Name _____

Creating New Jobs

Fill in the circle by the correct answer. Then write the answers to numbers 3, 4, and 5.

1. From the chart, you can make the inference that _____.
   - Ⓐ switchboard operators are now doing their jobs for mobile calls
   - Ⓑ long-distance calls are no longer being made on landline phones
   - Ⓒ switchboards aren't necessary to make long-distance calls now
   - Ⓓ the U.S. no longer has a need for phones of any kind

2. How can we estimate what the world population will be in 2050?
   - Ⓐ We know what the current world population is.
   - Ⓑ There is data from 2050 that informs us of the population.
   - Ⓒ We can assume that the population will not grow very much.
   - Ⓓ We can estimate based on the growth rate from recent decades.

3. Explain why jobs change when demand changes.

_____

_____

4. How does population growth affect the kinds of jobs that are needed?

_____

_____

5. Based on the chart, what's so different about the types of jobs in 1950 and 2017?

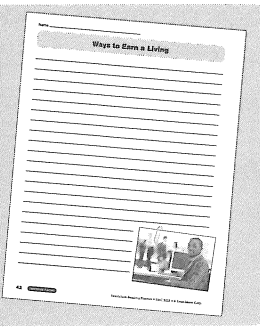
_____

_____

Write About the Topic

Use the Writing Form to write about what you read.

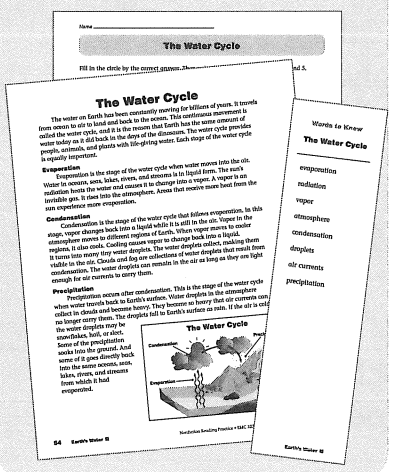
Explain how jobs will be different 60 years from now and why, and predict what some future jobs will be. Use text details.



Earth's Water

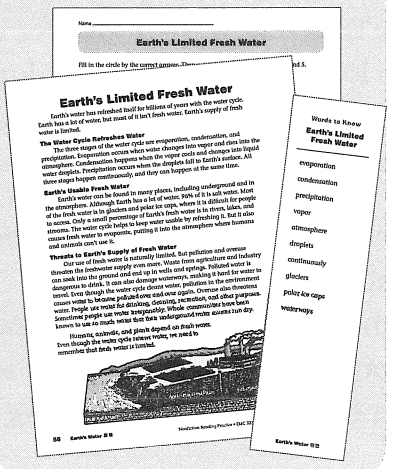
Level 1 ■

Words to Know list, Reading Selection, and Reading Comprehension questions



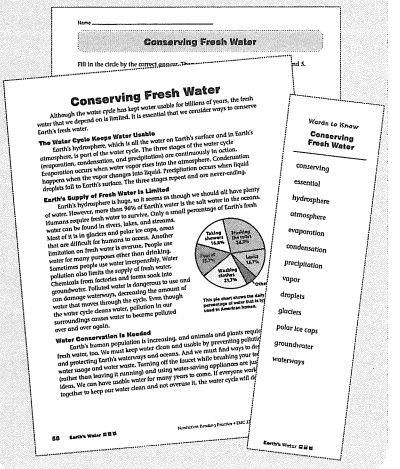
Level 2 ■■

Words to Know list, Reading Selection, and Reading Comprehension questions



Level 3 ■■■

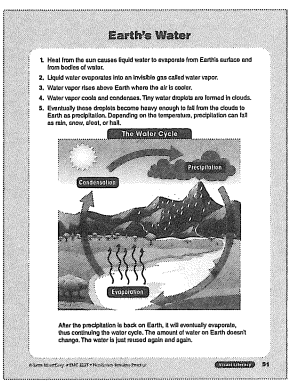
Words to Know list, Reading Selection, and Reading Comprehension questions



Assemble the Unit

Reproduce and distribute one copy for each student:

- Visual Literacy page: Earth's Water, page 51
- Level 1, 2, or 3 Reading Selection and Reading Comprehension page and the corresponding Words to Know list
- Graphic Organizer of your choosing, provided on pages 180–186
- Writing Form: Earth's Water, page 52



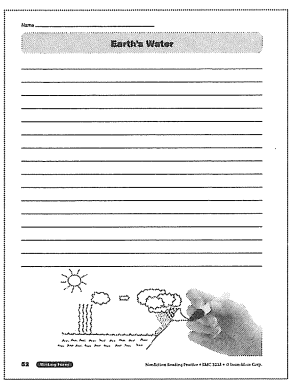
Visual Literacy

Introduce the Topic

Read aloud and discuss The Water Cycle diagram. Explain that the water cycle renews water with every stage. Tell students that Earth has not gained or lost any water for billions of years, but our water supply is limited because of threats such as pollution.

Read and Respond

Form leveled groups and review the Words to Know lists with each group of students. Instruct each group to read their selection individually, in pairs, or as a group. Have students complete the Reading Comprehension page for their selection.



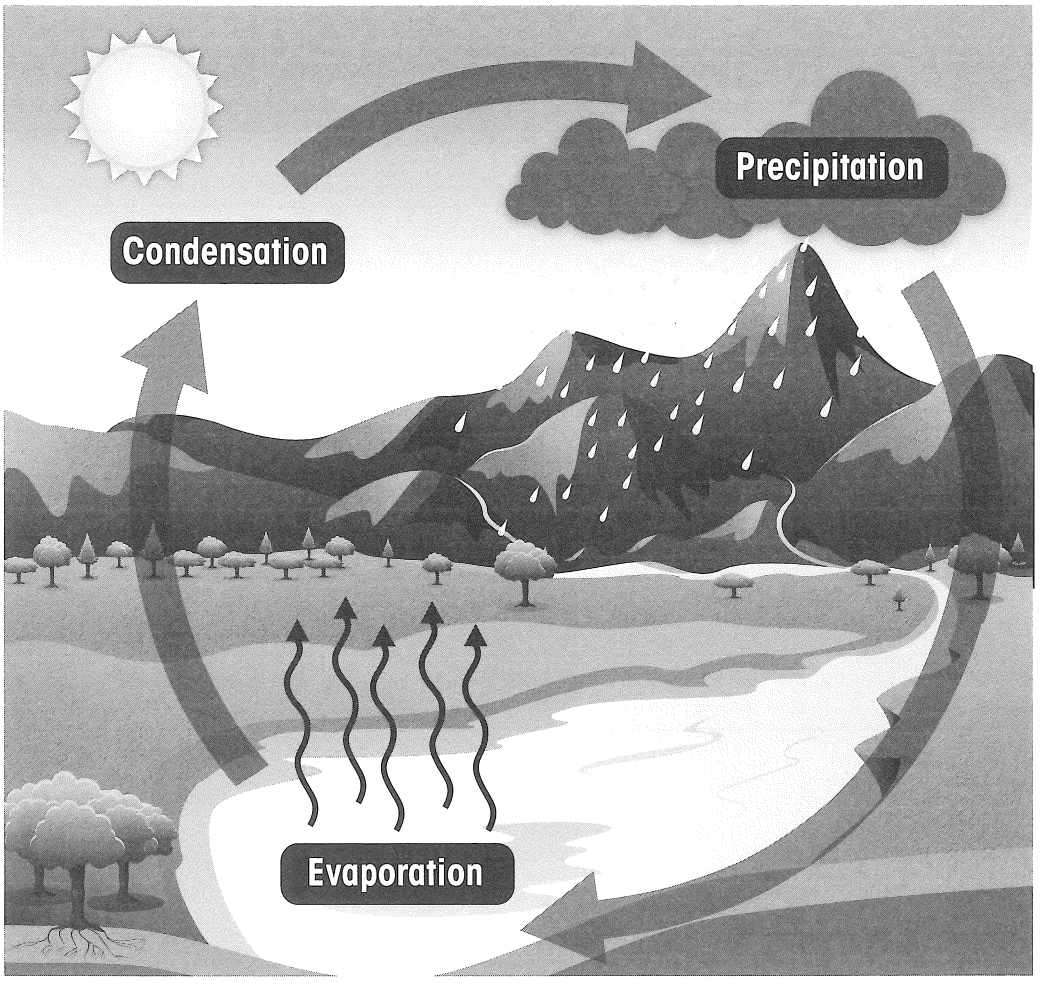
Writing Form

Write About the Topic

Read aloud the leveled writing prompt for each group. Tell students to use the Graphic Organizer to plan their writing. Direct students to use their Writing Form to respond to their prompt.

Earth's Water

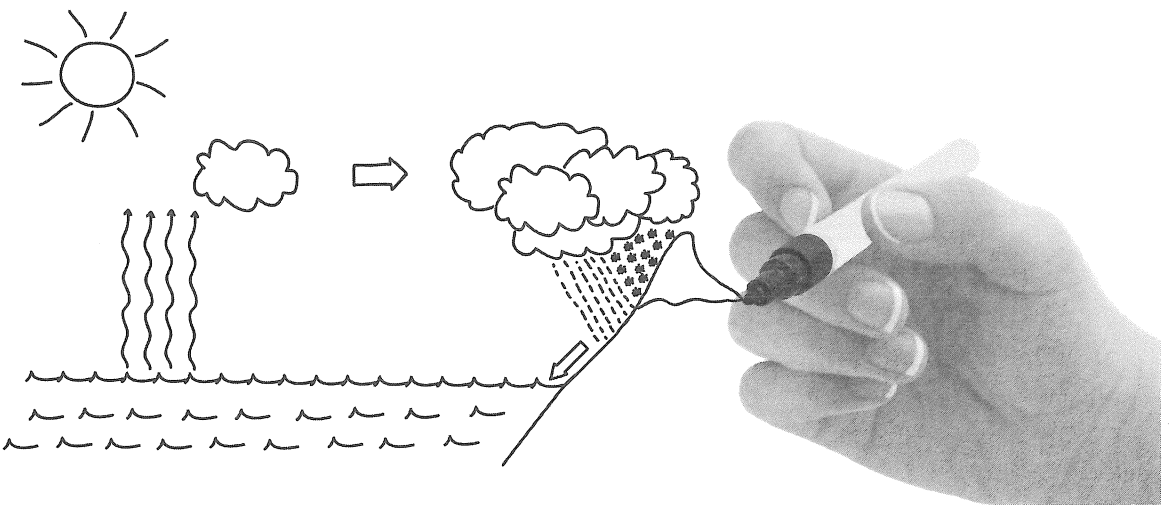
1. Heat from the sun causes liquid water to evaporate from Earth's surface and from bodies of water.
2. Liquid water evaporates into an invisible gas called water vapor.
3. Water vapor rises above Earth where the air is cooler.
4. Water vapor cools and condenses. Tiny water droplets are formed in clouds.
5. Eventually these droplets become heavy enough to fall from the clouds to Earth as precipitation. Depending on the temperature, precipitation can fall as rain, snow, sleet, or hail.



After the precipitation is back on Earth, it will eventually evaporate, thus continuing the water cycle. The amount of water on Earth doesn't change. The water is just reused again and again.

Name _____

Earth's Water



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Words to Know

The Water Cycle

evaporation

radiation

vapor

atmosphere

condensation

droplets

air currents

precipitation

Earth's Water ■

Words to Know

Earth's Limited Fresh Water

evaporation

condensation

precipitation

vapor

atmosphere

droplets

continuously

glaciers

polar ice caps

waterways

Earth's Water ■■

Words to Know

Conserving Fresh Water

conserving

essential

hydrosphere

atmosphere

evaporation

condensation

precipitation

vapor

droplets

glaciers

polar ice caps

groundwater

waterways

Earth's Water ■■■

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The Water Cycle

The water on Earth has been constantly moving for billions of years. It travels from ocean to air to land and back to the ocean. This continuous movement is called the water cycle, and it is the reason that Earth has the same amount of water today as it did back in the days of the dinosaurs. The water cycle provides people, animals, and plants with life-giving water. Each stage of the water cycle is equally important.

Evaporation

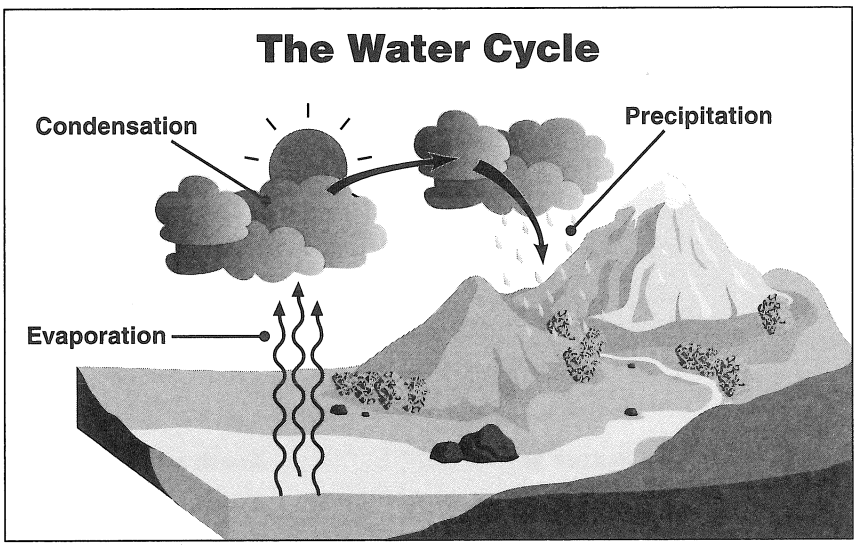
Evaporation is the stage of the water cycle when water moves into the air. Water in oceans, seas, lakes, rivers, and streams is in liquid form. The sun's radiation heats the water and causes it to change into a vapor. A vapor is an invisible gas. It rises into the atmosphere. Areas that receive more heat from the sun experience more evaporation.

Condensation

Condensation is the stage of the water cycle that follows evaporation. In this stage, vapor changes back into a liquid while it is still in the air. Vapor in the atmosphere moves to different regions of Earth. When vapor moves to cooler regions, it also cools. Cooling causes vapor to change back into a liquid. It turns into many tiny water droplets. The water droplets collect, making them visible in the air. Clouds and fog are collections of water droplets that result from condensation. The water droplets can remain in the air as long as they are light enough for air currents to carry them.

Precipitation

Precipitation occurs after condensation. This is the stage of the water cycle when water travels back to Earth's surface. Water droplets in the atmosphere collect in clouds and become heavy. They become so heavy that air currents can no longer carry them. The droplets fall to Earth's surface as rain. If the air is cold, the water droplets may be snowflakes, hail, or sleet. Some of the precipitation soaks into the ground. And some of it goes directly back into the same oceans, seas, lakes, rivers, and streams from which it had evaporated.



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Name _____

The Water Cycle

Fill in the circle by the correct answer. Then write the answers to numbers 3, 4, and 5.

1. One of the main ideas in the text is that _____.
   - Ⓐ precipitation can be rain, snow, hail, or sleet
   - Ⓑ we drink the same water today that dinosaurs drank
   - Ⓒ condensation follows the evaporation stage
   - Ⓓ all stages of the water cycle are equally important

2. How is evaporation similar to condensation?
   - Ⓐ In both stages water changes its form.
   - Ⓑ Both stages involve rain and clouds.
   - Ⓒ They are more important than precipitation.
   - Ⓓ In both stages, the ocean plays an important role.

3. Why is the precipitation stage needed for the water cycle to work?

   _____

   _____

4. Explain how the diagram helped you understand the water cycle.

   _____

   _____

5. What do you think would happen if the water cycle stopped working?

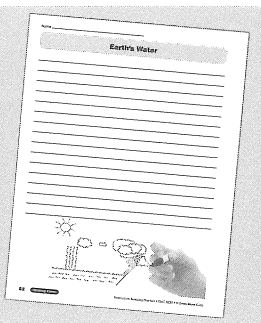
   _____

   _____

Write About the Topic

Use the Writing Form to write about what you read.

Write about the water cycle. Describe what it is and how it works. Use details from the text in your description.



Earth's Limited Fresh Water

Earth's water has refreshed itself for billions of years with the water cycle. Earth has a lot of water, but most of it isn't fresh water. Earth's supply of fresh water is limited.

The Water Cycle Refreshes Water

The three stages of the water cycle are evaporation, condensation, and precipitation. Evaporation occurs when water changes into vapor and rises into the atmosphere. Condensation happens when the vapor cools and changes into liquid water droplets. Precipitation occurs when the droplets fall to Earth's surface. All three stages happen continuously, and they can happen at the same time.

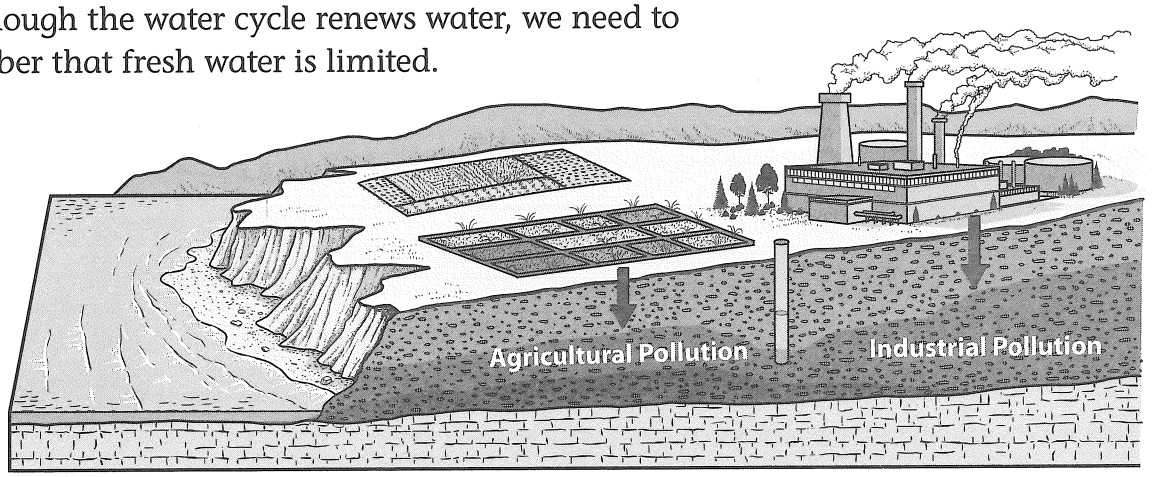
Earth's Usable Fresh Water

Earth's water can be found in many places, including underground and in the atmosphere. Although Earth has a lot of water, 96% of it is salt water. Most of the fresh water is in glaciers and polar ice caps, where it is difficult for people to access. Only a small percentage of Earth's fresh water is in rivers, lakes, and streams. The water cycle helps to keep water usable by refreshing it. But it also causes fresh water to evaporate, putting it into the atmosphere where humans and animals can't use it.

Threats to Earth's Supply of Fresh Water

Our use of fresh water is naturally limited. But pollution and overuse threaten the freshwater supply even more. Waste from agriculture and industry can soak into the ground and end up in wells and springs. Polluted water is dangerous to drink. It can also damage waterways, making it hard for water to travel. Even though the water cycle cleans water, pollution in the environment causes water to become polluted over and over again. Overuse also threatens water. People use water for drinking, cleaning, recreation, and other purposes. Sometimes people use water irresponsibly. Whole communities have been known to use so much water that their underground water sources run dry.

Humans, animals, and plants depend on fresh water. Even though the water cycle renews water, we need to remember that fresh water is limited.



Name _____

Earth's Limited Fresh Water

Fill in the circle by the correct answer. Then write the answers to numbers 3, 4, and 5.

1. Why is it important that more than 96% of Earth's water is salt water?
   - Ⓐ This fact shows how many marine animals depend on salt water.
   - Ⓑ It shows that humans, animals, and plants are able to use most of Earth's water for survival.
   - Ⓒ We do not have to be concerned at all about water pollution in salt water.
   - Ⓓ It means that we can't use most of Earth's water for survival.

2. What inference can be made about polluted water?
   - Ⓐ It smells bad but is probably safe to drink.
   - Ⓑ Drinking it could harm people and animals.
   - Ⓒ The water cycle is a solution for polluted water.
   - Ⓓ It is found only in wells and springs.

3. Would it be better if fresh water did not evaporate? Explain why or why not.

   _____

   _____

4. Write a main idea from the text and a detail that supports it.

   _____

   _____

5. Explain what water overuse is and why it's a problem.

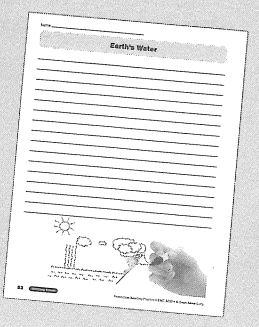
   _____

   _____

Write About the Topic

Use the Writing Form to write about what you read.

Explain the relationship between the water cycle and Earth's supply of fresh water. Use details from the text in your explanation.



Conserving Fresh Water

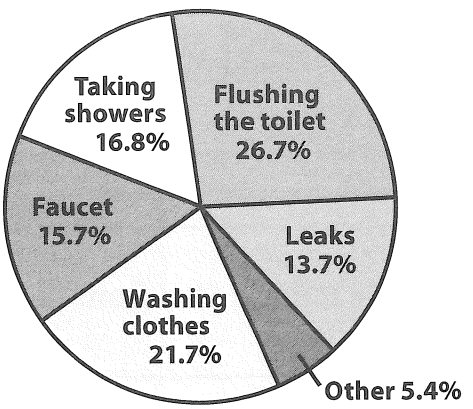
Although the water cycle has kept water usable for billions of years, the fresh water that we depend on is limited. It is essential that we consider ways to conserve Earth's fresh water.

The Water Cycle Keeps Water Usable

Earth's hydrosphere, which is all the water on Earth's surface and in Earth's atmosphere, is part of the water cycle. The three stages of the water cycle (evaporation, condensation, and precipitation) are continuously in action. Evaporation occurs when water vapor rises into the atmosphere. Condensation happens when the vapor changes into liquid. Precipitation occurs when liquid droplets fall to Earth's surface. The three stages repeat and are never-ending.

Earth's Supply of Fresh Water Is Limited

Earth's hydrosphere is huge, so it seems as though we should all have plenty of water. However, more than 96% of Earth's water is the salt water in the oceans. Humans require fresh water to survive. Only a small percentage of Earth's fresh water can be found in rivers, lakes, and streams. Most of it is in glaciers and polar ice caps, areas that are difficult for humans to access. Another limitation on fresh water is overuse. People use water for many purposes other than drinking. Sometimes people use water irresponsibly. Water pollution also limits the supply of fresh water. Chemicals from factories and farms soak into groundwater. Polluted water is dangerous to use and can damage waterways, decreasing the amount of water that moves through the cycle. Even though the water cycle cleans water, pollution in our surroundings causes water to become polluted over and over again.



This pie chart shows the daily percentage of water that is typically used in American homes.

Water Conservation Is Needed

Earth's human population is increasing, and animals and plants require fresh water, too. We must keep water clean and usable by preventing pollution and protecting Earth's waterways and oceans. And we must find ways to decrease water usage and water waste. Turning off the faucet while brushing your teeth (rather than leaving it running) and using water-saving appliances are just two ideas. We can have usable water for many years to come. If everyone works together to keep our water clean and not overuse it, the water cycle will do the rest.