



## **Lesson 2:**

# **Terrestrial Ecosystems**



**A terrestrial ecosystem is a land ecosystem.**

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

**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.**



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



**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.**



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



**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.

**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.**





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



**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.**





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



**Discovery Education Video:**

**[The Coniferous Forest Biome](#)**

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

**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.**



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





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

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



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





**Discovery Education Video:**

**The Deciduous Forest Biome**

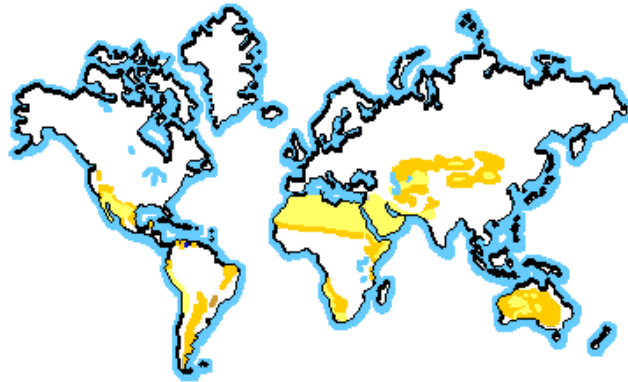
The climate, plants, and animals of the deciduous forest biome are presented.

**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.**



**Deserts are located on every continent except Europe.**



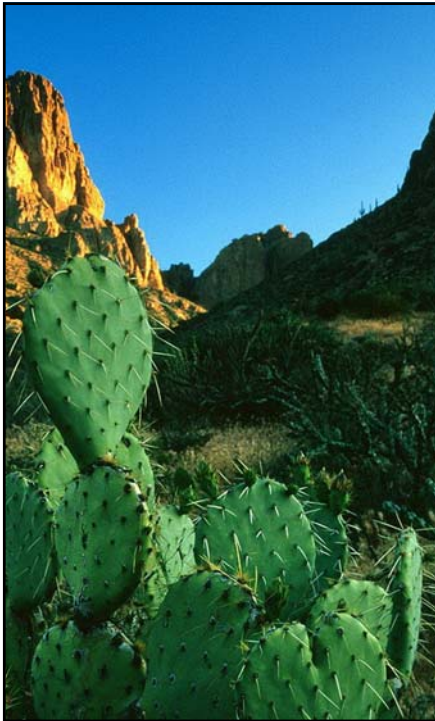
**While many deserts are hot and dry, there are also cold, dry deserts.**

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





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



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

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

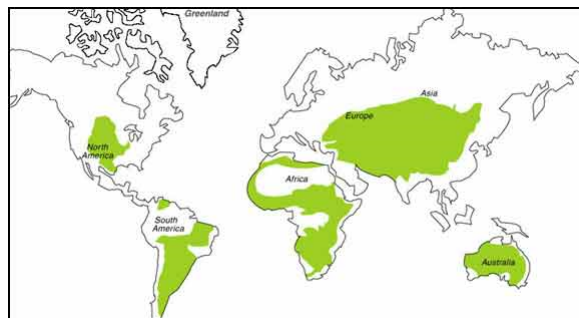


**The grassland biome is made up large open areas covered with grasses and shrubs.**

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



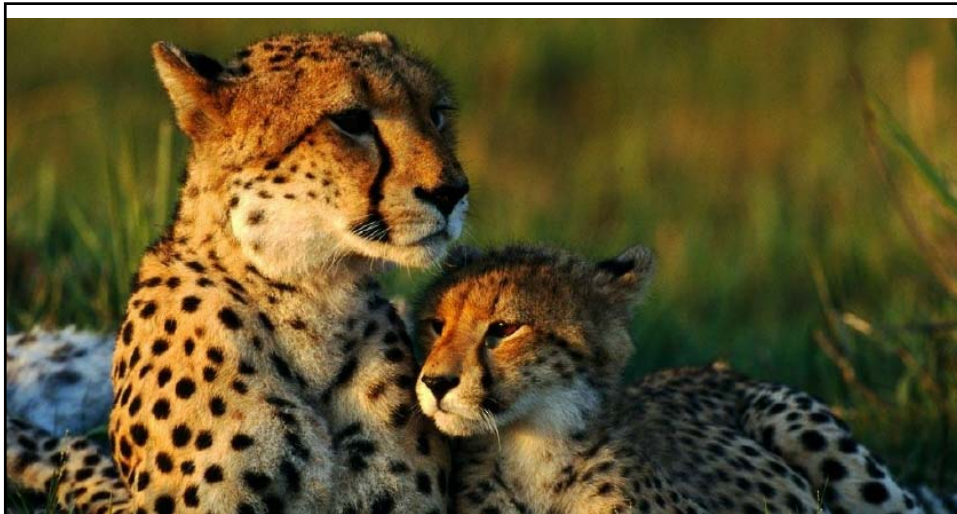
**About one-fourth of all the land on Earth is grassland.**



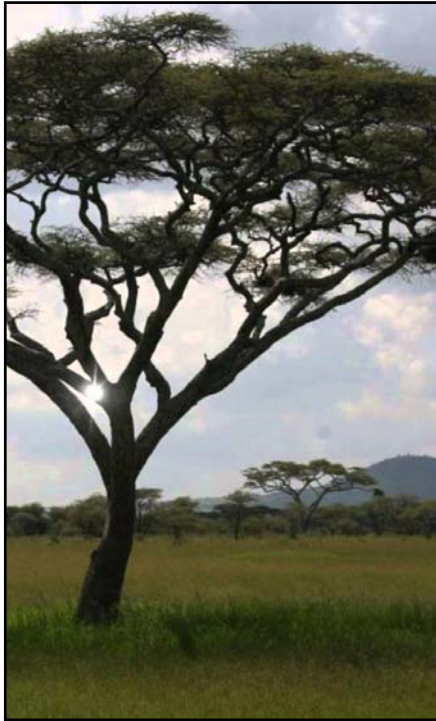
**Most grasslands receive 25-75 cm of precipitation each year.**

**Savannahs are hot tropical grasslands found mostly in Africa.**

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



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



**Discovery Education Video:**

**[The Grasslands Biome](#)**

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

**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.**





**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**



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





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



**Discovery Education Video:**

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

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

## **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.**