

Totally Tundra

Tundra is a huge biome located at the top of the world around the North Pole. It covers nearly 1/5 of the Earth's surface. Tundra soil is characterized by **permafrost**. Permafrost is a permanently frozen layer of ground. This usually extends a meter below the surface. The plants and microorganisms that live in the tundra are **dormant** during the winter. During the short summer, the very top section of soil thaws out enough for them to grow and reproduce.

Organisms that can survive in the tundra are adapted to handle extremely cold weather! The temperature gets as cold as **-60°F** and is only an average of **32°F** during the warmest month. For most of the year, water is not available and annual **precipitation** is usually less than 10 inches per year.

There are not any large plants in the tundra. Most of what grows is close to the ground. In cases where soil builds up in cracks of rocks, shrubs may grow there. **Lichens** are found growing on many rocks in the tundra. Lichens are unusual organisms because they are an association of both **fungus** and **algae** living and growing together. Lichens are a good food source for some animals of the tundra.

Plants of the tundra have special adaptations that allow them to survive the harsh conditions there. One example is the dark, red leaves that you find on many plants. The dark color helps these plants to absorb more heat from the sun to survive the cold climate. Many tundra plants grow in a low, tight clump that looks like a cushion. These **cushion plants** grow in a way that helps to protect them from the cold.

Because of the cold, dry climate of the tundra, animals that live there have developed ways of surviving the difficult conditions. One such animal is the **arctic fox**. Arctic foxes have white fur, and they have very furry feet. They eat birds, small rodents, and leftovers of larger kills. They do not hibernate and are able to withstand temperatures of nearly **-60°F**. Other animals of the tundra include caribou, musk ox, and polar bear.

Name _____

Date _____

Totally Tundra Questions

1. True or False. Tundra is a large biome.
2. Tundra covers nearly _____ of the earth's surface.
3. _____ is a permanently frozen layer of ground.
4. True or False. Most plants and microorganisms in the tundra are actively growing and reproducing all year.
5. In the tundra, temperatures are _____ and precipitation is _____.
 - a. cold, high
 - b. warm, high
 - c. cold, low
 - d. warm, low
6. True or False. There are lots of trees in the tundra.
7. Lichens are an association between _____ and _____.
8. Describe one adaptation of a plant growing in the tundra that helps it to survive.
9. What is an adaptation of the arctic fox that makes it suited to living in the tundra?
10. Name one other animal found in the tundra biome.

Name _____

Date _____

Totally Tundra Answers

1. **True** or False. Tundra is a large biome.
2. Tundra covers nearly **1/5** of the earth's surface.
3. **Permafrost** is a permanently frozen layer of ground.
4. True or **False**. Most plants and microorganisms in the tundra are actively growing and reproducing all year.
5. In the tundra, temperatures are _____ and precipitation is _____.
 - a. cold, high
 - b. warm, high
 - c. **cold, low**
 - d. warm, low
6. True or **False**. There are lots of trees in the tundra.
7. Lichens are an association between **fungus** and **algae**.
8. Describe one adaptation of a plant growing in the tundra that helps it to survive. **Red leaves for sun absorption, growing low to ground for cold protection**
9. What is an adaptation of the arctic fox that makes it suited to living in the tundra? **Thick white fur**
10. Name one other animal found in the tundra biome.
Caribou, musk ox, polar bear.