallons per flush for a traditional toilet.

In the kitchen make sure you wash only full loads in the dishwasher. And if you need a new machine, ask your parents to take a look at some of the water-efficient models that can reduce water usage to 6 gallons per load. New washing machines also offer significant water savings, using up to 40 percent less water per load than older machines, and they can save energy too!

## Understanding Water

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## Water Pollution

Most people think water pollution comes directly from a factory or other known source, a type of pollution known as "point source pollution." Because of laws passed in the 1970s, most of those sources of pollution have cleaned up their act. Today, the biggest source of pollution is us - you and me. This type of pollution is known as "nonpoint source pollution" because it can't be traced to one single source; we can't tell how much pollution is coming from where.

Types of nonpoint pollution that ultimately end up in our waterways include used oil poured into storm drains, soil washed from construction sites, grease from restaurants, paint brushes cleaned in the street, or fertilizer and pesticides washed off farm fields and city lawns. That's why it is so important for all of us to clean up our act and learn how to prevent such pollution.


