

Science

Science

Earth Science

Water

by Kim Fields

Genre	Comprehension Skill	Text Features	Science Content
Nonfiction	Cause and Effect	<ul style="list-style-type: none">• Captions• Diagram• Call Outs• Glossary	Water

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Vocabulary

condensation

evaporation

groundwater

precipitation

water cycle

water vapor

wetlands



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Why is water important?

Living Things and Water

Living things need water. Trees and snails need water to grow. Green plants must have water to make food. Fish need the oxygen in water.

Your body needs water. Water makes up about two-thirds of your body. Water helps you in many ways. Water helps digest food. It carries things to and from parts of your body.



Your body uses water to change its temperature. When it's cold, water keeps you warm. When you are hot, you might sweat. Sweat is a kind of water. It carries heat away from you.

Some animals live only in water. You can see many of these animals with your own eyes. Others are tiny. You can't see those animals without help.





The Uses of Water

We use water for many things. People get food from oceans, rivers, and lakes. Farmers use water for their crops. This water comes from the sky or moves through pipes.

People need to drink water. Animals need to drink water too. Water is also used to clean food and buildings.



These crops need water to grow.



We use water to make electricity. Running water turns wheels. These wheels make power we can use. The power travels through wires to our homes.

We use water to travel. Ships carry goods we use across water. We even play in and around the water.



Water is used in many factories.

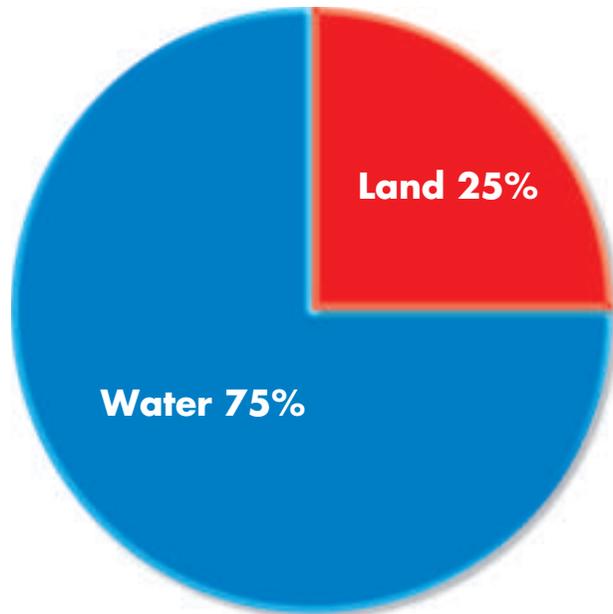




The Planet of Water

Earth is called the “blue planet.” Three-fourths of its surface is covered with water.

Most of Earth’s water is salty. Salt water makes up Earth’s oceans. Some of the salt comes from rocks. Some salt also washes off the land. This salt mixes with the water.



Why is Earth called the “blue planet”?



Salt in ocean water affects our ability to use it. You can’t water plants with ocean water. You can’t drink it either. Factories can’t use ocean water to make things.

Water is found in many places. Some water is in the ground. Some is frozen. A small amount of water in the air is called water vapor. **Water vapor** is an invisible gas. It rises from surface water and mixes with air.





Fresh Water

We need to drink fresh water. Fresh water contains little salt. We could not live without it. A small part of Earth's water is fresh. Most fresh water is frozen.

We get some fresh water from underground. Water goes down into the soil. Water that collects in between rocks is called **groundwater**. People dig wells to get this water.



Many streams and rivers have fresh water. This water is always moving. Streams form rivers. Both streams and rivers can flow into lakes. **Wetlands** form when water gathers on low land. The water stays there for part of the year.

Wetlands are home to many animals. They also soak up extra water. This helps to stop flooding. The water in wetlands goes down into the soil. Then it becomes groundwater.



Most fresh water is frozen in ice near the North and South Poles.



This stream might flow into a river or a lake.



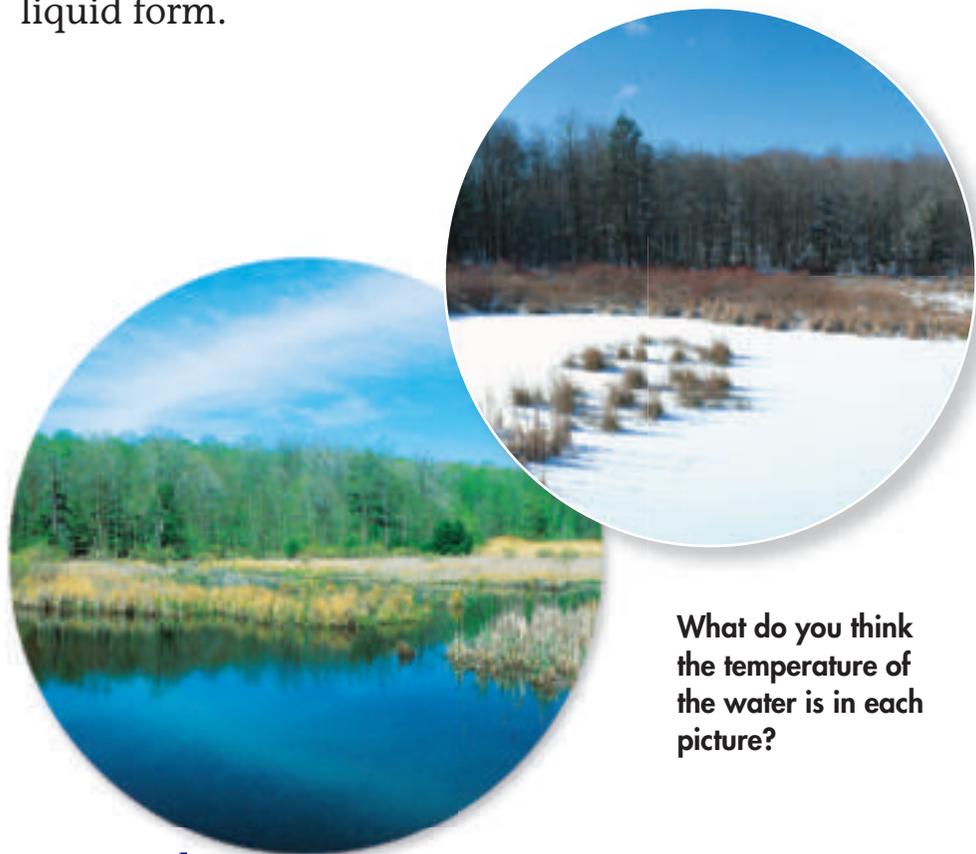


How do forms of water change?

Forms Water Can Have

Water can freeze during cold weather. In some places, it stays below 0 degrees Celsius all year. This means it stays below freezing all year.

The weather is cold for only part of the year in other places. There, cold weather in the winter freezes the water. Later, warm weather turns the water back into liquid form.



What do you think the temperature of the water is in each picture?



Dew forms on many plants at night.



Water can become a gas. **Evaporation** is what happens when water turns into a gas. Energy from the Sun heats water. It becomes water vapor. You cannot see water vapor. On hot days you can sometimes feel sweat on your skin. Sweat evaporates unless there is too much water vapor in the air.

Water vapor can turn back into a liquid. **Condensation** is what happens when water vapor turns back into liquid water. During the night, air cools. Water vapor turns into drops of water. These drops of water are dew.





How Does Water Move Around Earth?

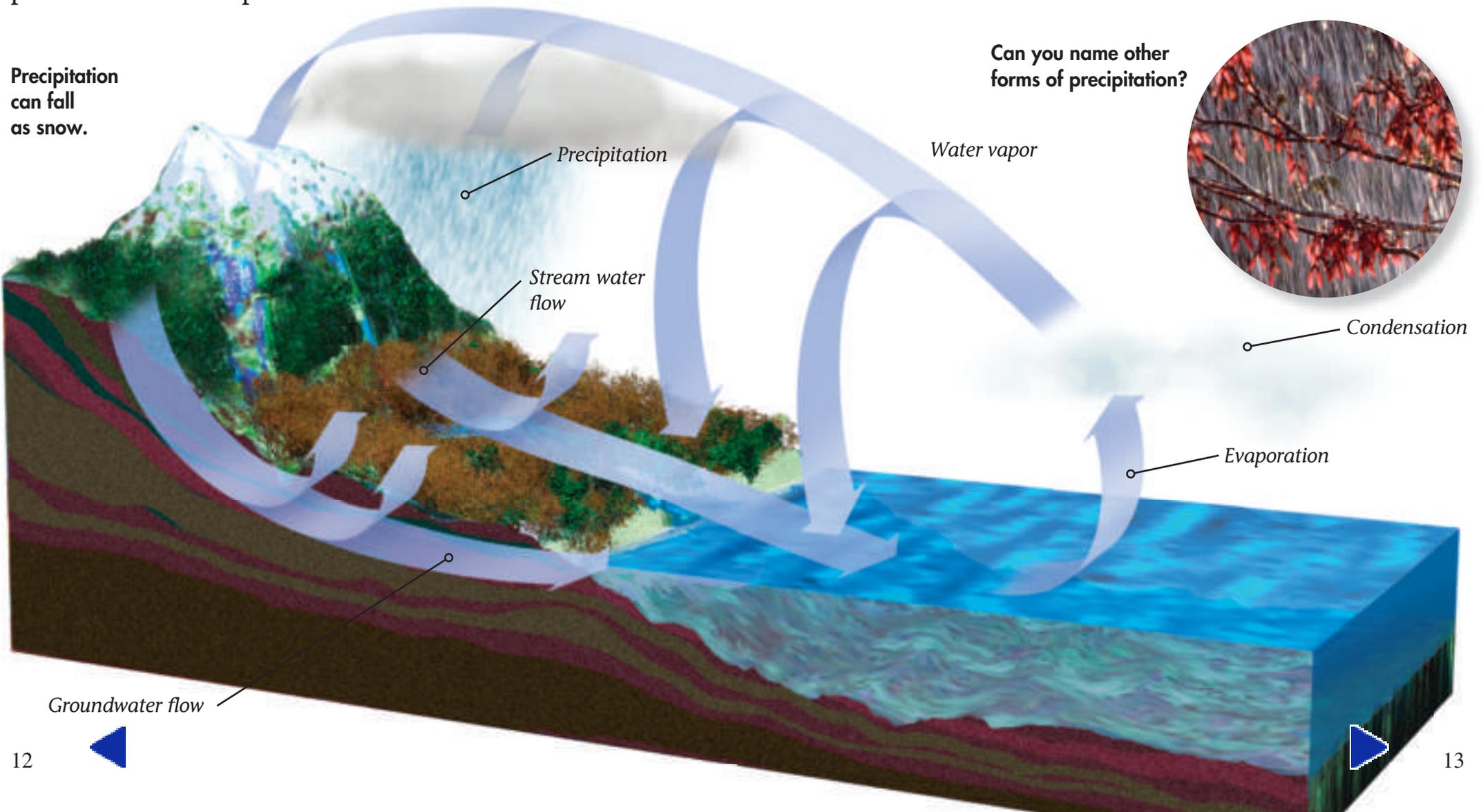
Water on Earth is used over and over. Water moves from Earth's surface into the air. Then it returns to Earth again. This is called the **water cycle**. This cycle gives us fresh water.

Water vapor rises into the air. The cooler air causes it to condense and turn into water droplets or ice particles. These droplets collect and form clouds.



When water particles in clouds grow, they fall faster. Water falling to Earth is called **precipitation**. Water falls to Earth as rain, snow, sleet, or hail depending on the temperature.

Some precipitation goes into the ground and becomes groundwater. Some runs into oceans, lakes, rivers, and streams. Surface water later evaporates. The water cycle continues all the time.





Ways to Clean Water

People need clean water. Water may have germs. It may have salt, dirt, or other things in it. All of this is taken out of the water we use.

Germs in water can make people feel sick. We want to drink water that tastes good. Salt or dirt in water can break machines too.

 This water-cleaning plant is in Chicago, Illinois. It is one of the largest in the world.



How does water get cleaned? First, it goes to a water-cleaning plant. Chemicals are sometimes added to kill germs. Sometimes the water sits in big tanks. This lets dirt sink to the bottom. Finally, water is pumped through a filter. Now, the water is clean and can be used!

Water is everywhere. People and animals need water to live. We use water for many things. Without water, there wouldn't be life on Earth!



Glossary

condensation	the process of water vapor turning into a liquid
evaporation	the process of water turning into a gas
groundwater	fresh water that is underground
precipitation	water that falls to Earth
water cycle	the movement of water from Earth's surface into the air and back again
water vapor	water in the air in the form of a gas that cannot be seen
wetlands	places with wet or water-covered ground at least part of the year

What did you learn?

1. Where can fresh water be found on Earth?
2. Name the different forms of precipitation.
3. How much of Earth's surface is covered by water?
4. **Writing in Science** In this book you have read about how water is cleaned. Write to explain how water is made safe for drinking. Use details from the book in your answer.
5.  **Cause and Effect** What causes condensation to happen at night?

