



Science

Genre

Nonfiction Articles explain information about real people, living things, places, situations, or events.



Text Feature

A **Process Diagram** is a drawing that shows how something changes over time.

Content Vocabulary

evaporates
precipitation
nomads

MORE THAN SAND

by *Haritha Gupta*

Cold deserts? Deserts on mountains? Read on to find out some cool facts about deserts.

You probably know some basic facts about deserts. For example, most people know that deserts are dry places where more water **evaporates** each year than falls as **precipitation**, or rain. You might also know that **nomads** move frequently from place to place and often call deserts home. However, there are many facts about deserts that you may *not* know. Take the quiz below to help you find out more about these remarkable regions.

True or False?

No rain falls in the desert.

FALSE Most deserts have less than 10 inches of rain each year. However, in some South American deserts, it is true that rain almost never falls. In one desert in Chile, no rain has fallen for 45 years in a row! In other deserts, such as those in Madagascar, an island nation off the coast of southeastern Africa, about 24 inches of rain falls each year. All of this rain falls within a single month!

purple flowers in desert in Chile

True or False?

All deserts are hot.

FALSE Temperatures in deserts can reach above 100°F during the day, but can fall below freezing at night. Some scientists also consider any place that has almost no plants a desert. Regions that are too cold for anything to grow are called “frigid deserts.” Examples are the ice deserts of Antarctica and Greenland. Other deserts are cold for long periods. The Gobi in Asia has freezing temperatures for as long as six months at a time.

Still other deserts are the hottest places on Earth. The hottest temperature ever recorded was 136.4°F in a desert in Libya, in northern Africa.

frozen desert region in Greenland

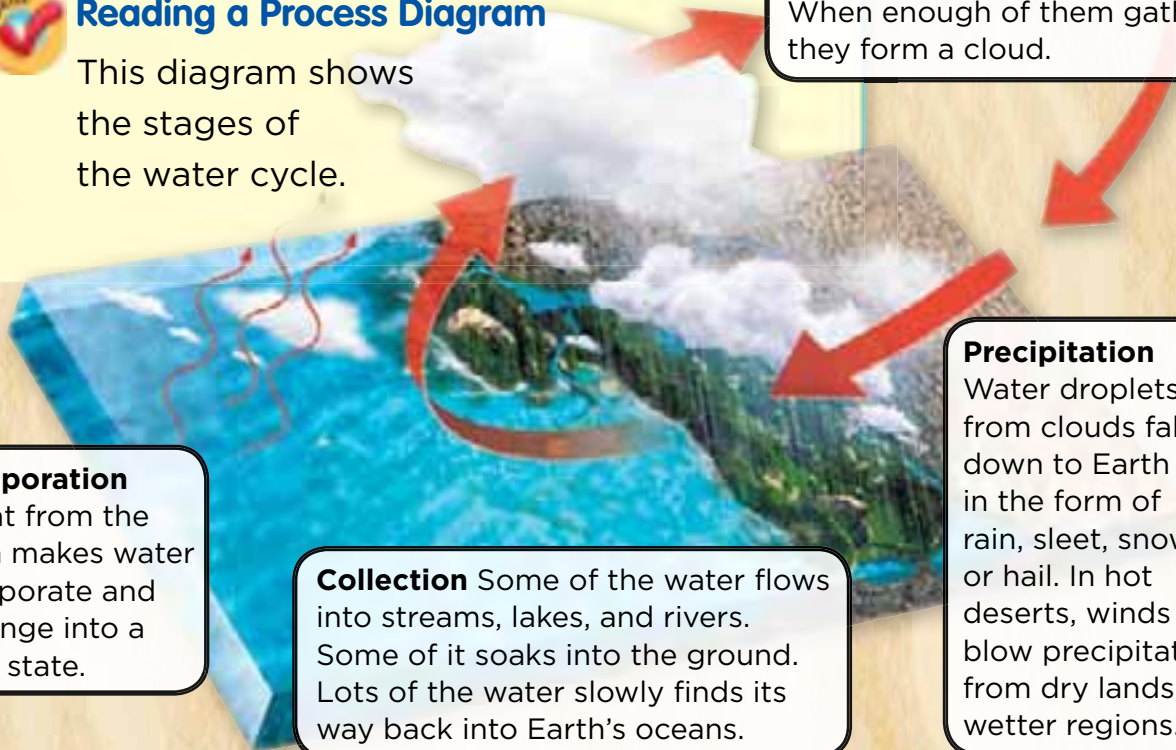


Water Cycle



Reading a Process Diagram

This diagram shows the stages of the water cycle.



Evaporation

Heat from the Sun makes water evaporate and change into a gas state.

Collection Some of the water flows into streams, lakes, and rivers. Some of it soaks into the ground. Lots of the water slowly finds its way back into Earth's oceans.

Condensation As moist air rises, it cools. Water vapor condenses into tiny water droplets or changes from vapor into tiny ice crystals. When enough of them gather, they form a cloud.

Precipitation

Water droplets from clouds fall down to Earth in the form of rain, sleet, snow, or hail. In hot deserts, winds blow precipitation from dry lands to wetter regions.

True or False?

Deserts are flat and sandy.

FALSE Although deserts can be low and flat, some have rocky hills and even mountains. Some also have lakes and plains covered with gravel. Sand makes up only about 2 percent of North American deserts, 10 percent of the Sahara in northern Africa, and 30 percent of the Arabian Desert.

mountains in a South American desert



True or False?

There is no life in the desert.

FALSE To survive in a dry desert environment, plants and animals, including humans, must make some adaptations. Desert plants cannot grow too close together because each plant would not get enough water. In fact, many desert plants do not grow at all during dry periods. However, after a rainfall, they quickly sprout, flower, and die. Some desert plants get their water from deep underground. The mesquite tree has roots that can reach as deep as 263 feet. Other plants store water in their leaves, roots, or stems.

Like plants, most desert animals are inactive during dry periods. Other animals stay in burrows underground or rest in the shade during the heat of the day. They come out to eat at night after the temperature has dropped.

When rain does come, every living thing in the desert seems to celebrate. Colorful flowers cover the desert floor, and animals leave their hiding places to drink and eat.



Namib desert in Africa

True or False?

There are many deserts in the world.

TRUE Deserts cover about one fifth of Earth's land area. The largest desert in the world is the Sahara. The Sahara stretches from the Atlantic Ocean eastward to the Red Sea, spreading across parts of Morocco, Algeria, Tunisia, Libya, Sudan, Chad, Niger, Mali, and Mauritania. It covers an area about the size of the United States.

Sahara desert



Connect and Compare



1. Look at the water cycle diagram on page 351. What role does water vapor play in the water cycle? **Reading a Process Diagram**
2. Compare and contrast the different types of deserts discussed in this article. Put this information in a Venn diagram. **Apply**
3. Think about “More Than Sand” and *My Great-Grandmother's Gourd*. Describe ways that people adapt to living in desert regions. **Reading/Writing Across Texts**



Science Activity

Research the life cycle of a desert animal or plant. Using this information, create a process diagram like the one on page 351.



Find out more about deserts at www.macmillanmh.com

Write a Dialogue

Writer's Craft

Dialogue

Well-chosen **dialogue** makes characters sound natural and believable. It can also help further the plot. Quotation marks and punctuation in dialogue make the characters' words stand out from the rest of the text.

I wanted the dialogue between a cat and a dog to sound natural.

I used quotation marks correctly.

The Great Debate

by Louis G.

"Of course cats are superior to dogs. We can climb trees," said the orange cat.

"Ridiculous! Dogs are stronger," growled the bulldog.

"Strength isn't everything, you know," said the cat.

"We're so much more independent than you dogs. We don't need to be walked. We don't need to be bathed. As a matter of fact, most of us hardly need any attention at all from humans."

"Boring. Boring. Boring," said the dog. "You cats tip-toe around so quietly, your owners hardly even know you're there."

"Well all you dogs do all day is bark. We cats know how to catch mice. That's a useful talent," sniffed the orange cat.

The bulldog snorted. "Ha! We keep our humans safe from burglars. That's more important than catching a pathetic little mouse!"

"You can have your opinion. However, one of those pathetic little mice is stealing food from your bowl," said the orange cat, yawning.

The bulldog turned and barked, "Hey, come back here you thieving mouse!"

Your Turn

Write a dialogue between two characters. Include quotation marks, commas, and correct punctuation in the dialogue. Then read your dialogue aloud to see if the characters sound natural. Use the writer's checklist to check your writing.



Writer's Checklist

- Ideas and Content:** Does my dialogue show what my characters think?
- Organization:** Does the sequence of sentences make sense?
- Voice:** Do my words express each character's feelings and thoughts?
- Word Choice:** Did I choose words for the **dialogue** that reveal each character's personality?
- Sentence Fluency:** Do the sentences match the way the characters would speak?
- Conventions:** Did I use quotation marks correctly in dialogue? Did I check my spelling?