

## Coral Reef Ecosystem

Fill in the circle to complete the sentence. Then answer questions 3, 4, and 5.

1. A natural enemy of corals is \_\_\_\_\_.

- (A) the octopus
- (B) shallow ocean waters
- (C) the crown-of-thorns sea star

2. A lack of algae causes \_\_\_\_\_.

- (A) the ocean to warm
- (B) coral bleaching
- (C) symbiosis

3. What state of balance is described in paragraph 3?

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4. You are an ocean scientist looking at a coral reef. How can you determine if it is healthy?

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5. Keeping ocean waters clean, limiting fishing, and cutting down on energy use will do what?

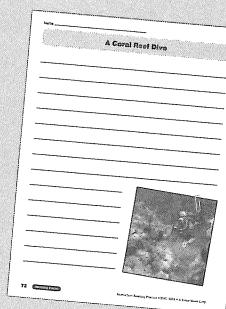
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### Write About the Topic

Use the Writing Form to write about what you read.

Imagine you are a diver in a coral reef. Explain what you see to someone who has never dived before.



# Desert Adaptations

## Level 1

Words to Know list, Reading Selection, and Reading Comprehension questions

**Desert Life**

An animal's color can help it survive. Animals hide by blending in with their surroundings. This is called camouflage. The color of a rock pocket mouse camouflages it from predators that hunt mice.

Rock pocket mice live in the deserts of the southwest United States. Some of these mice have been colored for survival. Some are dark fur. The light-colored mice live on sandy-colored rocks. The dark-colored mice live in the desert. It is covered with black lava rock.

Long ago, a vibrant deposited lava became black rocks. Light-colored rocks. They could easily no longer blend in with their surroundings. But dark-colored mice were able to survive by changing offspring. They were mostly black. All of the rock pocket mice living in black rock areas are dark-colored. This is called adaptation.

Cactus plants have adaptations too. Cactus can survive in a hot, dry desert. A cactus can survive in a hot, dry desert. Spines catch moisture on its body. A cactus usually looks like a cactus. Its spines shade the cactus from the sun. Animals like to eat juicy meat that the spines are sharp, and they keep moist.

**Words to Know**  
survive  
habitat  
camouflage  
deserts  
sandy-colored  
deposited  
offspring  
adaptations  
cacti  
spines  
cactus  
moisture

**Desert Adaptations 1**  
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**Desert Adaptations 2**  
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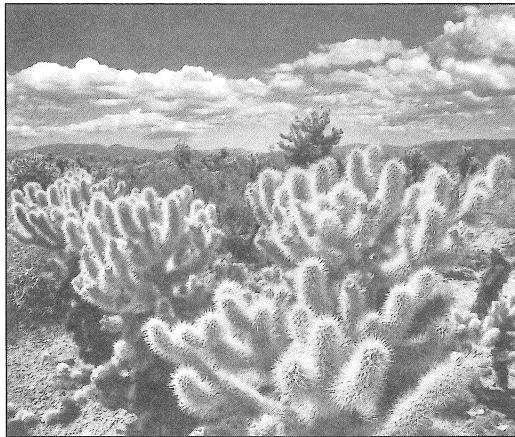
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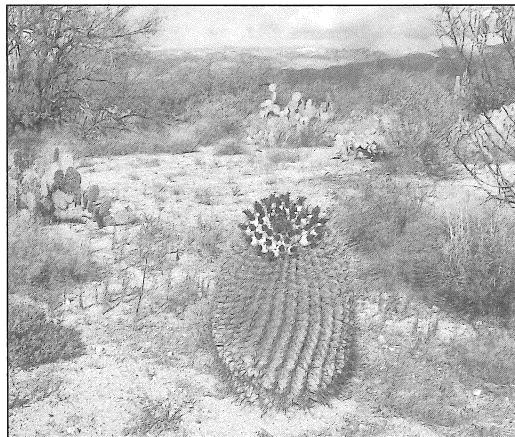
# Desert Life Adaptations



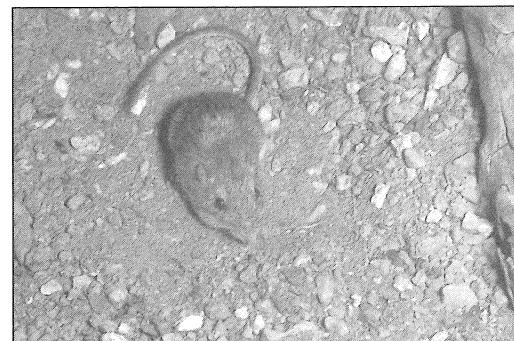
**Jumping cholla cactus**



**Dark rock pocket mouse**



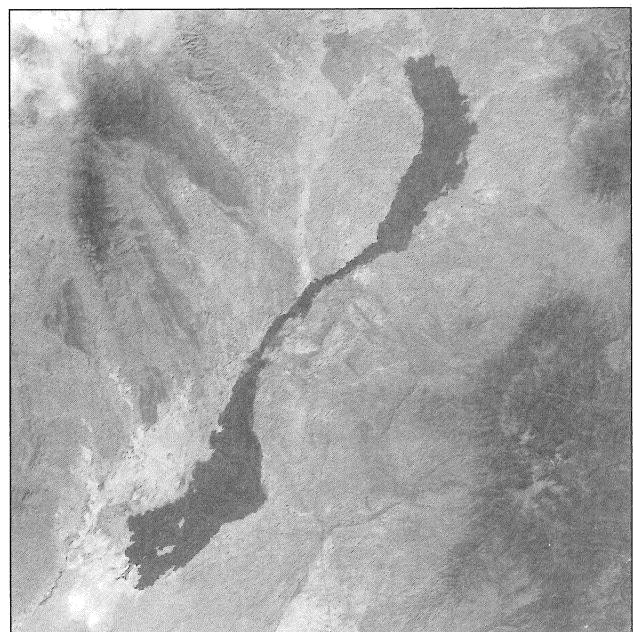
**Barrel cactus**



**Light rock pocket mouse**



**Close-up view of lava rocks in the desert**



**Satellite photo of a lava flow in the desert**

# **Life in the Desert**



## **Words to Know**

### **Desert Life**

survive  
habitat  
camouflage  
deserts  
sandy-colored  
deposited  
offspring  
adaptations  
cacti  
spines  
cactus  
moisture

Desert Adaptations ■



## **Words to Know**

### **Life in the Desert**

survive  
surroundings  
camouflage  
deserts  
sandy-colored  
habitat  
offspring  
adaptation  
cactus  
cacti  
spines  
moisture  
barrel cactus  
shallow  
escaping

Desert Adaptations ■ ■

## **Words to Know**

### **Adapting to Desert Life**

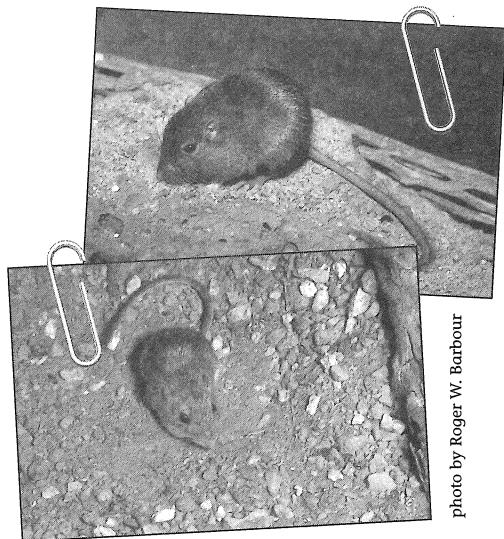
survive  
surroundings  
camouflage  
deserts  
sandy-colored  
deposited  
cactus  
spines  
moisture  
jumping cholla  
reproduce  
barrel cactus  
shallow

Desert Adaptations ■ ■ ■

# Desert Life

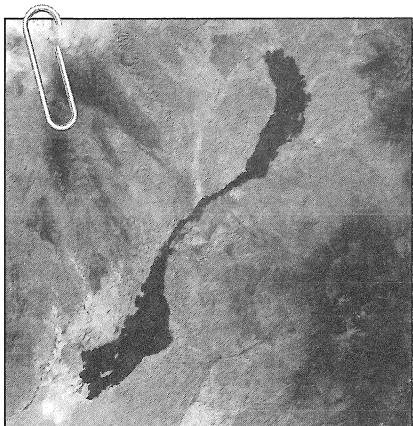
An animal's color can help it survive. Animals hide by blending in with their habitat. This is called camouflage. The color of a rock pocket mouse camouflages it from owls that hunt mice.

The rock pocket mouse lives in the deserts of the southwestern United States. Some of these mice have light-colored fur and some have dark fur. The light-colored mice live on sandy-colored rocks and soil. The dark-colored mice live where the desert is covered with black lava rock.



Rock pocket mice have coloring that camouflages them on dark or light rocks.

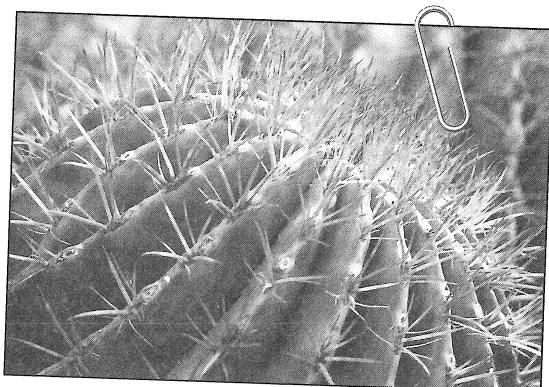
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photo by R. B. Forbes,  
photo by Roger W. Barbour



This satellite photo shows a large area of the desert in New Mexico where lava flowed.

Long ago, a volcano deposited lava in some desert areas. The lava cooled and became black rock. Light-colored mice were no longer camouflaged. They could easily be seen by owls hunting for food. But dark-colored mice were able to survive. So, there were more dark mice having offspring. Today, all of the rock pocket mice living on the dark rocks are dark-colored. The mice living in the sandy part of the desert are light-colored. These different colors are adaptations.

Desert plants have adaptations, too. Cacti have needles, or spines, instead of leaves. A cactus can survive in a hot, dry desert. Spines catch moisture and drip it toward the roots of the cactus. A cactus may be thickly covered with spines. Its spines shade the cactus from the hot sun. Animals looking for a juicy meal know that the spines are sharp, and they keep away.



A barrel cactus has spines that help it survive.

## Desert Life

Fill in the circle to complete the sentence. Then answer questions 3, 4, and 5.

1. Camouflage can help an animal \_\_\_\_\_.  
Ⓐ catch moisture  
Ⓑ survive in the desert  
Ⓒ find a juicy meal

2. Desert owls eat \_\_\_\_\_.  
Ⓐ cactus spines  
Ⓑ lava  
Ⓒ rock pocket mice

3. How is the coloring of the rock pocket mouse related to its habitat?  
\_\_\_\_\_  
\_\_\_\_\_

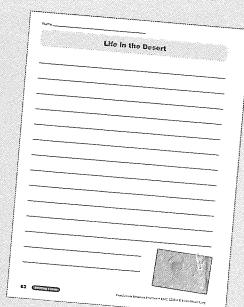
4. In what way are the adaptations of the rock pocket mouse and a cactus alike?  
\_\_\_\_\_  
\_\_\_\_\_

5. What is the main idea of paragraph 4?  
\_\_\_\_\_  
\_\_\_\_\_

### Write About the Topic

Use the Writing Form to write about what you read.

Write an interview with a rock pocket mouse. Show what you know about this mouse in your questions and answers.



# Life in the Desert

An animal's color can help it survive.

Animals hide by blending in with their surroundings. This is called camouflage.

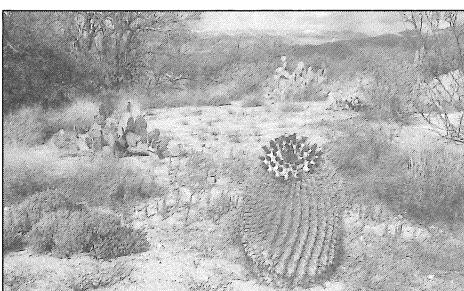
The color of a rock pocket mouse camouflages it from owls that hunt mice.

Rock pocket mice live in the deserts of the southwest United States. Light-colored rock pocket mice live where there are sandy-colored rocks. The habitat of dark-colored mice is black lava rock. Why do the mice come in two different colors?

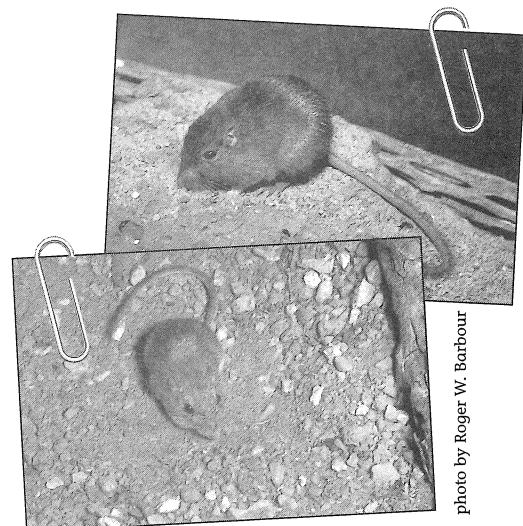
Long ago, lava from a volcano flowed over the sandy soil of the desert. The lava cooled and became black rock. Light-colored mice were no longer camouflaged. They could easily be seen on the black rocks by owls or snakes hunting for food. Dark-colored mice survived better. So, there were more dark mice having offspring. Today, all of the rock pocket mice living in black rock habitats are dark-colored. This is called an adaptation.



Cacti grow in an area of black rocks made by lava flows in the Valley of Fires, New Mexico.



The barrel cactus has spines that are a danger to people.



Rock pocket mice have coloring that camouflages them on dark or light rocks.

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Desert plants have adaptations, too. A cactus can survive in a hot, dry desert because of its adaptations. Cacti have needles, or spines. A spine is an adaptation of a leaf. Spines are useful to the plant. They catch moisture and drip it toward the roots of the cactus.

A barrel cactus has adaptations that help it get and store water. Its shallow roots spread out like a net to quickly drink up even the smallest amount of desert rain. The body of the cactus has folds that swell and store water. Its thick, waxy skin keeps the water inside the plant from escaping into the air.

## Life in the Desert

Fill in the circle to complete the sentence. Then answer questions 3, 4, and 5.

1. Dark-colored mice survive \_\_\_\_\_.

- (A) without adaptations
- (B) on sandy soil
- (C) in lava rock habitats

2. The spines of a cactus are \_\_\_\_\_.

- (A) an adaptation
- (B) for storing water
- (C) camouflage

3. List three adaptations of a barrel cactus and tell what purpose they have in common.
- 
- 

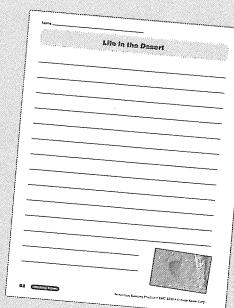
4. Why are two colors of rock pocket mice found in the same desert?
- 
- 

5. Do you think camouflage is important to both mice and owls in the desert? Explain your answer.
- 
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### Write About the Topic

Use the Writing Form to write about what you read.

You are a rock pocket mouse. Write to describe how you survive in the desert. Give details.



# Adapting to Desert Life

photo by Roger W. Barbour

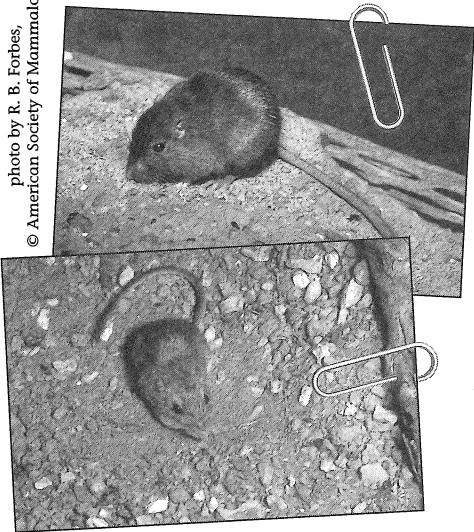


Photo by R. B. Forbes,  
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The color of an animal's fur helps it survive. Animals can hide by blending in with their surroundings. This is known as camouflage. The color of a rock pocket mouse camouflages it from owls that hunt mice.

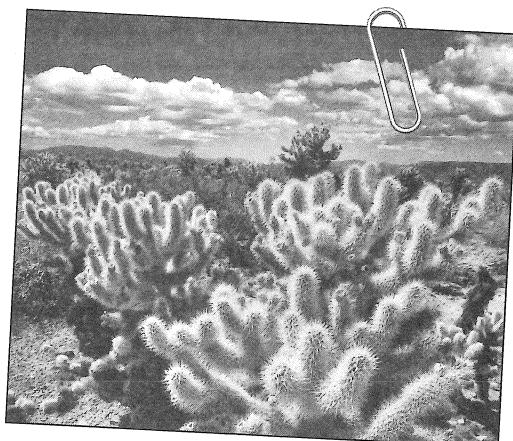
The rock pocket mouse lives in the deserts of the southwestern United States. These mice are found in two different colors. Light-colored rock pocket mice live on sandy-colored rocks and soil. Dark-colored mice live in areas of black lava rock.

Long ago, lava from a volcano was deposited over the desert. The lava cooled into black rock. Light-colored mice could not survive without camouflage. The dark-colored mice survived and had offspring. Now, all of the rock pocket mice living on the dark rocks are dark-colored. The mice living on sandy rocks and soil are light-colored. This is called an adaptation.

Desert plants have adaptations, too. A cactus has adaptations that help it survive in a hot, dry desert. One adaptation is its needles, or spines. A spine is an adaptation of a leaf. Spines are useful for catching moisture and dripping it toward the roots of the cactus.

The jumping cholla (CHOY-ah) cactus uses its spines to reproduce. If an animal brushes against a jumping cholla, a small piece breaks off and sticks to the animal. In time, the piece drops to the ground, grows roots, and becomes a new plant.

The roots of the barrel cactus are an adaptation that allows this cactus to get and store water. The shallow roots spread out like a net to soak up even the smallest amount of desert rain.



Be careful around the jumping cholla cactus! It almost seems to jump onto people and animals that get near it.