

Lesson 2: **Terrestrial Ecosystems**

1



A terrestrial ecosystem is a land ecosystem.

Terrestrial ecosystems include tundra, forests, grasslands, deserts, and rainforests.

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**The arctic tundra is earth's coldest biome.
Temperatures in the tundra can be as low as -50° C.
Much of the soil in the tundra remains frozen year
round. This layer of permanently frozen ground is
called permafrost.**



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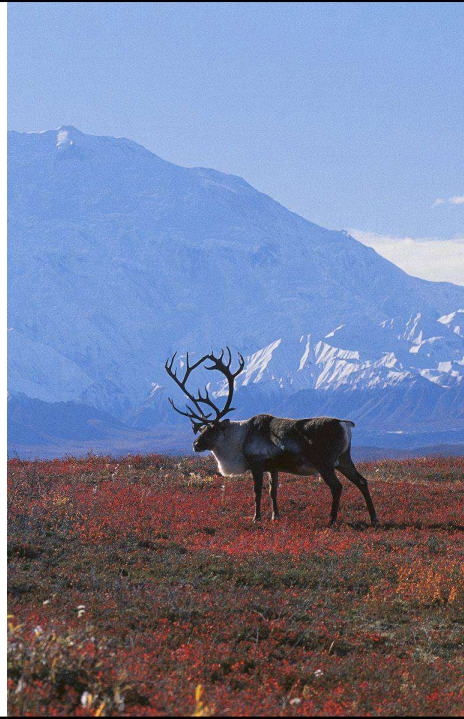
**The arctic tundra is located in the
northernmost parts of Canada, Alaska,
Europe, and Asia.**



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During warm weather, a thin layer of topsoil will thaw, allowing small shrubs and plants to grow.

There are very few trees and larger plants because their roots cannot grow deep enough into the permafrost.



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Animals that live in the arctic tundra include polar bears, snowy owls, wolves, arctic foxes, and migratory birds.

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Discovery Education Video:

**[The Arctic Tundra:
Earth's Coldest Biome](#)**

The climate, plants, and animals of the arctic tundra; as well as their characteristics, are presented.

7

The coniferous forest biome is made up of forests of cone bearing trees with needles such as spruce, hemlock, and fir.

These are also called evergreen trees – trees that do not lose their leaves in the winter.



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The coniferous forest is located across much of Canada, Alaska, Northern Europe, and Asia.



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The coniferous forest receives 30-85 cm of precipitation each year.

Because trees in this biome do not lose leaves in the winter to provide compost for the forest floor, the soil is not very fertile.



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Animals that live in the coniferous forest include moose, elk, rabbits, and owls.

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Discovery Education Video:

[The Coniferous Forest Biome](#)

The climate, plants, and animals of the coniferous forest biome are presented.

12

The deciduous forest biome is made up of forests of deciduous trees such as oak, maple, elm, and hickory.

These are trees which lose their leaves in the winter, giving this biome four distinct seasons.



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The deciduous forest is located across much of Europe, the eastern United States, and small portions of Asia.



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The deciduous forest receives 75-150 cm of precipitation each year.

Decomposing leaves from the trees make the soil in this biome very fertile.



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Animals that live in the deciduous forest include deer, bears, squirrels, and chipmunks.

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Discovery Education Video:

[The Deciduous Forest Biome](#)

The climate, plants, and animals of the deciduous forest biome are presented.

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The desert biome is the world's driest biome, receiving less than 25 cm of rainfall each year.

Because of these dry conditions, deserts can support very little life compared to other biomes.



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Deserts are located on every continent except Europe.



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While many deserts are hot and dry, there are also cold, dry deserts.

Deserts are characterized by their lack of precipitation; not their temperature.



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Animals that live in the desert include snakes, lizards, and camels.

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Discovery Education Video:
[The Desert Biome](#)

The climate, plants, and animals of the desert biome are presented.

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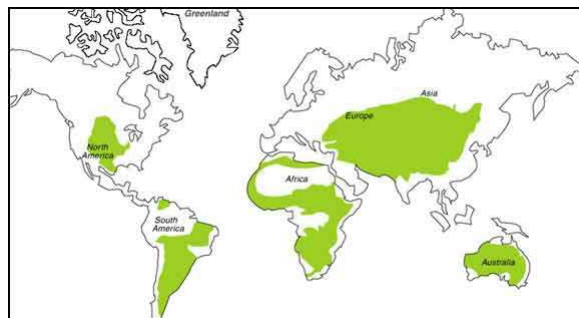
The grassland biome is made up large open areas covered with grasses and shrubs.

Because water in the grassland is often limited, there are few large trees in this biome.



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About one-fourth of all the land on Earth is grassland.



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Most grasslands receive 25-75 cm of precipitation each year.

Savannahs are hot tropical grasslands found mostly in Africa.

Temperate grasslands, or prairies, are found in North America and other parts of the world.

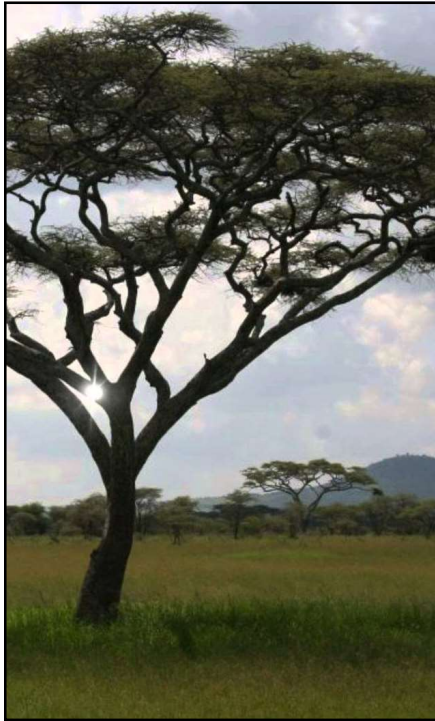


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Animals that live in the grassland include zebras, giraffes, bison, and prairie dogs.

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Discovery Education Video:
[The Grasslands Biome](#)

The climate, plants, and animals of the grasslands biome are presented.

27

The rainforest is a biome that receives a large amount of rainfall. Rainforests are filled with tall trees and large plants.

The rainforest is home to about half of Earth's plant and animal species.



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Rainforests can receive up to 400 cm of rainfall each year.

There are two types of rainforests – tropical and temperate. Tropical rainforests are located near the equator



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Tropical rainforests are located in Central and South America, Africa, and Asia. Temperate rainforests are located on the Pacific coast of the United States.



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Animals that live in the rainforest include snakes, lizards, frogs, birds, and chimpanzees.

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Discovery Education Video:

[The Rainforest Biome: Tropical and Temperate Environments](#)

The climate, plants, and animals of the rainforest biome are presented.

32

Terrestrial Ecosystems: Key Questions

- 1. What is a terrestrial ecosystem?**
- 2. Compare and contrast the different types of terrestrial biomes.**
- 3. Give examples of the variety of ecosystems that can exist within a single biome.**