

Desert Biome



What is a Biome?

A biome is a naturally occurring area of Earth.

Each biome has its own climate as well as the animals and plants that have adapted to be able to survive in each area.



Tundra Biomes

There are two major tundra biomes. The Arctic Tundra which is located around the North-Pole and the Alpine Tundra which is located around the top of high mountains. These are the coldest places on Earth.



Forest Biome

Forest biomes are filled with trees and woody plants. In total, forests cover around one third of the Earth's land.



There are three general forest types - Temperate Forests, Tropical Forests and Boreal Forests. Each one has their own climate and wildlife. Forests are homes to millions of different plants and animals, with most plants and animal species being found in the rainforests. Around 20% of the Earth's forests have never been cut down. The oldest living thing is a tree that lives in Nevada. It is estimated to be over 4,700 years old.

What can you think of that was around that long ago?

Grassland Biome

There are two main grassland biomes, the Savanna Grassland and the Temperate Grassland.

Grassland biomes are large areas of grasses, rather than shrubs or trees. They generally have average rainfall, a bit more than a desert but not as much as a forest and their weather is extremely hot in summer and extremely cold in winter. They have extremely fertile soil which makes them ideal locations for farmland. Periodic fires are beneficial to them as they keep the invasive plants in order. There is a grassland on each continent except Antarctica.



Aquatic Biome



The Aquatic Biome is the largest biome on Earth and is divided into two categories, freshwater and saltwater. Water covers 75% of the Earth's surface and is home to a large number of different habitats that each independently have their own plants and animals.

Desert Biome

Desert Biomes cover around one fifth of the Earth's surface and are the driest of all the biomes. They receive less than 50cms of rain each year and it is difficult to predict when or where it will occur. There are hot deserts and cold deserts.



There are four major types of deserts - Hot and Dry, Semiarid, Coastal and Cold. They are classified according to several characteristics.

Plants of the Desert Biome

Plants that are found in the desert biomes have had to adapt to grow in severe weather conditions and lack of water.

Most desert plants do not grow very high and most have adapted to be able to store water in their stem. Others grow small amounts of leaves to avoid evaporation. Most grow apart from other plants and have large root systems to reduce the amount of competition they have for their stems.



Animals of the Desert Biome



Most of the wildlife in the desert biomes are all small animals such as reptiles and rodents. These animals need to be small enough to hide under the small vegetation or in burrows to escape the heat. Many of the animals are also nocturnal, meaning they sleep during the day and come out when the weather is cooler.

With a lack of water in the desert biomes the animals have adapted to be able to store water or find water in the foods they eat. Others, like the camel, have adapted to store fat in their hump because fat stores heat.

Desert Soils

The soils in the deserts are mainly sand and have small amounts of nutrients for the plants to use as food.

The evaporation from the water in the soil in the plants and from the ground is higher than the rainfall, causing dry and sandy soils. They are generally light in colour and because they do not hold the water they cannot support much plant life.



Your Turn

You are going to create your own desert biome. Remember the soil should be mainly sand but should contain some soil to feed the plant life.

Over the next few days you should see condensation build in your jar as the water is lost from the plant and the soil and then reabsorbed as the jar cools. This will show you the biome is working.

Make Your Own Desert Biome

You will need:

- Jar
- Gravel
- Pebbles
- Fine grain sand
- Dirt with nutrients (potting mix)
- Sticks
- Succulent
- Water
- Large bowl
- Measuring cups



Desert Biome Method

1

In a large bowl mix one cup of sand with a quarter cup of dirt.

2

Place rocks in the bottom of your jar and pour your soil/sand over the top of the rocks.

3

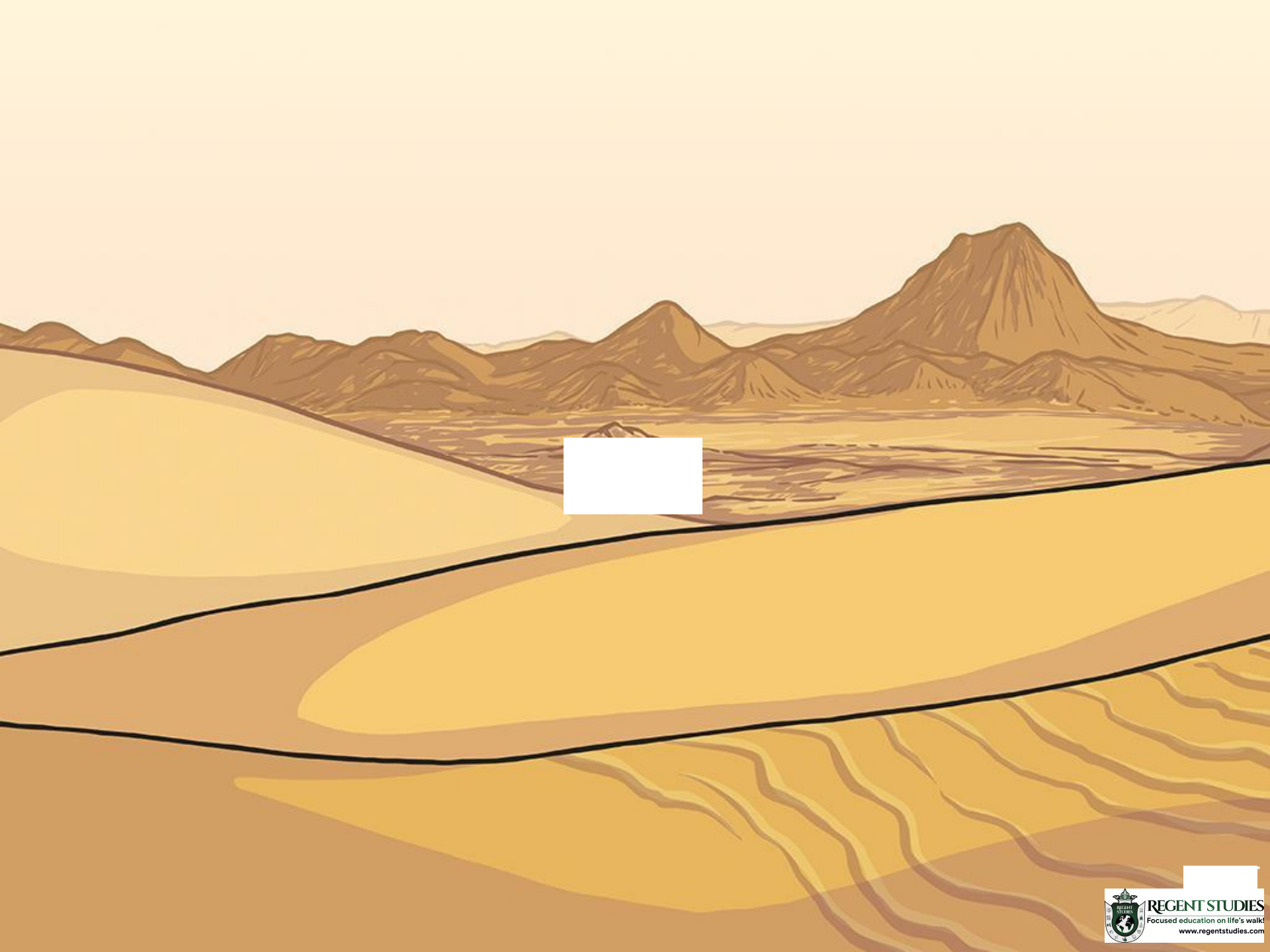
Arrange your plant with the rocks and sticks in the dirt.

4

Lightly pour in half a cup of water and close the lid on the jar.

5

Place your jar in a sunny place and record your findings on the recording sheet.



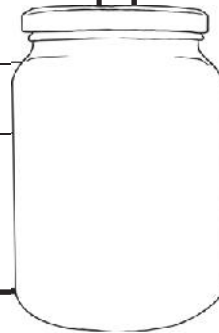
Desert Biome

What I need:

- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____

Draw how your desert biome looks once it is in a sunny place.

Record how your biome looks after five weeks.



I began to see condensation in my jar on day _____.

How does this mean your biome is working? _____

How has your plant changed over time?
