



# Biomes

For Grades 3-5

*This Pack contains:*

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4 ARTICLES

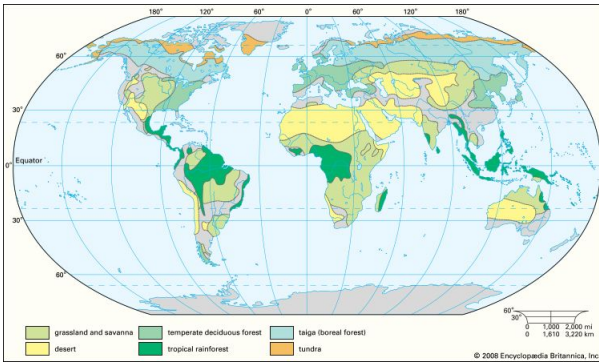
1 IMAGE

3 VIDEOS

ARTICLE

# biome

A biome is a large region of Earth that has a certain climate and certain types of living things. Major biomes include tundra, forests, grasslands, and deserts.



There are several major biomes on Earth. A biome is a large region with a certain climate and certain types of living things.

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The plants and animals of each biome have traits that help them to survive in their particular biome. Plants and animals that live within smaller areas of a biome also depend on each other for survival. These smaller areas are called ecosystems. Each biome has many ecosystems.

## Tundra



Wildflowers bloom on the tundra in the Arctic National Wildlife Refuge in the state of Alaska.

*U.S. Fish and Wildlife Service*

The tundra biome is found in extreme northern regions. This biome has cold, dry conditions. The main plants include mosses, lichens, and short grasses. Arctic foxes, reindeer, and migrating birds are some common tundra animals.

## Forests

Trees are the main plants in forest biomes. There are several different types of forest biome.

The taiga is a conifer forest biome. It lies just south of the tundra biome. The taiga has long, cold winters and short, mild summers. It gets more rain than the tundra does, so it can support conifers. Conifers are trees with needles, such as spruces and firs. Lynx, gray wolves, moose, and beavers live in this biome.



Forests of coniferous trees are found in areas with long winters.

© Dmitri Naumov/Fotolia

Deciduous forests are found mainly in the Northern Hemisphere. This biome has cold winters and warm summers. The trees are deciduous, meaning that they shed their leaves in the fall. Deer, bears, bobcats, and squirrels are common to this biome.



The Amazon River basin has the largest area of rainforest in the world.

© Filipe Frazao/Shutterstock.com

Tropical rainforests lie near the Equator. This biome has hot, wet conditions all year long. Tall, tropical trees and many other plants grow there. Monkeys, parrots, and anaconda snakes are some of the many rainforest animals.

## Grasslands



A boy on horseback rides through the steppes of Mongolia. The climate in these temperate grasslands of central Asia is less extreme than the climate of tropical grasslands, or savannas.

*InvictaHOG*

Grassland biomes are places that get enough rain for grasses to grow but not enough to support forests. Temperate grasslands have hot summers and cold winters. Tropical grasslands, also known as savannas, are hot all year long. Prairie dogs and mule deer live in the temperate grasslands of North America. Giraffes, zebras, and lions live in the tropical grasslands of Africa.

## Deserts



The Sahara is the largest hot desert on Earth.

*© Dmitry Pichugin/stock.adobe.com*

Deserts are the driest biome. They can be hot or cold. The continent of Antarctica is a desert. The largest hot desert, the Sahara, is in northern Africa. Deserts receive less than 10 inches (25 centimeters) of rain each year. Cacti and creosote bushes are two types of plant that can survive the dry conditions. Rattlesnakes, lizards, roadrunners, and owls are some of the animals of this biome.

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ARTICLE

# desert

When people think of a desert, they usually think of a sandy, hot, and dry place. But there are other types of deserts as well. A desert is any large region that gets very little rain each year. Very few plants or animals live in desert areas.



Most deserts get less than 10 inches (25 centimeters) of rain in a year.

*Lynn Abercrombie*



Watch how animals find food in the desert.

*Encyclopædia Britannica, Inc.*



The plants and animals of the desert have developed ways of dealing with the harsh environment.

*Encyclopædia Britannica, Inc.*

## Features

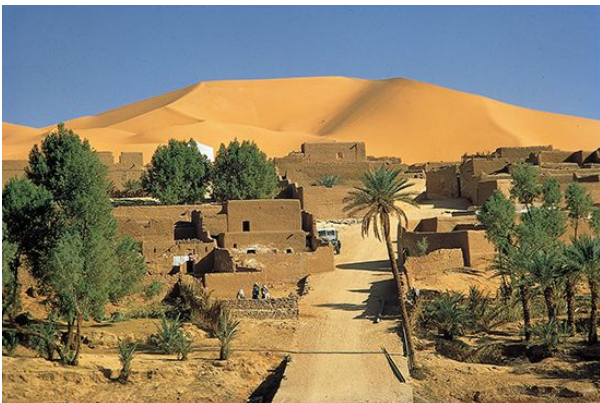
Deserts cover about 20 percent of Earth's land surface. All the continents have them. Deserts differ greatly in their land features. They may include dunes of shifting sand, mountains, bare rock, and plains of gravel and boulders. Sand dunes are not as common in deserts as many people think. For example, they make up only about 10 percent of the Sahara of northern Africa. Some deserts are not sandy at all.

## Types of Deserts



The Gobi in Inner Mongolia is a cold desert.

*Junming*



The Kerzaz oasis is part of the western Sahara in Algeria.

*Victor Englebert*

Deserts may be hot or cold. In hot deserts daytime temperatures are often above 100 ° F (38 ° C) in summer. The temperature drops sharply at night. The Sahara is the world's largest hot desert. Other hot deserts include the Kalahari in southern Africa and those in the southwestern United States. Most hot deserts are in the region known as the tropics. This is a band of Earth on either side of the Equator.

Cold deserts are farther from the equator than hot deserts. Though they are very dry, the main reason they have few plants is that it is so cold there. A cold desert covers much of Antarctica. The Gobi in central Asia is another cold desert.

## Life in a Desert



Sand dunes in the Namib Desert, in Africa, can reach a height of 1,000 feet (300 meters).

© Jeremy Woodhouse/Getty Images

Desert plants and animals have features that help them survive in the dry climate. Some plants have special roots that help them absorb the small amount of water that is available. Cacti and yuccas are common desert plants. Desert animals include camels, gazelles, snakes, lizards, and small rodents.

Few people live in deserts. Groups who do include the Tuareg of the Sahara, the San of the Kalahari, the Bedouins of the Middle East and North Africa, and the Aboriginal peoples of Australia. Many desert dwellers live in oases. An oasis is a place in the desert with a supply of fresh water.

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"Desert." *Britannica LaunchPacks: Biomes*, Encyclopædia Britannica, 23 Mar. 2025. packs.eb.com. Accessed 3 May. 2025.

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ARTICLE

# grassland

Grasses grow in wide, open spaces around the world. Large areas covered with grasses are called grasslands. Tropical grasslands grow close to the Equator. Temperate grasslands grow in regions farther from the Equator.



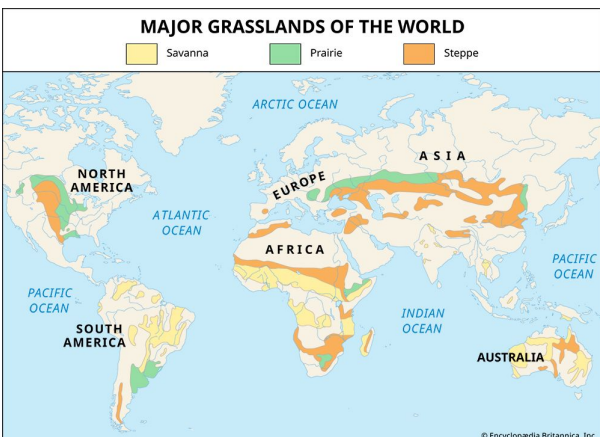
The grasslands in central North America are called prairies.

© Jim Parkin/Fotolia



Grasslands can be found all over the world.

Encyclopædia Britannica, Inc.



There are three different kinds of major grasslands: savanna, prairie, and steppe. They can be found all over the world.

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## Features

Many different kinds of grasses grow on the world's grasslands. Grasslands may have no trees or only a scattered few. Usually the land is flat. Sometimes it has rolling hills. Dust storms, tornadoes, and wildfires sometimes rage across grasslands.

Grasslands are good for grazing livestock. Grasslands also have good soil for farming. Wheat, oats, corn, and other crops have replaced many wild grasses.

## Types of Grasslands



The sun sets on a savanna in the African country of Kenya.

© Digital Vision/Getty Images

Tropical grasslands are often called savannas. Africa, India, Southeast Asia, Brazil, and Australia all have areas of tropical grassland. The climate of savannas is extreme. Temperatures are high, and there are wet and dry seasons. During the dry season savannas get little rain.



A boy on horseback rides through the steppes of Mongolia. The climate in these temperate grasslands of central Asia is less extreme than the climate of tropical grasslands, or savannas.

*InvictaHOG*

The climate in temperate grasslands is less extreme. The prairies of North America are temperate grasslands. So are the pampas of Argentina, the veld of southern Africa, and the steppes of central Asia. The huge rangelands in Australia's southeastern corner are also temperate grasslands.

## Life in the Grasslands

The large animals that live in tropical grasslands include zebras, gazelles, lions, and kangaroos. Horses, antelope, hawks, and prairie dogs are a few of the animals that live in temperate grasslands.

In the past wandering peoples lived on many of the world's grasslands. For example, the Mongols lived on the steppes of central Asia. The Plains Indians lived on the prairies of North America.

## Changing Grasslands

In the 1800s farmers moved onto the grasslands of southern Africa, Australia, South America, and North America. They began changing the grasslands into farmland. In North America the prairies once extended down the middle of the continent, from Canada to Texas. Now most of this land is farmland. The Australian grasslands and the South American pampas have also become mostly farming and grazing lands. Grasslands have also disappeared as cities and towns have expanded.

But much grassland still exists. The veld still carpets large parts of southern Africa. Steppes extend 5,000 miles (8,000 kilometers) from eastern Europe to eastern China. They are mostly unspoiled wilderness, and few people live there.

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ARTICLE

## tundra

The tundra is a large, barren region with no trees. In fact, the word *tundra* comes from the Finnish word *tunturia*, which means "treeless plain." Areas of tundra lie between the permanent ice of the far north and the northern forests of North America, Europe, and Asia. They cover about 20 percent of Earth's surface. They are some of the coldest places on Earth.



Reindeer graze on the Arctic tundra of Canada's Northwest Territories.

© Grambo Photography—All Canada Photos/age fotostock

## Features

Tundra may be flat, hilly, or mountainous. Little plant life grows on the bare or rocky ground. Tundra in coastal areas tends to be foggy. Snow covers the tundra for more than six months of the year.

## Types of Tundra

Arctic tundra lies in northern Europe, Russia, Alaska, Canada, and Greenland. In those areas the winter temperature may be as low as  $-25^{\circ}\text{F}$  ( $-32^{\circ}\text{C}$ ). The summer temperature may rise to only  $40^{\circ}\text{F}$  ( $4^{\circ}\text{C}$ ). Because of these cold temperatures, the Arctic tundra has a permanent layer of frozen soil, called permafrost. Some permafrost reaches as deep as 1,500 feet (457 meters).

Alpine tundra lies farther south than Arctic tundra. Alpine tundra is found in high mountains above the tree line. (The tree line is the highest place where trees can grow.) They have short, cool summers and less extreme winters than Arctic tundra. Alpine tundra does not have a layer of permafrost.

## Life in the Tundra

Only low-growing plants, such as mosses and shrubs, can survive in the tundra. Plantlike living things called lichens also grow there.

Tundra animals must be able to survive long, cold winters. Many birds live there in the summer, but few stay through the winter. Some common tundra animals are reindeer, Arctic foxes, snowy owls, musk oxen, and polar bears.

Very few people live in the tundra. Arctic peoples, including the Inuit, tend to live in places where hunting and fishing can provide enough food year-round.

## Resources

The ground in many areas of tundra contains coal, oil, iron ore, lead, or other resources. Many companies have set up mining operations in tundra regions. However, some people worry that mining and oil drilling endangers tundra plants and animals.

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 IMAGE

## Sequoia National Park



Giant sequoia trees towering over a hiking trail that winds through the Giant Forest in Sequoia National Park, California.

© Elena Pueyo—Moment/Getty Images

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*Citation (MLA style):*

*Sequoia National Park*. Image. *Britannica LaunchPacks: Biomes*, Encyclopædia Britannica, 23 Mar. 2025. packs.eb.com. Accessed 3 May. 2025.

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 VIDEO

## rainforest



## Video Transcript

Tropical rainforests teem with rich and diverse life. Scientists estimate that more than half of the known plant and animal species live in tropical rainforests. More remarkably, the scientists believe that there are many other species within a rainforest that have yet to be discovered.

Tropical rainforests are home to many of the world's animals.

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*Rainforest.* Video. *Britannica LaunchPacks: Biomes*, Encyclopædia Britannica, 23 Mar. 2025. packs.eb.com. Accessed 3 May. 2025.

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# taiga



## Video Transcript

The taiga (or boreal forest) is a region of cold weather and conifer trees growing on wet, spongy land. It is found in northern Europe, Asia, and North America, just south of the frosty, treeless tundra. Many animals thrive in the taiga. Caribou (or reindeer), brown bears, lynx, beavers, moose, wolves, and snowshoe hares are just some of the mammals that make the taiga their home.

Many animals live in the taiga.

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*Taiga.* Video. *Britannica LaunchPacks: Biomes*, Encyclopædia Britannica, 23 Mar. 2025. packs.eb.com. Accessed 3 May. 2025.

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# desert



## Video Transcript

NARRATOR: What makes a region a desert? The answer is how dry it is and how many plants grow there. Deserts are very dry. But just because they are dry does not mean they are hot. The Gobi is a large area in Central Asia. It gets very little rain and can be very hot in the summer. But in winter it is very cold. A cold desert also covers part of Antarctica in a region where snow seldom falls.

Hot or cold, all deserts are dry.

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