

JUNIOR RANGER

DISCOVERY BOOK

**YOU CAN BECOME
A RED ROCK CANYON JUNIOR RANGER
BY FOLLOWING THESE EASY STEPS:**

- 1** Complete at least 4 activities for your age group in the booklet. Look for these symbols for your age group:

Ages 6 and under



Ages 7-9



Ages 10 and up



This symbol



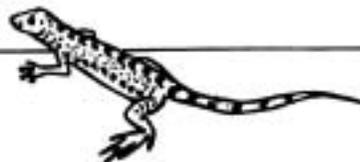
shows activities everyone can do for fun!

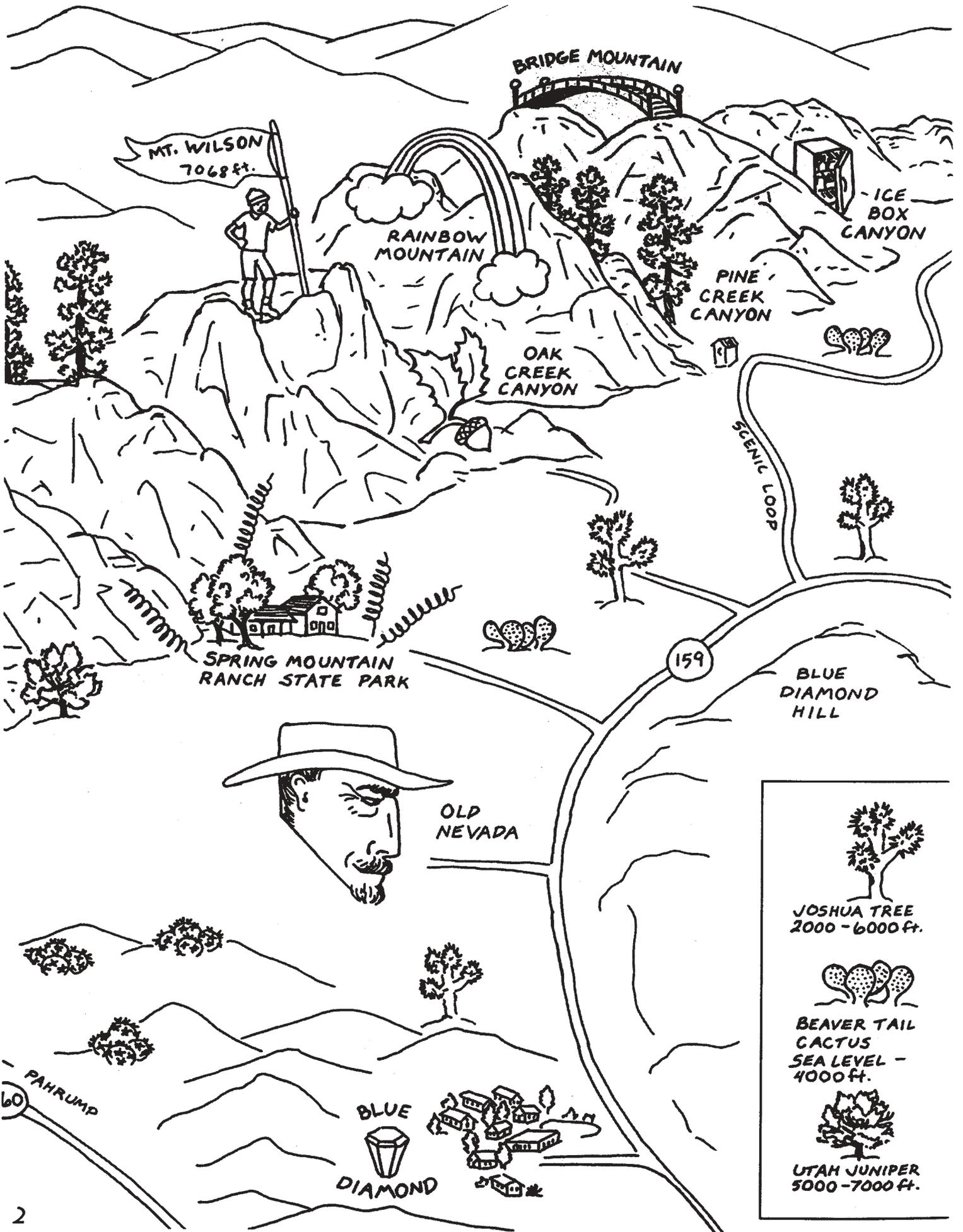
You may have an adult or Ranger help you with the activities.
There is also a glossary in the back of this book.
You may do more activities if you wish.

- 2** Take or mail this booklet to the Red Rock Canyon Visitor Center and have a Ranger check your work. The Red Rock Canyon Visitor Center is open everyday 8 am to 5:30 pm (summer) 4:30 pm (winter). (Please see address on inside back cover.)

- 3** Successful completion of this booklet entitles you to a special Junior Ranger badge and certificate at the Visitor Center.

- 4** Have Fun!





MT. WILSON
7068 ft.

RAINBOW
MOUNTAIN

BRIDGE MOUNTAIN

ICE
BOX
CANYON

PINE
CREEK
CANYON

OAK
CREEK
CANYON

SPRING MOUNTAIN
RANCH STATE PARK

SCENIC LOOP

159

BLUE
DIAMOND
HILL

OLD
NEVADA

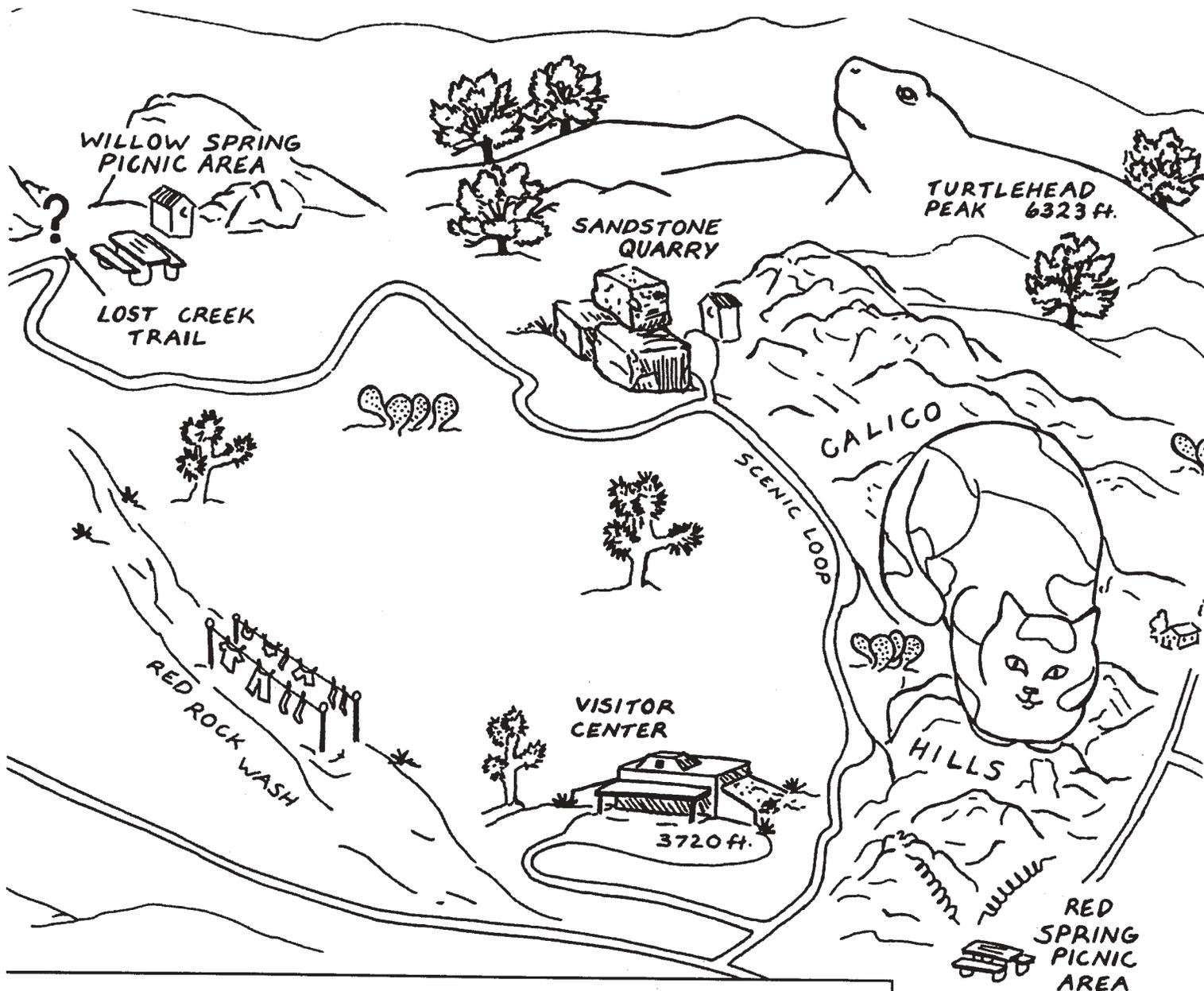
JOSHUA TREE
2000 - 6000 ft.

BEAVER TAIL
CACTUS
SEA LEVEL -
4000 ft.

UTAH JUNIPER
5000 - 7000 ft.

60
PAHRUMP

BLUE
DIAMOND



LIFE ZONES AT RED ROCK

How would you like to travel from Mexico to the Arctic and not leave Red Rock Canyon? As you drive around the Scenic Drive, you will change elevation (the height above sea level). The temperature will be about 3-5 degrees cooler for each 1000 feet you climb. You may not think of these changes as much, but for plants and animals it is. Each type of plant and animal can only tolerate a certain amount of coolness and dryness. For each 1000 feet you climb, it's like traveling 60 miles to see new types of plants. Pine Creek is an exception to this rule. Find out why.



MANY HEADED
BARREL CACTUS
3500 - 4800 FT.



PONDEROSA
PINE
6000 FT. AND UP



DESERTS OF THE UNITED STATES



WHAT IS A DESERT?

A desert is an area that gets less than 10 inches of rain per year. It can be very hot, (130 degrees F), and sometimes quite cold (below freezing).

Red Rock Canyon is within the Mojave Desert which is the smallest of the four North American deserts.

Death Valley National Park is also located within the Mojave Desert's boundaries and boasts of having the world's second hottest recorded temperature of 134.6 degrees F. That's hot enough to fry an egg on the sidewalk!

The Mojave Desert gets most of its four inches of rain during winter storms, but the eastern sections, like Red Rock Canyon, also get occasional scattered summer thunderstorms. The rain is important to support shrubs, spring and summer wildflowers, cacti and trees which in turn support wildlife.

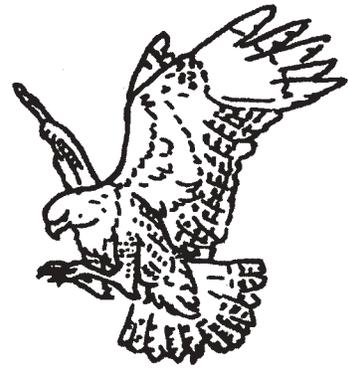
Come and discover a part of the Mojave Desert at Red Rock Canyon National Conservation Area.

WILD LIFE WATCH

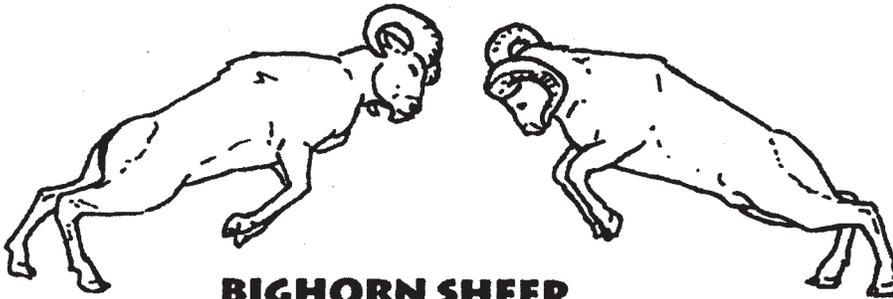
Many people think there is no wildlife in the desert. This is not true! If you take a close look, you may be surprised by what you can find.

If you walk quietly and look carefully you may spy some of the inhabitants of Red Rock Canyon. Remember not to feed or pet any wild animal.

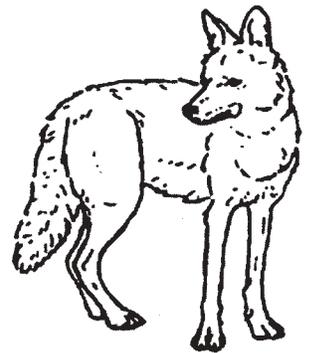
Draw a circle around each animal you see.



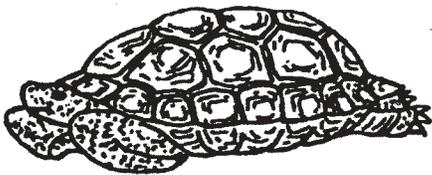
RED TAILED HAWK



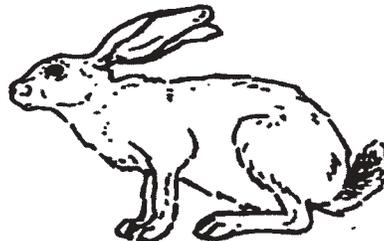
BIGHORN SHEEP



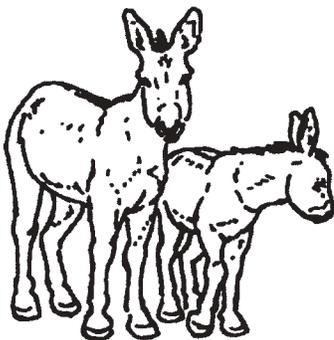
COYOTE



DESERT TORTOISE



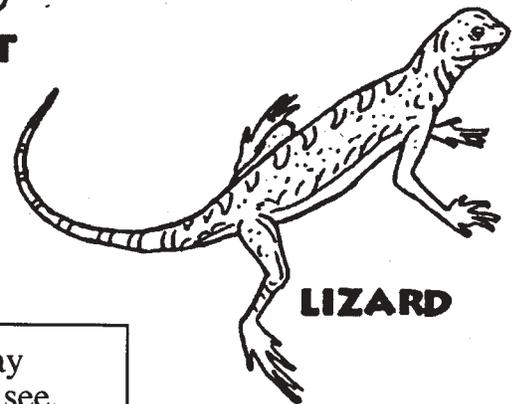
JACKRABBIT



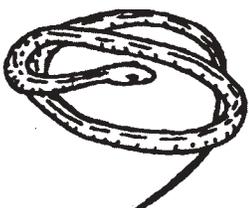
BURROS



ANT



LIZARD

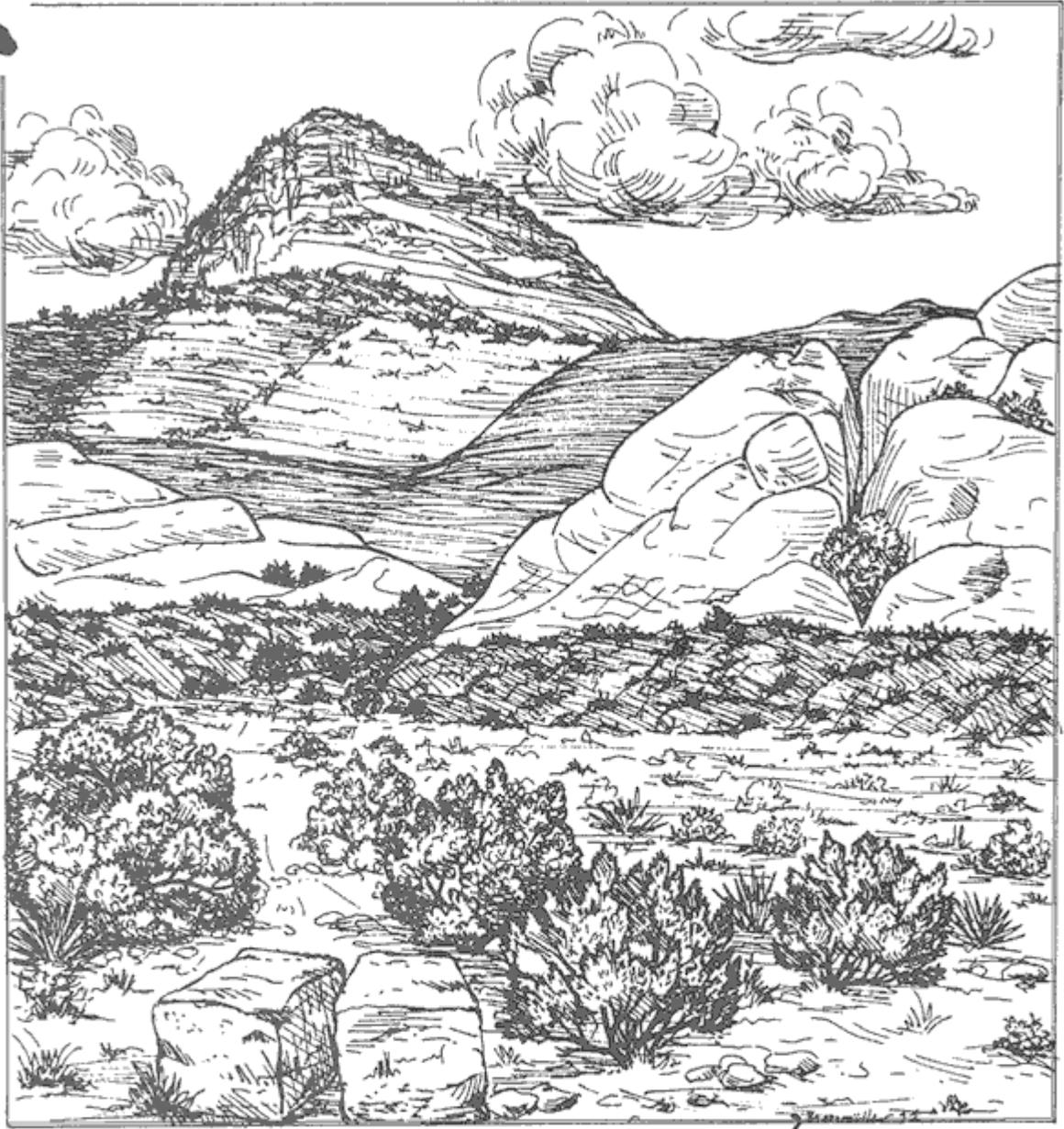


SNAKE

In the space provided you may draw any other animal that you see.
.....



ANTELOPE GROUND SQUIRREL



SHAPES AND COLORS IN SANDSTONE QUARRY

You can see many shapes and colors in nature if you look closely. In this picture of the Sandstone Quarry area, draw around the shapes you see.

CIRCLES



SQUARES



TRIANGLES



RECTANGLES



Put an X by 5 different colors that you see. red green blue
 orange yellow brown black white purple



SANDSTONE QUARRY, AN ANCIENT SANDBOX

Visit Sandstone Quarry, 3 miles from the Visitor Center along the Scenic Drive. Walk to the big red rocks. Run your hand across a red rock. How does it feel? Sharp _____ Smooth _____ Rough _____ Warm _____ Cold _____

Look to the top of the rocks. Imagine that this was once a giant sand pile. Over a long time, the grains of sand were stuck together by minerals to make these red and white rocks. Now the sun, rain, and cold are slowly breaking down the sandstone. The sand grains fall to the ground or wherever the wind blows them. Look around for sand on the ground. Write down a word that tells how it feels.

Would you like it for your sandbox? Yes _____ No _____

Walk down the short trail with an adult. Look at the big blocks of sandstone cut out of the rock. What shape are they? Square _____ Rectangle _____ Circle _____

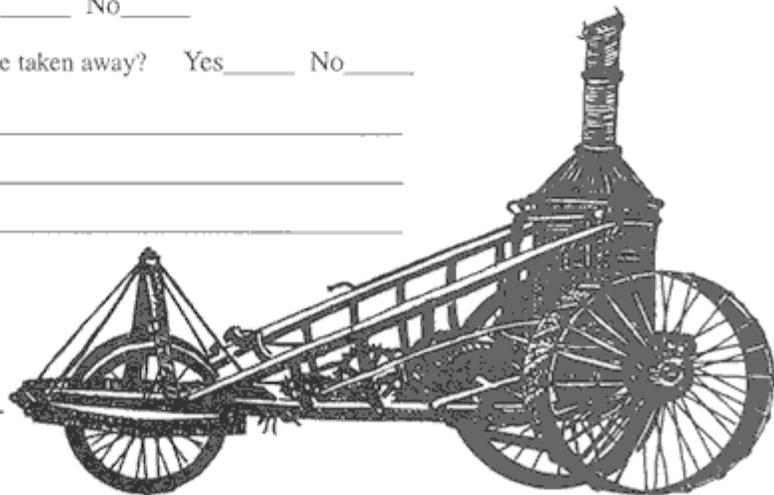
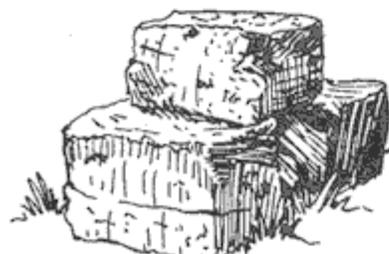
A long time ago people cut the red and white rocks and took them out to make buildings. They used a big steam engine to pull the rocks out to the road. The steam engine used too much fuel and other sandstone was found closer to the railroad so cutting and hauling were stopped. Now that Red Rock Canyon is a National Conservation Area, rocks and plants may not be removed by anyone.

Stand next to a big sandstone block. Is it taller than you? Yes _____ No _____

Can you put your arms around it? Yes _____ No _____

Are you glad that these rocks will not be taken away? Yes _____ No _____

WHY? _____





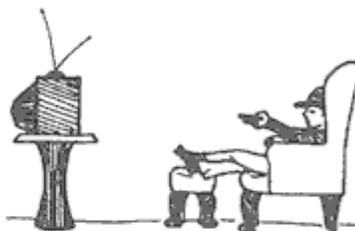
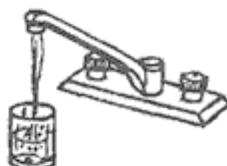
PLANTS OF THE DESERT were given names by pioneers which often described what they thought the plants looked like. Using the names below, draw what you think these plants look like.

BARREL CACTUS

TEDDY BEAR CHOLLA

PENCIL CHOLLA

PRICKLY PEAR CACTUS



YESTERDAY AND TODAY

The Paiutes who used to live in Red Rock Canyon didn't have grocery stores, running water or houses; yet they had to eat, drink, and have a place to live.

Draw a line to connect each item from our lives with a similar item the Paiute people might have used.



DESERT OASIS AT LOST CREEK

Visit the Lost Creek Trailhead seven miles from the Visitor Center on the Scenic Drive. Walk up the trail until you come to a spring with willow trees around it (about 1/3 mile).

Put your fingers in the water. How does it feel? _____ cold? _____ warm?

Sit quietly next to the stream for a few minutes. Do you see any insects or animals? Write down those that you see. _____

Do you think this might be a good spot for other animals to come and drink when you are not there? What animals might get water here?

Lost Creek has water all year long. If you were a thirsty Native American or pioneer at Red Rock Canyon years ago, would this spot have been important to you? _____yes _____no

WHY? _____

DO NOT DRINK THIS WATER. There may be tiny creatures in the water like Giardia lamblia that could make you sick. People today must purify water from wild streams and springs before they can safely drink it.

If you have time, you may want to walk a short distance to the end of the canyon where a seasonal waterfall occurs in the spring and after a heavy rainfall.

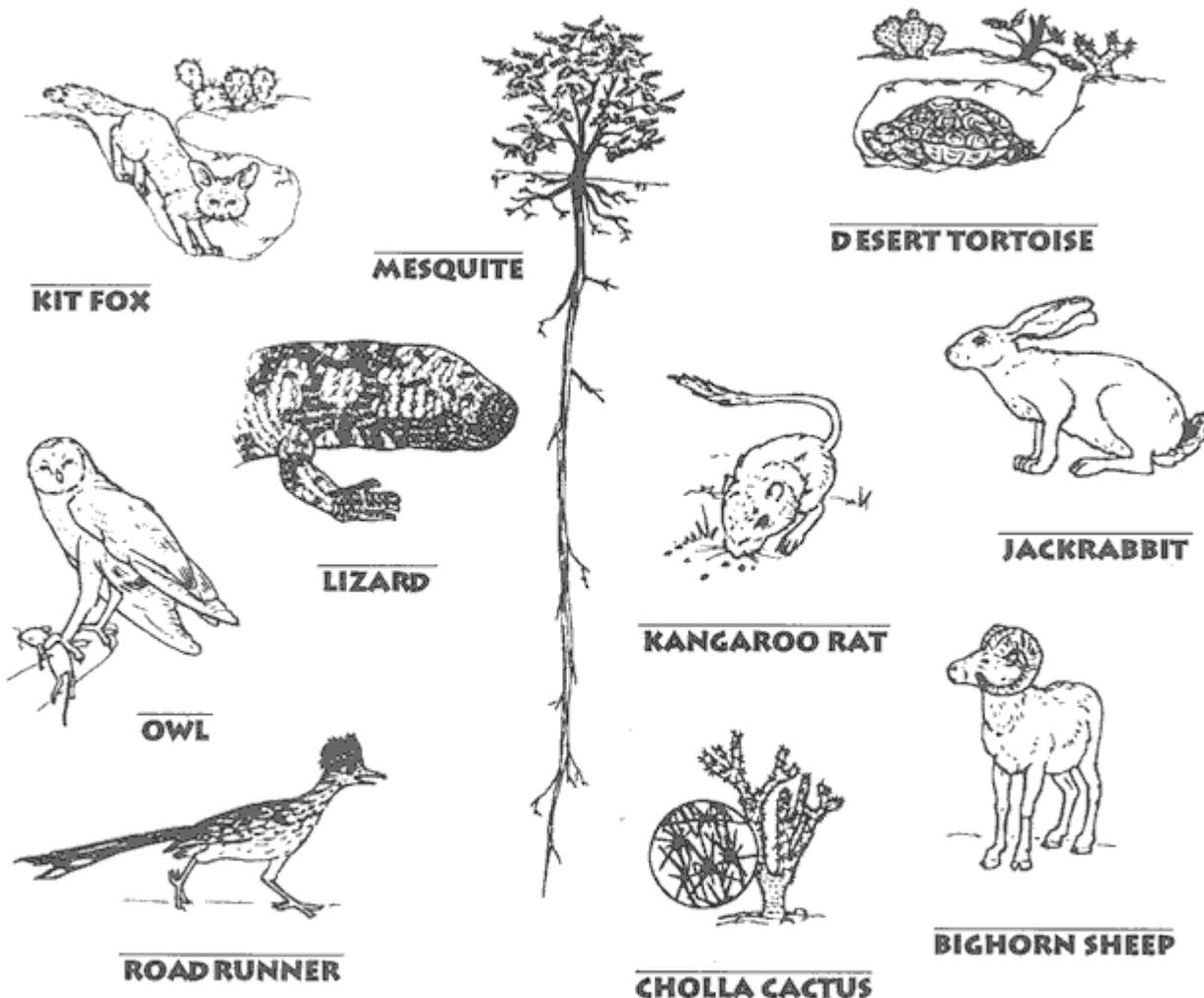


SURVIVING IN THE DESERT



Plants and animals at Red Rock Canyon have adapted to survive in the hot and dry weather of the desert. Match each plant or animal with its adaptation.

WRITE THE NUMBER(S) OF THE ADAPTATION for that plant or animal in the blank next to it. There may be more than one right answer. Hint: Ask for handouts on plants or mammals.



- ① Its body is adapted to get all of its water from seeds.
- ② Spines create shade.
- ③ Burrows underground.
- ④ Comes out at night in summer.
- ⑤ Big ears catch cool breezes and has reflective body hair.
- ⑥ Eats insects and small animals.
- ⑦ Pants to keep cool.
- ⑧ Has scaled skin resistant to drying.
- ⑨ Tap root may go down 100 feet to get to water.
- ⑩ Internal organs insulated by fat layer.



_____ CACTUS



B _____



H _____ CHOLLA



_____ CHOLLA

MY CACTUS PAGE

Often plants were named because they reminded people of other things. Using the clues provided and other clues around the Visitor Center, write in the name of each of these cacti. See if you can come up with some new names.



_____ CHOLLA



PRICKLY CACTUS



_____ CACTUS



J _____ G

CHOLLA



YTOEOC



ROGAKONA TRA



TRACKING DOWN RED ROCK CANYON INHABITANTS

Although you may not see the animals who live here, you may find signs of them by their tracks and droppings. Unscramble the words to discover what animals make Red Rock Canyon their home.

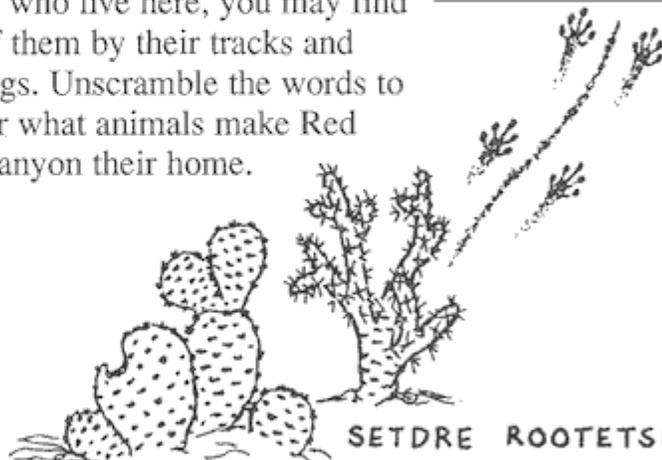
DARLZI



ALIQU



HIRNBOG PEHES



SETDRE ROOTETSI



WHO AM I?



Using the clues below, identify some animals that live at Red Rock Canyon.

WHO AM I?

1. I eat small rodents.
2. I seek shelter underground.
3. I am coldblooded.
4. I have no legs.

WHO AM I?

1. I frequently sit atop trees.
2. I eat lizards and rodents.
3. I soar on updrafts.
4. I have a red tail.
5. I come out during the day.

WHO AM I?

1. I nibble on grass.
2. I will sit very still so you won't see me.
3. I can hop very fast.
4. My big ears help to cool me off.

ANIMALS OF RED ROCK CANYON WORD SEARCH

Find these animals of Red Rock Canyon in the letter block. Their names may be found going up, down, diagonally, or across. Circle the words as you find them.

1. BIGHORN

2. HAWK

3. LIZARD

4. BAT

5. RABBIT

6. FOX

7. COYOTE

8. BOBCAT

9. SQUIRREL

10. COTTONTAIL

P	T	R	E	E	F	R	O	G	P	O	Y	X	N	D
C	R	M	A	T	O	R	T	O	I	S	E	B	B	Z
B	R	N	Q	B	F	J	C	E	O	T	W	O	N	U
I	D	G	H	P	B	S	O	V	K	E	R	B	A	T
G	N	B	A	F	O	I	T	U	L	E	P	C	S	W
H	A	W	K	R	A	T	T	L	E	S	N	A	K	E
O	Y	L	F	O	N	T	O	D	G	Q	O	T	C	V
R	L	I	Z	A	R	D	N	W	K	U	A	H	B	E
N	T	A	B	D	C	O	T	B	X	I	O	F	L	T
E	L	G	B	R	A	E	A	O	R	R	U	T	B	O
G	O	R	F	U	E	E	I	R	T	R	E	L	E	Y
R	A	V	E	N	R	O	L	Q	S	E	U	D	R	O
N	R	O	H	N	G	R	I	H	B	L	X	K	W	C
E	A	G	L	E	T	I	O	B	A	O	R	E	K	A
N	S	E	D	R	A	G	O	N	F	L	Y	L	T	R

11. DEER

12. BURRO

13. EAGLE

14. RAVEN

15. ROADRUNNER

16. TREEFROG

17. DRAGONFLY

18. BEETLE

19. RATTLESNAKE

20. TORTOISE

RED ROCK CANYON PUZZLE



Use what you have learned about Red Rock Canyon to complete this crossword puzzle. Here are some words to pick from:

WICKIUP QUARRY

LIMESTONE NATURALIST

YUCCA CACTUS

TINAJA

ENVIRONMENT

CONSERVATION

DESERT GEOLOGY

PIONEERS

RANGER

PAIUTE

MANO PETROGLYPHS

WATER

MOJAVE

WASH

ARCHAEOLOGIST

OASIS SANDSTONE

KEYSTONE

ACROSS

1. A desert plant with stiff narrow pointed leaves that look like swords. (See *A DAY IN THE LIFE*)
2. A person who studies the people, customs, and life of ancient times. (See *THINKING*)
3. A hand-sized stone used by Native Americans for grinding meal. (See *A DAY IN THE LIFE*)
4. A Native American tribe which has inhabited southern Nevada for hundreds of years. The state of Utah was named after this group of people.
5. A person who studies animal and plants and educates others about nature.
6. A person in charge of patrolling and protecting public land and those people visiting it.
7. A fertile place in the desert due to the presence of water.
8. A region receiving less than ten inches of rain per year.
9. A rock type made up of the remains of shells or coral.
10. Carvings on the rocks made by various Native American groups hundreds of years ago.

DOWN

1. A place where stone is removed to be used for building. (HINT: The third stop on the scenic drive.)
2. A large natural water basin. (See *A DAY IN THE LIFE*)
3. A desert plant with fleshy stems and spines.
4. People of mostly European descent who settled in the western frontier during the mid-1800's to the mid 1900's.
5. A dry river bed created by flash floods.
6. The name of a thrust fault found at Red Rock Canyon National Conservation Area.
7. A Native American hut made of brush or covered with mats. (See *YESTERDAY AND TODAY*)
8. The name of the desert which occurs in parts of southern Nevada, California, and Arizona.
9. An important liquid to take with you when you hike. 70% of your body is made of this.
10. The careful use of natural resources to protect them from waste.
11. The natural surroundings that have an affect on life.
12. The study of the Earth's history through its soil and rocks.
13. The rock type of Red Rock Canyon's "red" rocks.

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THINKING ABOUT RED ROCK CANYON

Setting aside areas of land for conservation and parks brings up certain issues and questions. Here are examples of 5 considerations. Pick 2 and answer the question.

WHAT WOULD HAPPEN IF ...

1) people decided to build houses instead of leaving open space for parks?

2) there were no Park Rangers?

3) Native Americans moved back to Red Rock Canyon?

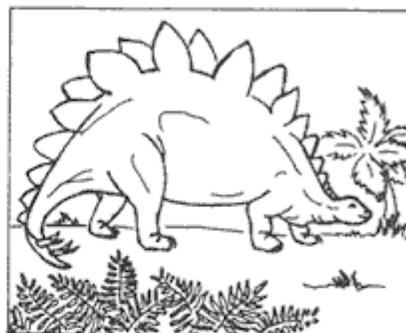
4) Native American artifacts, fossils, and plants were collected by people?

5) you climbed up a rock and couldn't get down?



THE RED ROCK CANYON STORY:

_____ The Age of Dinosaurs



_____ Ancient Ocean



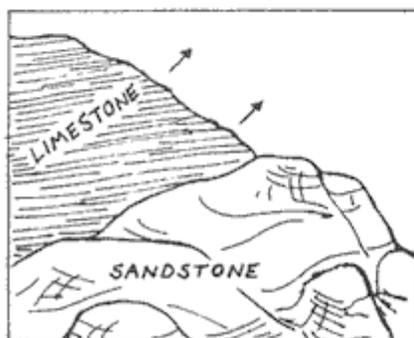
_____ Giant Sand Dunes



_____ Canyons Formed by Massive Cracks in Rocks



_____ Keystone Thrust Fault



The picture blocks tell the geologic story of Red Rock Canyon but they are not in order. Number the blocks in the correct order from 1 to 5. (Hint: See the Visitor Center Exhibit area or geology handout!)



RED ROCK CAREERS

There are many jobs at Red Rock Canyon National Conservation Area. Which job would you enjoy? Pick ONE job and write your answers to these questions next to the pictures.

QUESTIONS: What personal qualities might be needed for each of these jobs? What kind of training?



ARCHAEOLOGIST GENTLY
CLEANING AN ARTIFACT.



NATURALIST LEADING
CHILDREN ON A NATURE HIKE.



RANGER RESCUING SOMEONE.



A DAY IN THE LIFE

A day in the life of an Anasazi child 2,000 years ago was quite different from a child's day today. The Anasazi people cooperated with each other to survive. Children started working as soon as possible to gather seeds, grow crops (like corn), hunt small animals (such as rabbits and birds), prepare meals, and care for younger children. They also learned to make tools and pottery. Tribe members taught children about the world through stories and rituals. Schools and churches help serve a similar purpose today.

Help finish the story below by filling in the blanks from the words provided. Information at the Visitor Center, the Glossary in this booklet, and the Children's Discovery Guide may help you find the answers.

Roasting Pit, Petroglyph, Metate, Mano, Yucca, Agave, Tinaja, Bighorn Sheep, Storytelling, Snares



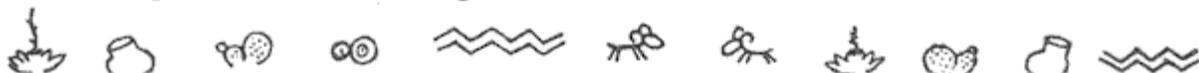
As the sun rises over the red hills, another day begins for Aanzi and her kind. Aanzi collects her pot and walks to the spring by the big white mountain to get water to use for the day. Until just a few days ago, she was able to go to the hidden lake in the red hills, but the warmer weather has caused all the water there to disappear. Aanzi can remember spending her springtime watching the water slide along the rocks. The rushing water slid into the deep hole cut into the stone forming a pool or _____, where she could gather water easily.

Along the way she passes her father and several men collecting grey rocks to use for the cooking area called the _____. It will be only a few days until the _____ plant and desert tortoise are cooked enough to eat. In the meantime she will help her mother gather the seeds which she will grind on the large flat stone (or _____) with the flat hand-sized stone (or _____) to make cooking flour. By mixing the mesquite seeds and berries together, a

tasty meal will be had by all. Near the spring, Aanzi sees her brother, along with several other boys, making _____ out of yucca fiber ropes to catch a rabbit or two for dinner. Above the boys on the rocks are several carved images (or _____) of the various animals which previous hunters found in the area, including the agile _____, an animal with big curved horns.

Seeing the rock carvings reminds Aanzi of the _____ she and her family will share tonight around the fire. She looks forward to learning how they and the land came to be.

After a five-mile round trip, Aanzi returns to her camp with the water for the day. Her mother is hard at work weaving a basket for the wedding that will follow the feast. Someday Aanzi will be able to weave the _____ fiber and make the yucca soap as skillfully as her mother does. That will be fun!





CINQUAIN POEM

One way to understand and enjoy an area is from written descriptions. Poetry is a fun way to write about Red Rock Canyon. The Cinquain poem does not need to rhyme. It describes a natural object in a different way. Just follow the directions below to write your Cinquain (pronounced -Sin-cane; French and Spanish for five)

HERE'S AN EXAMPLE OF A CINQUAIN POEM:

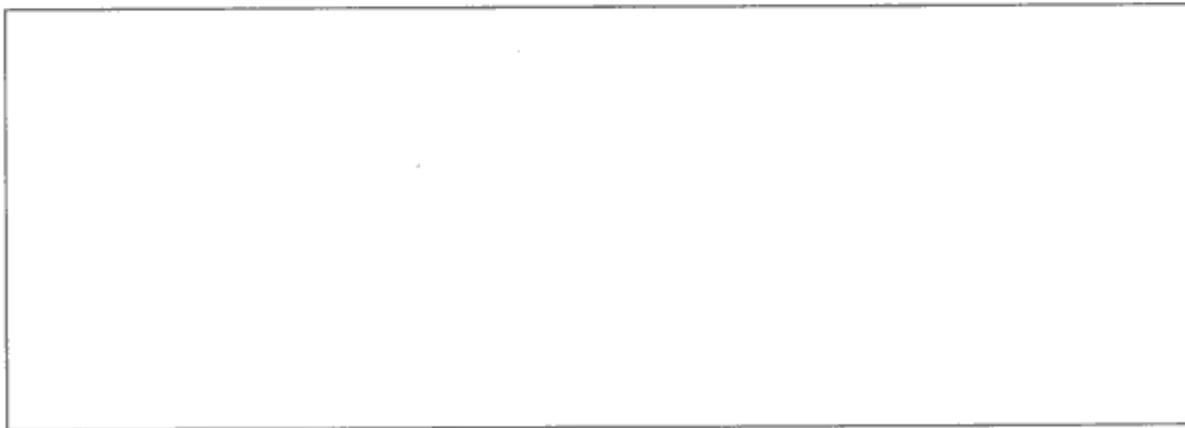
- Name your object in one word. _____
- Write 2 descriptive words about your object. _____
- Write 3 action words about your object. _____
- In 4 or 5 words, describe its relationship to the environment.

- Sum up your feelings about the object in one word. _____

HERE'S AN EXAMPLE OF A CINQUAIN POEM:

ANT
SMALL, STRONG
CLIMBING, STINGING, GATHERING
LITTLE SCAVENGER OF THE DESERT
PERSISTENCE

DRAW YOUR NATURAL OBJECT BELOW:



GLOSSARY TERMS



Adaptation—A change in a living thing which helps it to adjust to its natural surroundings.



Archaeologist—A person who studies the people, customs, and life of ancient times.



Artifact—Any human-made object.



Cactus—A desert plant with fleshy stems and branches. It is usually covered with prickly spines.



Conservation—The official care and protection of natural and cultural resources.



Desert—A region receiving less than 10 inches of rain a year.



Environment—All the conditions and influences which affect the development of an organism.



Geology—The study of the Earth's history through soil and rocks.



Limestone—A rock type formed from the remains of shells or coral.



Mano—Spanish for hand; referring to a hand-sized stone used by Native Americans for grinding meal.



Metate—Spanish word which refers to a large flat stone used to grind seeds into meal.

Oasis—A green, fertile area in a desert where a supply of water allows trees and plants to grow.

Paiute—The group of Native Americans who lived in southern Nevada, southern Utah, and southeastern California from

approximately 900 years ago to historic times. These were principally nomadic hunter/gatherers.

Petroglyph—Rock carvings made by Native Americans.

Pictograph—Paintings on rocks by Native Americans using vegetable or mineral dyes. Their meaning has not been verified.

Pioneers—This refers to people who settled in the western United States during the mid-1800s to mid-1900s.

Quarry—A place where stones are excavated for building purposes.

Ranger—A government official in charge of patrolling and protecting public land and those people visiting it.

Sandstone—A type of rock made of sand grains cemented together. The type of rock the Calico Hills are made of.

Tinaja—Spanish word which refers to large water holes created by water erosion in the rocks.

Wash—Low ground which is flooded part of the year and dry the rest of the time and distinguished by a channel cut into the ground.

Wickiup—A small, cone-shaped Native American dwelling covered with brushwood or with mats.

Wildlife—Wild animals which live in their natural surroundings.

Yucca—A desert plant with stiff narrow pointed leaves much like swords.



CREDITS



We would like to thank everyone who contributed their time and energy to the completion of the Red Rock Canyon Junior Ranger Discovery Book.

Janis Moosmüller - Artist and Text; **Carol Ward** - Text; **Elsie Hardenbrook** - Text and Editing; **Kathy August** - Text; **Lisa McAllister** - Editing; **Staff of Red Rock Canyon** - Typing; Our "Pioneer" Jr. Rangers; Red Rock Canyon Interpretive Association. Reprint by Sabre Design & Publishing®.



For information on the Jr. Ranger program contact:
Red Rock Canyon National Conservation Area
HCR 33 • Box 5500 • Las Vegas NV 89124 • (702) 363-1921

A "MAZE"ING BIGHORNS



A thirsty bighorn sheep is trying to reach a water hole at the bottom of Oak Creek Canyon, but the trail down the rock face to the waterhole is not an easy one. Storm clouds on the horizon threaten to bring a snow storm which could make the trail very slippery and dangerous. A hungry mountain lion lurks in the bushes and a burro stands near the waterhole refusing to share any of the water with others.

Can you help the bighorn find its way? What would happen if the bighorn were to meet any of these obstacles as it descended the trail?

