

# **Growing Up in the Desert: What to Eat and Where to Live**

**2<sup>nd</sup> Grade Field Trip to  
Red Rock Canyon National Conservation Area  
Las Vegas, NV**

# Growing Up in the Desert

## Overview:

Students will make observations of plants and animals using the Red Spring Trail at Red Rock Canyon National Conservation Area. They will also compare the diversity of life in different habitats.

## Duration:

45-minute session for pre-activity  
1 day for field trip and reflection  
60-minute session for post-activity

**Grade:** Second

## Next Generation Science Standards:

2-LS4-1 Biological Evolution: Unity and Diversity		
Students who demonstrate understanding can: <b>2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats. [Clarification Statement: Emphasis is on the diversity of living things in each of a variety of different habitats.] [Assessment Boundary: Assessment does not include specific animal and plant names in specific habitats.]</b>		
The performance expectation above was developed using the following elements from the NRC document <i>A Framework for K-12 Science Education</i> :		
<b>Science and Engineering Practices</b> <b>Planning and Carrying Out Investigations</b> Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions. <ul style="list-style-type: none"><li>Make observations (firsthand or from media) to collect data which can be used to make comparisons.</li></ul> <b>Connections to Nature of Science</b> <b>Scientific Knowledge is Based on Empirical Evidence</b> <ul style="list-style-type: none"><li>Scientists look for patterns and order when making observations about the world.</li></ul>	<b>Disciplinary Core Ideas</b> <b>LS4.D: Biodiversity and Humans</b> <ul style="list-style-type: none"><li>There are many different kinds of living things in any area, and they exist in different places on land and in water.</li></ul>	<b>Crosscutting Concepts</b>

## Field Trip Theme:

Red Rock Canyon provides animals with the food, water, shelter, and space they need to survive. By learning about different animals, students can help them survive and become better caretakers of Red Rock Canyon.

**Objectives:**

Students will:

- Know some of the plants and animals that live in the desert.
- Compare and contrast adaptations of at least two desert animals.
- Identify two habitats utilized by desert animals.
- Investigate and describe how animals use plants and other animals for food.
- Explain that habitats include food, water, shelter, and space.
- Explain how particular features of plants and animals help them live in different kinds of places.
- Describe and compare the desert and the rainforest.

**Background Information:**

All animals no matter where they live need food, water, shelter and space in order to survive. Living in the desert is especially difficult because it is a land of extremes. The temperatures can fall below 0°F/-18°C in the winter and rise above 110°F/43°C in the summer. Water is hard to find in the desert because it doesn't rain very much, we only get four inches a year in Las Vegas. Without the rain the dirt or soil doesn't have very many vitamins and nutrients to grow big plants. The plants that do grow in the desert are usually smaller and take a long time.

To survive in the desert, animal and plant species have a variety of adaptations, behavioral or physical characteristics of a species that make it better suited to its environment.

This program will explore the habitat requirements of three desert animals, each of which belongs to a different class, to compare and contrast the varying adaptations that enable them to continue the survival of their species. The animals to be discussed are bighorn sheep (mammals), desert tortoises (reptiles) and great horned owls (birds).

**Vocabulary:**

*It is not necessary for students to know these definitions. This serves as a resource to support student understanding as it comes up in discussion or activities.*

**Adaptation:** a physical or behavioral characteristic of a species that makes it more fit to exist in its environment.

**Aestivation:** a period of dormancy during the summer that allows animals to avoid excessive heat or drought.

**Brumation:** the reptilian form of hibernation

**Camouflage:** a physical adaptation that enables an organism to blend with its environment.

**Carnivore:** an animal that eats only other animals.

**Desert:** an arid land with usually sparse vegetation; usually receives less than 10 inches (25 centimeters) of rainfall annually

**Environment:** the circumstances and conditions surrounding an organism that influences its existence, including physical, biological and all other factors

**Habitat:** the place or environment where an organism lives and grows.

Hibernation: a period of dormancy during the winter in which the metabolic processes of an animal are slowed.

Herbivore: an animal that eats only plants.

Mammal: warm blooded, vertebrate, feeds young with milk from mother, fur or hair covered that gives birth to live babies.

Nocturnal: active only during the night

Omnivore: an animal that eats both other animals and plants.

Reptile: cold blooded, vertebrate, usually egg-laying external horny scales/plates.

Species: a group of organisms that have common traits or attributes.

### **Materials:**

- Teacher resource pages (project these images from your computer or transfer them into a PowerPoint presentation to retain the colored graphics)
- Student Field Experience Journal copied for each student
- Here is the Southwestern Desert by Madeleine Dunphy or computer, projector, and speakers to play the video book <http://www.youtube.com/watch?v=RXrOe6tOYTM>
- The Great Kapok Tree by Lynne Cherry

### **Suggested Pre-Activity:**

1. Read the book Here is the Southwestern Desert by Madeleine Dunphy or play the video book <http://www.youtube.com/watch?v=RXrOe6tOYTM>
2. Discuss the theme of the book with the students. Even though the book focuses primarily on the plants and animals of the Sonoran Desert, many of the same plants and animals can be found in the desert that we live in, the Mojave Desert. Show students the map of the Four Major North American Deserts to point out the Sonoran, Mojave, Great Basin, and Chihuahuan.
3. Show students the pictures of the geology, plants, and animals taken at Red Rock Canyon, which is part of the Mojave Desert.
4. Have students reflect on what they have learned in the book by filling out page 2 of Student Field Experience Journal.

### **Field Trip Summary:**

Plants and animals play an important role at Red Rock Canyon. During this field trip, students will:

- Discuss what plants and animals of the Mojave Desert need in order to survive
- Observe artifacts of a desert tortoise, bighorn sheep, and great horned owl.
- Discuss how these animals get their basic needs from the desert.
- Take a tour of the Red Springs Trail to find where the tortoise, big horn sheep, and great horned owl can find food, water, shelter, and space to survive.

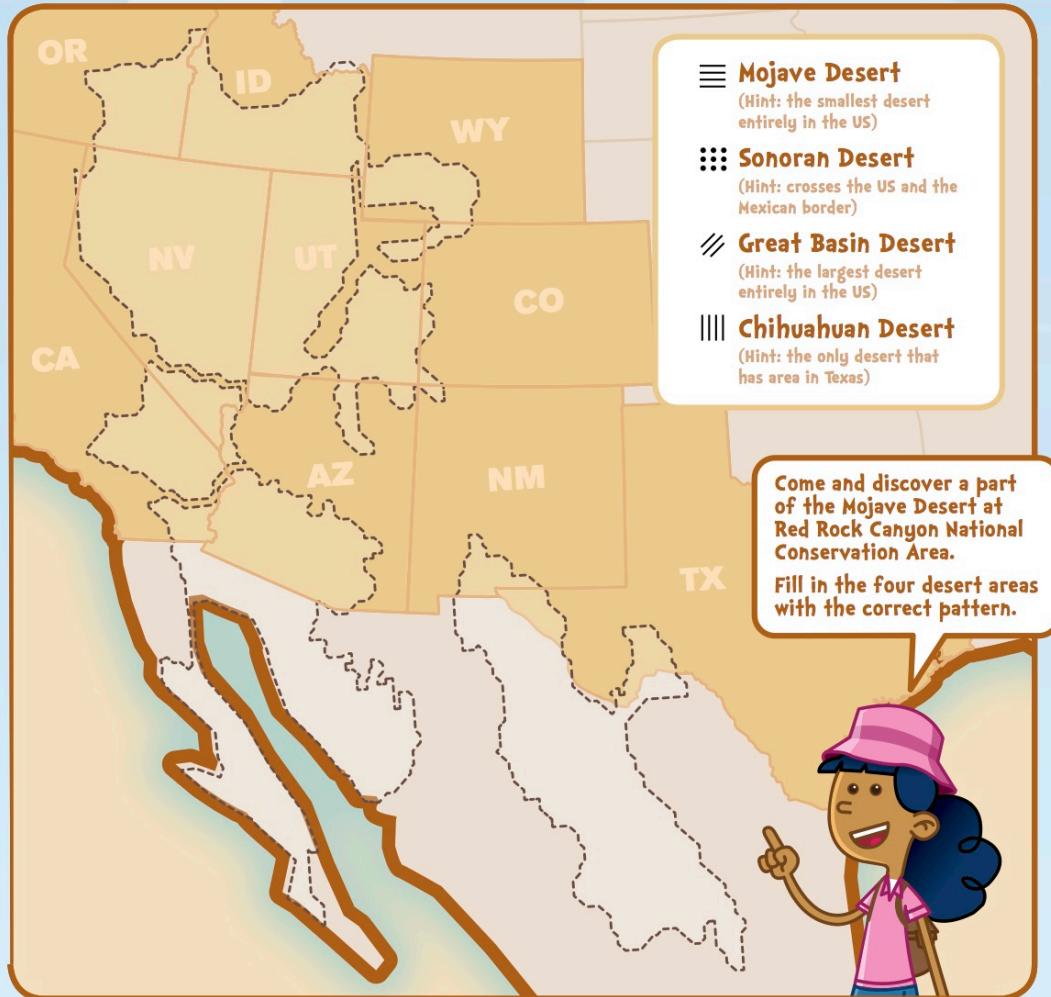
After coming back from the field trip, have students fill out the reflection sheet from the Student Field Experience Journal.

**Suggested Post-Activity:**

1. Have students reflect upon what they learned about the desert tortoise, bighorn sheep, and great horned owl. Lead a discussion on what they need in order to survive (food, water, shelter, and space).
2. Have students pick an animal and draw that animal in its habitat with its basic needs nearby in their Student Field Experience Journal. Then have them describe the habitat.
3. Read The Great Kapok Tree by Lynne Cherry to students. Have them draw a picture of what the rainforest looks like, describe the rainforest, and compare it to the desert.

# Teacher Resources

## Four Major North American Deserts



## What is a desert?

A desert is an area that gets less than 10 inches of rain per year. It can be very hot and sometimes quite cold (below freezing). Red Rock Canyon National Conservation Area is within the Mojave Desert, which gets most of its rain during winter storms and occasional scattered summer thunderstorms. Other places in the Mojave Desert can reach temperatures up to 130 degrees F (about 55 degrees C). That's hot enough to fry an egg on the sidewalk! Red Rock Canyon National Conservation Area is also part of the BLM's National Landscape Conservation System.

This page can be found in the Red Rock Canyon Junior Ranger Book Page 4 a at <https://www.blm.gov/sites/blm.gov/files/uploads/Nevada-Red%20Rock%20Canyon-Junior%20Explorer%20book.pdf>

Show these pictures of the geology, plants, and animals at Red Rock Canyon, which is part of the Mojave Desert.

Pictures courtesy of:

<http://www.redrockcanyonlv.org/photo-gallery/> and

<http://www.redrockcanyonlv.org/redrockcanyon/plants-wildlife/>



















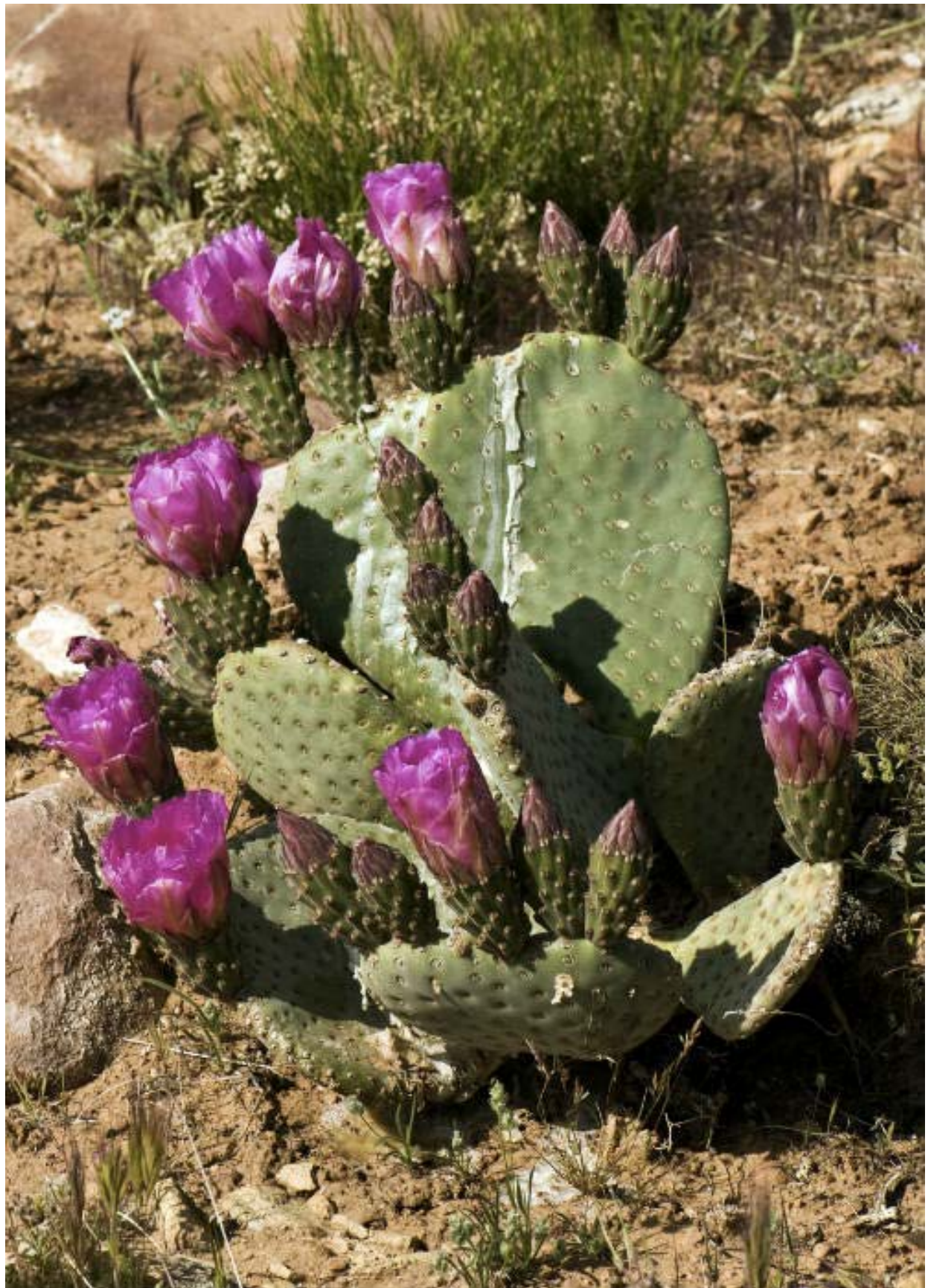
















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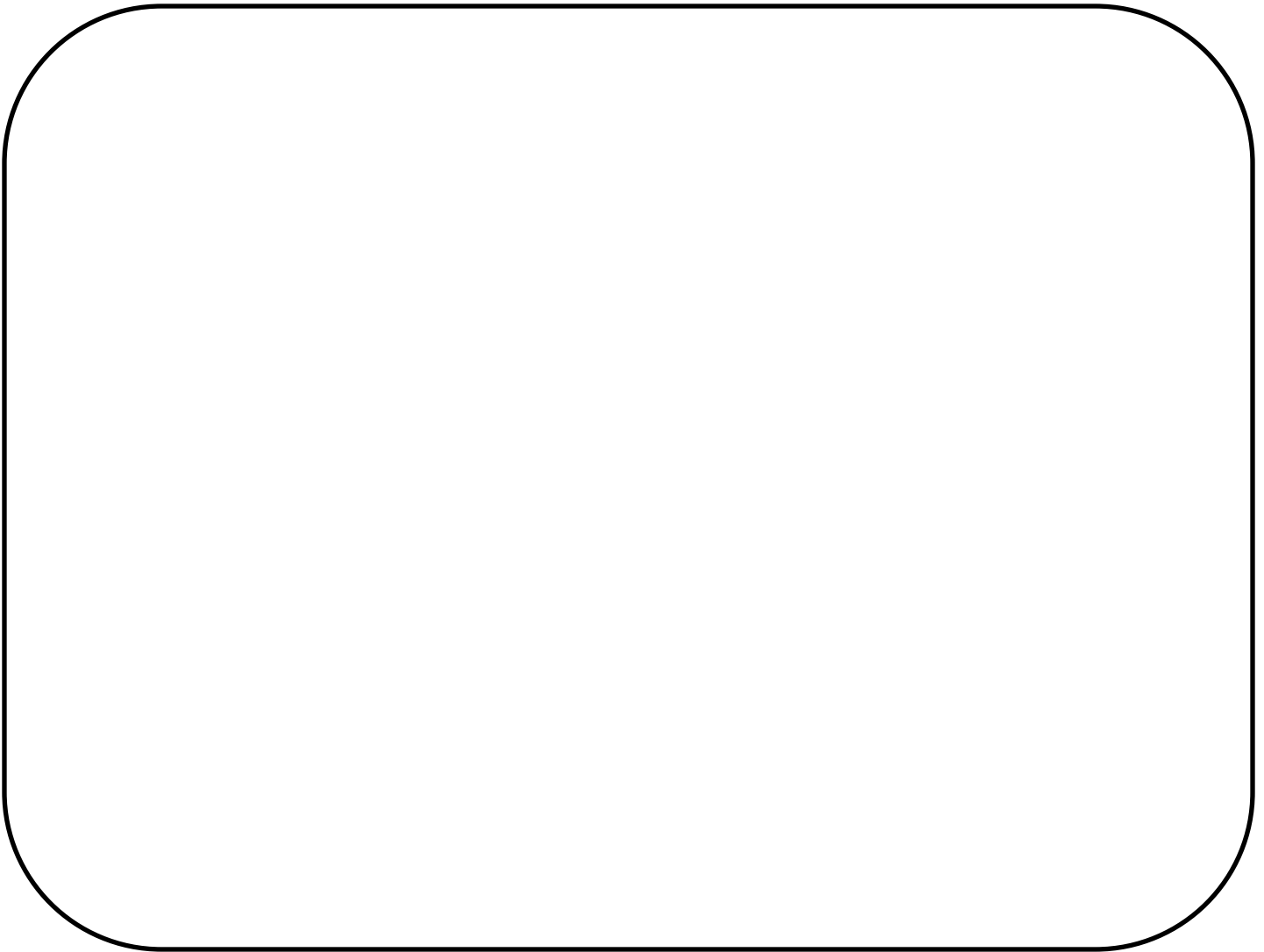
**Student Field Experience Journal  
Red Rock Canyon National Conservation Area  
Las Vegas, NV**

Name: \_\_\_\_\_

# Here is the Southwestern Desert

The plants and animals of the Southwestern Desert can live without \_\_\_\_\_  
for a very long time.

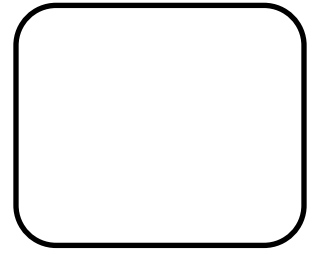
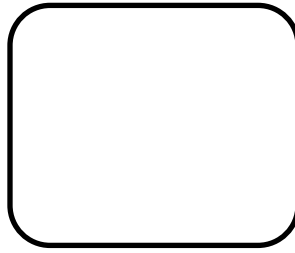
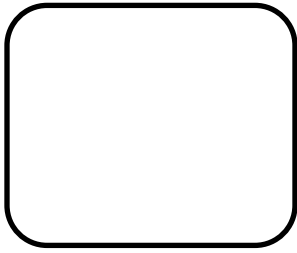
The Southwestern Desert can be broken up into smaller deserts. One of the deserts is the Mojave Desert, which is where Red Rock Canyon is located. Draw a picture of what the Mojave Desert looks like using the plants and animals that your teacher showed you.



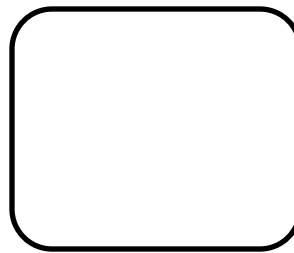
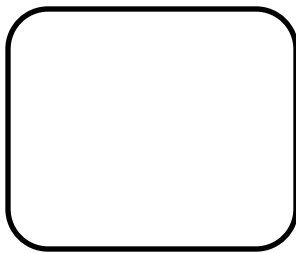
# Field Trip Reflection

I took a field trip to \_\_\_\_\_  
on \_\_\_\_\_

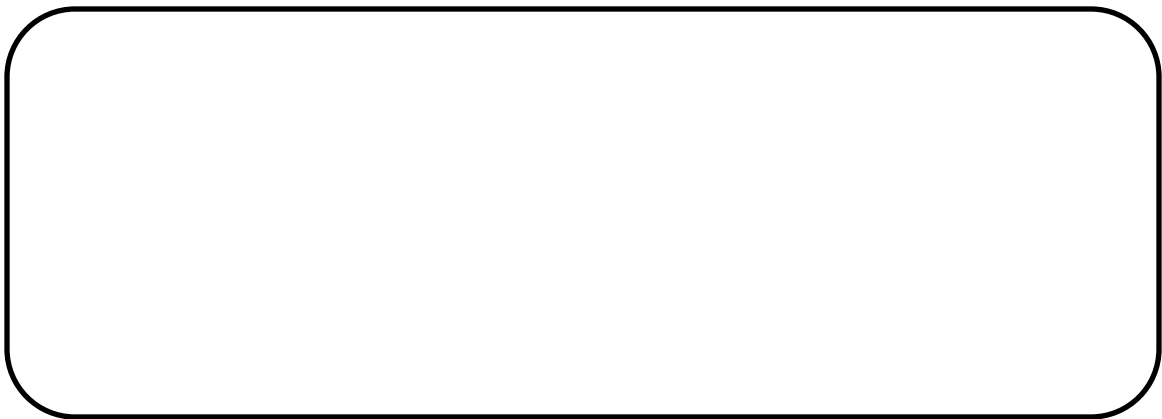
Here are three things I saw:



Here are two things I learned:



The best part of the day was:

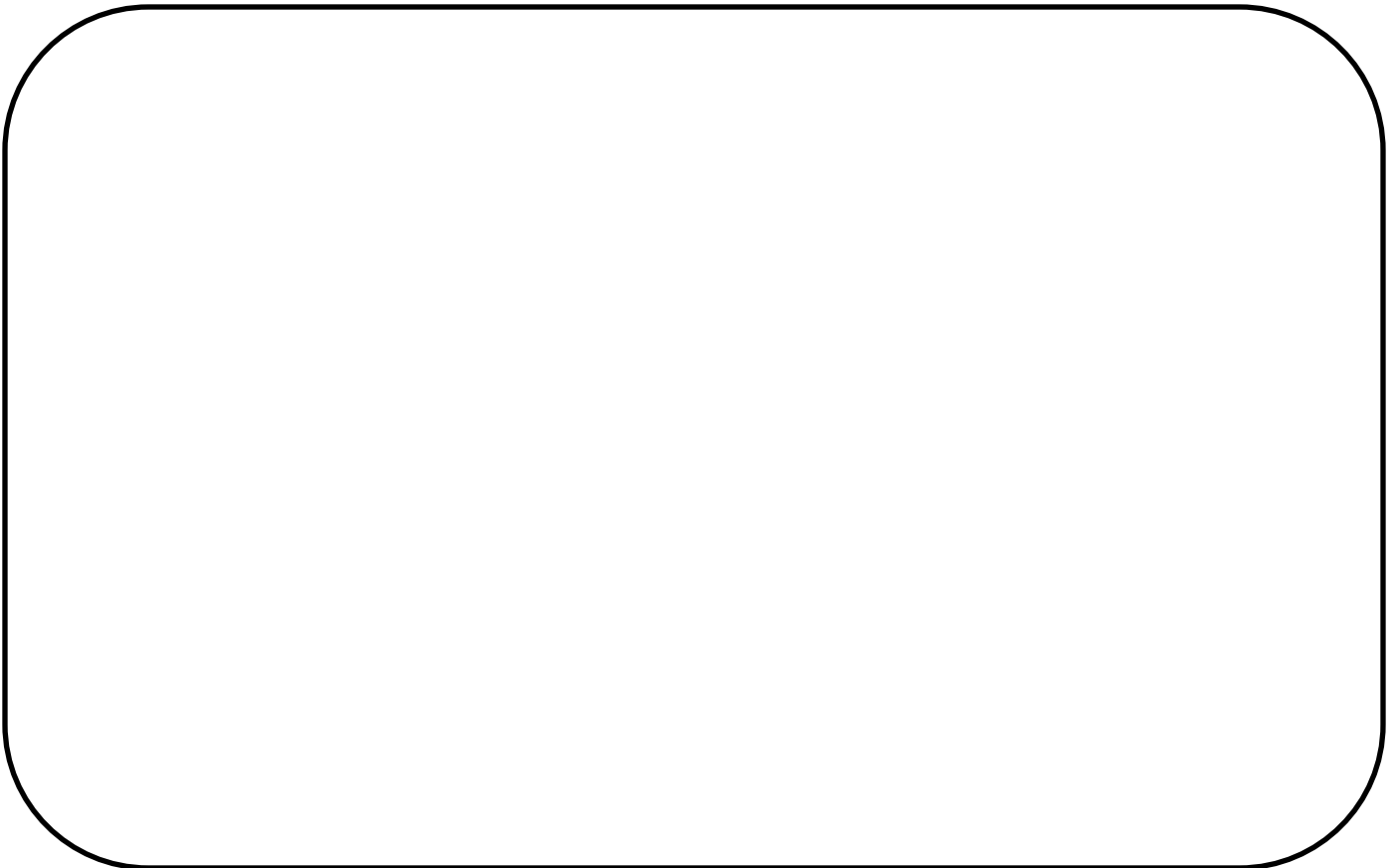




# Plants and Animals of the Mojave Desert

What do animals of the desert need? \_\_\_\_\_

Choose an animal from the field trip: tortoise, bighorn sheep, or great horned owl. Draw a picture that shows the animal and what it needs in order to survive.



Describe the habitat of your animal. Use your picture to help you.

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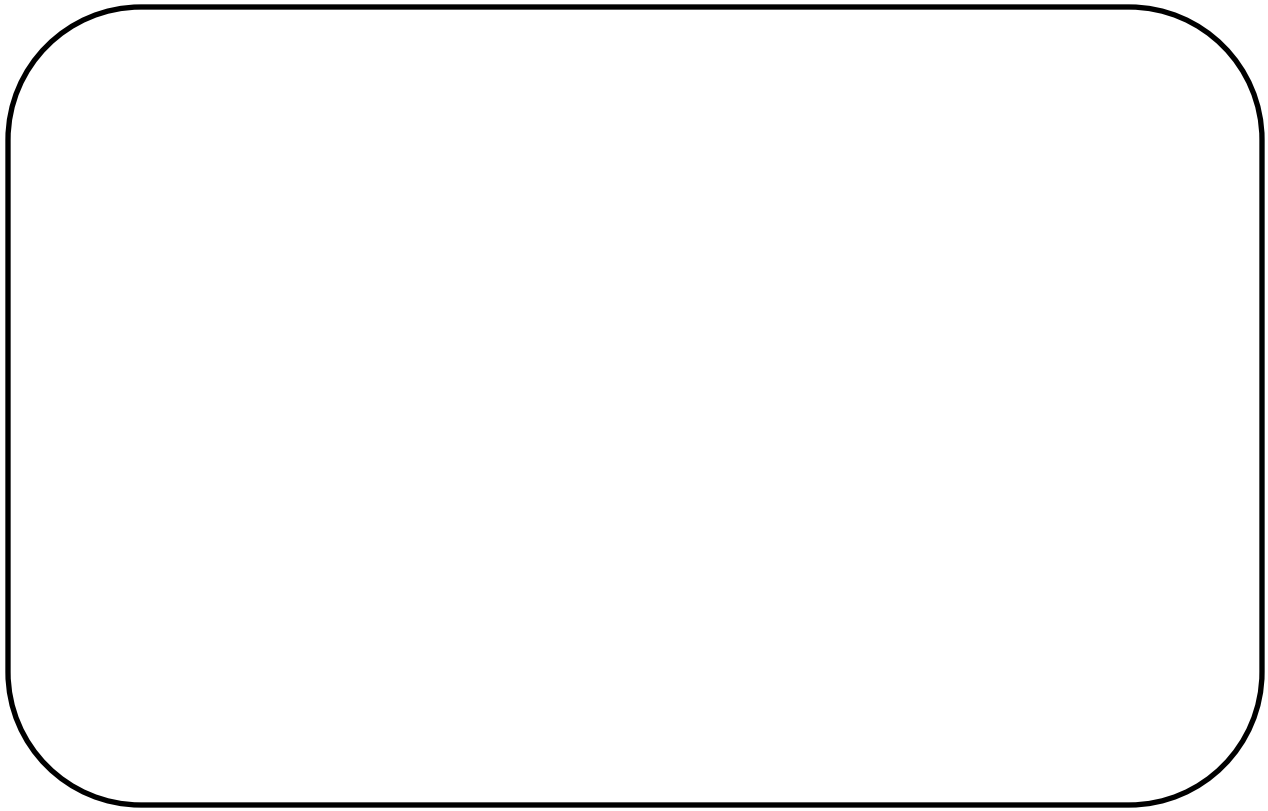
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Draw a picture of a rainforest.



Describe the rainforest. Use your picture to help you.

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How is the desert different from the rainforest? Write your answer in the chart.

A desert has....	A Rainforest has...