

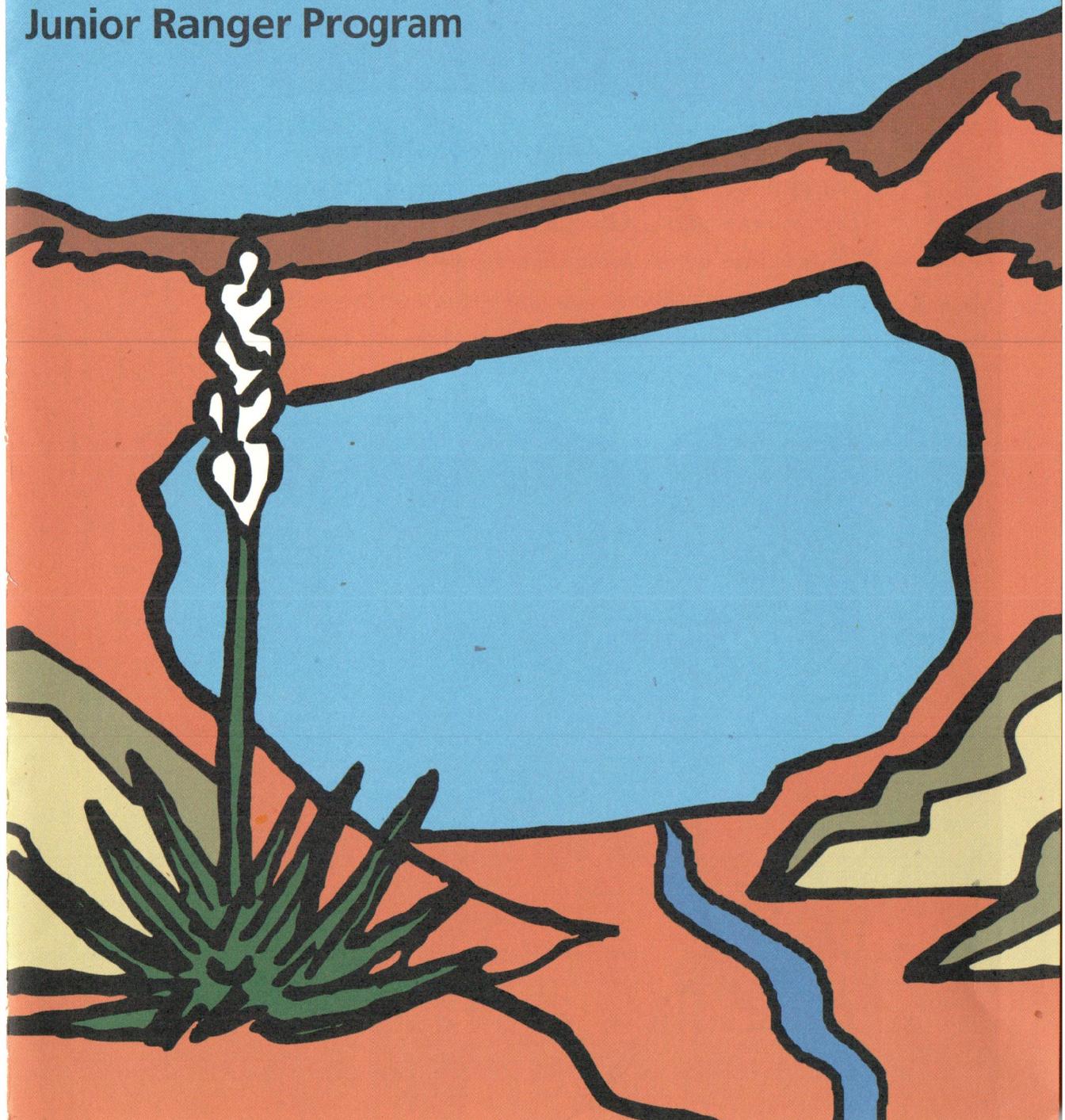
Natural Bridges

National Park Service
U.S. Department of the Interior

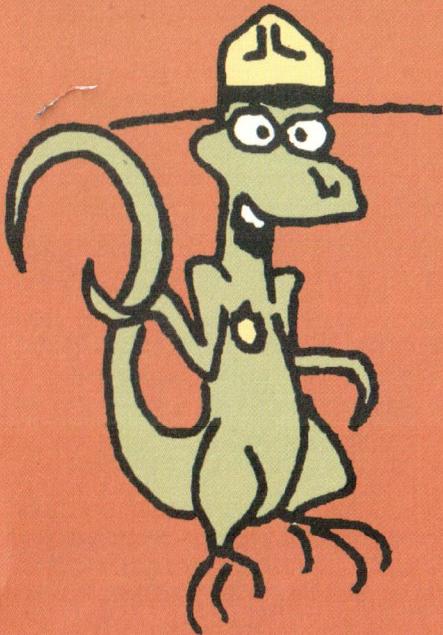
Natural Bridges National Monument



Junior Ranger Program



Hi! I'm Lenny, a spokeslizard for the Natural Bridges National Monument Junior Ranger Program. Did you know that you can help out the park, its plants and animals, and other visitors by following some simple guidelines? Stay on the trail, leave what you find and respect the wildlife, like me! This helps keep the park just how you found it so others can enjoy it too.



Instructions

What is a Junior Ranger?

A Junior Ranger is a special person with a special job. Junior Rangers help protect national parks and monuments and keep them beautiful for everyone. They do this by following park rules and being a good example to other park visitors. So if you like being outdoors and exploring nature, come join the Junior Ranger Program!

How do I become a Junior Ranger?

1. You must be at least 4 years old.
2. Watch the park video or attend a ranger program in the campground.

Park Ranger Signature

Date

3. Complete the activities in this booklet according to your age or learning level.



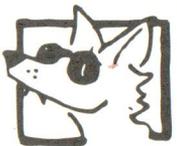
Ages 4 to 6

Complete at least 3 activities with the **Modest Mouse** symbol.



Ages 7 to 9

Complete at least 4 activities with the **Rockin' Raven** symbol.



Ages 10 and up

Complete at least 5 activities with the **Cool Coyote** symbol.

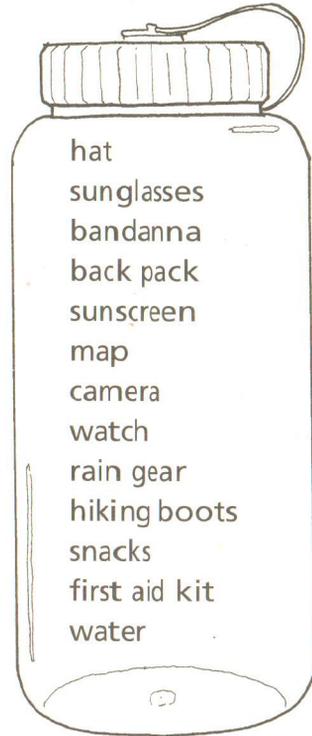
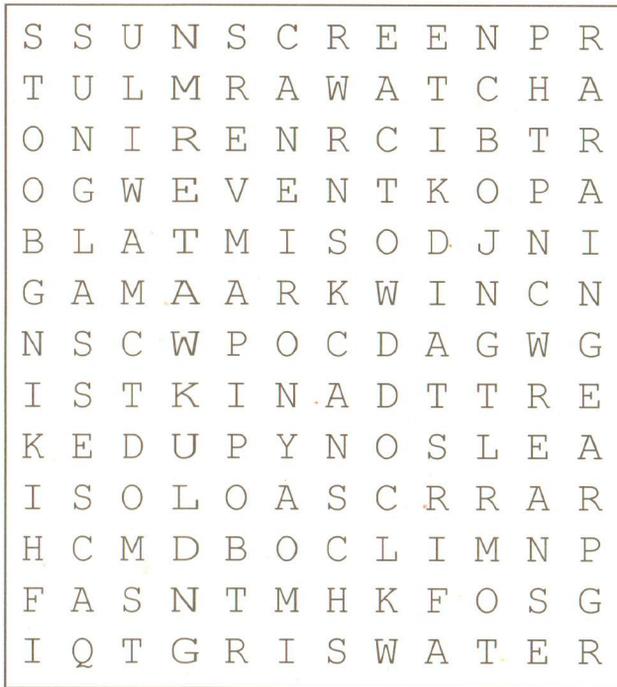
What do I do when I am finished?

When you are finished, bring your booklet to the visitor center. You and a park ranger will look through what you have accomplished. Then you will be sworn in as an official Junior Ranger of Natural Bridges National Monument!

Take a Hike!



Ready to explore? Take a hike to one of the three bridges and see what you can discover. Before you go, **complete the word search** below and find some helpful things to take along on your hike. You will find one word three times in the puzzle because it is a very important thing to have when you are hiking, especially in the desert.



I hiked to _____ Bridge.

My favorite part of the hike was _____

Bridges Bingo



Part of becoming a Junior Ranger involves exploring the park and discovering new things about nature. Go out into the park and use your senses to see, smell, touch and listen to the world around you. See how many different squares you can cross off on the bingo board.

For the Ravens and Coyotes, in the squares you cross off, write what you found or where you found it.

<p>Find 3 green things</p>	<p>Feel something wet</p>	<p>Listen to an insect</p> 	<p>Smell something sweet</p> 
<p>Find and ID an animal track</p> 	<p>Watch a Lizard</p> 	<p>See some rock art</p> 	<p>Listen to the wind</p>
<p>Listen to a bird</p> 	<p>Stand under a natural bridge</p>	<p>Smell a tree</p> 	<p>Find a rock bigger than a truck</p>
<p>Feel some sandstone</p>	<p>Find an animal's home</p>	<p>Touch something rough</p>	<p>Find a shady spot</p>

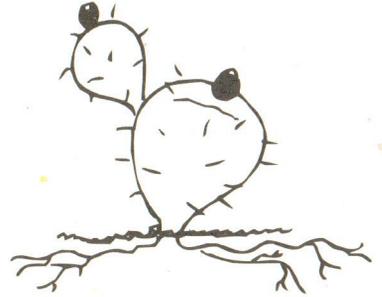
Desert Dwellers Word Scramble

Unscramble the letters in (), then fill in the blanks to find out some of the ways plants and animals survive in the desert.

1. Desert plants often have light colored _ _ () _ _ which reflect the sunlight and keep them cooler. (**selvae**)

2. Some plants have a waxy coating on their leaves that keeps them from losing too much _ () _ _ _ . (**treaw**)

3. Cacti have special cells in their stems that act like sponges and help them () _ _ _ _ water. (**esort**)



4. The _ _ () _ _ _ on cacti are really modified leaves that actually help them provide shade for themselves. (**nespis**)

5. Some desert plants like the prickly pear cactus have shallow, wide spreading _ _ _ () _ so they can soak up moisture even from a light rain that only dampens the surface of the soil. (**osotr**)



6. Coyotes cool themselves off by _ _ _ () _ _ _ just like other dogs. (**gintnap**)



7. Many small desert animals spend the hottest part of the day in underground
_ _ _ _ _ (srobwur)

8. Most desert animals are more active at () _ _ _ _ _
when it's much cooler. (ghitn)



9. Lizards can sometimes be seen doing "push ups" to raise themselves a few
centimeters above the hot _ _ _ _ _ (dorung)

10. Amphibians, like the Spade Foot _ _ () _ bury themselves in the ground
where it's moist and cool and stay there until it rains. (dota)

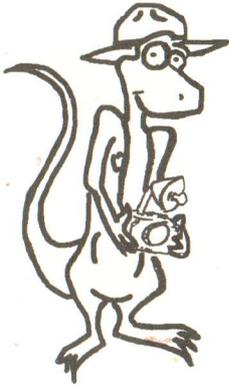
11. Kit foxes don't need
to drink much water
because they get most
of it from their
() _ _ _ _ . (yper)

The desert may look like a hard place to live, but it is home to hundreds of different plants and animals. Unscramble the circled letters from the puzzle to find out the scientific word for our special survival skills.

Your Answer:

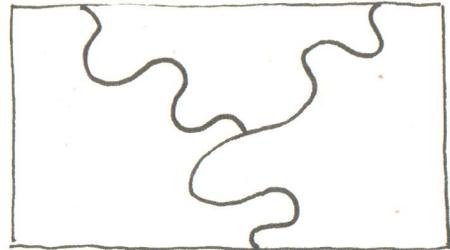
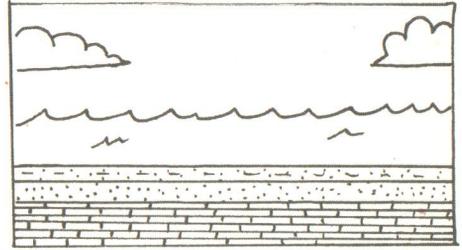


Bridge Formation: Spanning Time



Natural bridges are formed in a unique way. Read the geology statements below and match them to my geology snapshots on the right.

1. Many years ago, an ancient ocean covered this area. **Sediments** like sand and mud piled up over thousands of years at the bottom of the ocean and in sand dunes at the edges of the ocean.
2. Eventually, the ancient ocean evaporated or dried up. The sand and mud at the bottom and the edges of the ocean hardened into layers of sedimentary rock. The new landscape was crossed by meandering (winding) rivers.
3. Over time, these rivers **eroded** away the layers of soft sandstone and made canyons. Forces deep inside the earth caused the entire **Colorado Plateau** to lift up. The **uplift** caused the river to carve even deeper.
4. The rivers eventually created large **meanders** within the canyons. Water gradually wore away at the thin walls of the canyons and created a hole. The hole created a "short cut" for the river to take instead of going all the way around the bend in the canyon.
5. Over time, the river continued to erode the rock making the hole bigger and bigger.
6. Someday, as erosion continues, more and more rock will wear away and the bridge will collapse.



Key Words

Geology: The study of the earth and the things out of which it is made.

Sediment: Layers of sand, mud or pebbles.

To Erode: The wearing away of soil and rock by wind, water and ice.

Colorado Plateau: The "Four Corners" area of Utah, Colorado, New Mexico and Arizona.

Meander: A large loop or bend in path that a river takes.

Uplift: Movement inside the earth that pushes up the rocks of the crust.

What's Wrong? What's Right?

In this picture, there are some park visitors who are not following the rules and are not respecting Natural Bridges and its resources.

Cross out the visitors who are not being respectful.
Circle the pictures of the people who are being good park stewards.



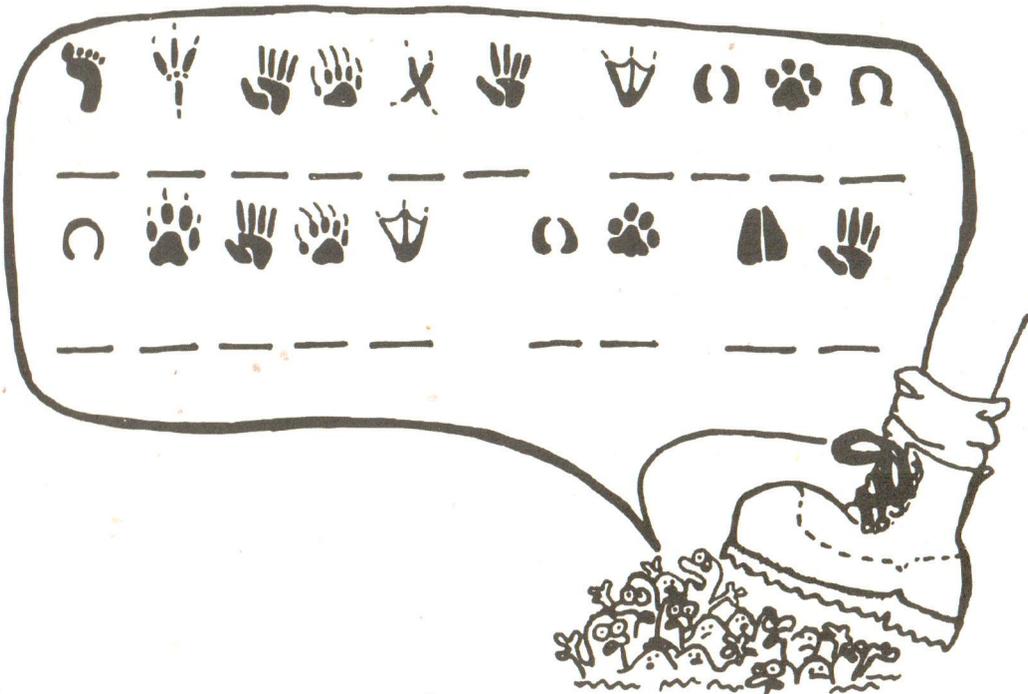


Cryptic Crust



Ready for a big word? Cryptobiotic! It is a scientific word that means "hidden life." It refers to the blackish brown crust you may see on the soil. It is made up of thousands of tiny organisms like bacteria, algae and lichen. Cryptobiotic soil crust is very fragile and can be destroyed by simply walking on it. We need to protect it because it helps hold the soil together and absorbs water so that other plants can use it and grow. It's a good thing!

Use this key to break the cryptic code:



Creative Corner



Poetry is a unique way to remember or describe your experiences and feelings. Cinquain poems are a form of poetry that have five lines and do not rhyme. Follow the instructions below and write a cinquain poem about something you have seen or experienced here at Natural Bridges.

Line 1: One word, the **subject** of your poem (tells what the poem is about)

Line 2: Two words that **describe** the subject

Line 3: Three **action** words that the subject does

Line 4: A **phrase** (4 to 5 words) that further describes the subject

Line 5: One final word that renames what the poem is about (a **synonym**)

Here's an example:

Wind
Cold, invisible
Blowing, whistling, singing
Whipping over the rock
Whoosh!

Now it's your turn:



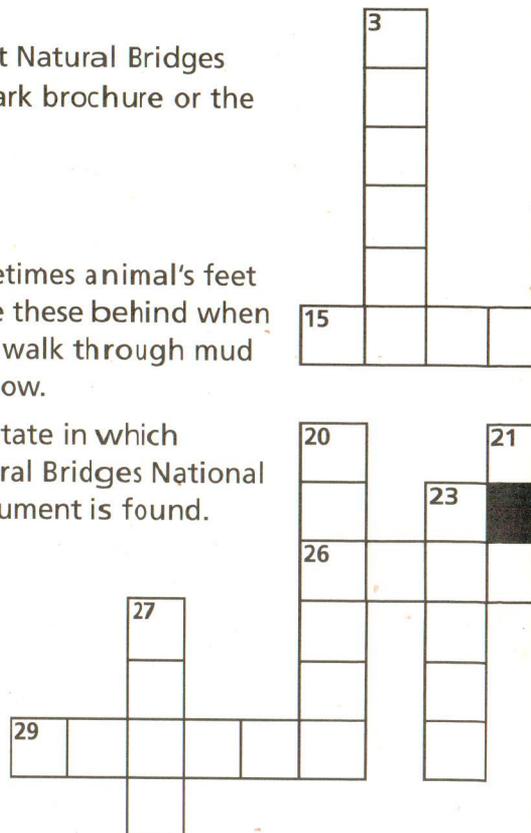
Canyon Criss-Cross

Complete the crossword puzzle to learn more about Natural Bridges and its resources. If you need help, check out the park brochure or the exhibits and video in the Visitor Center.

Across

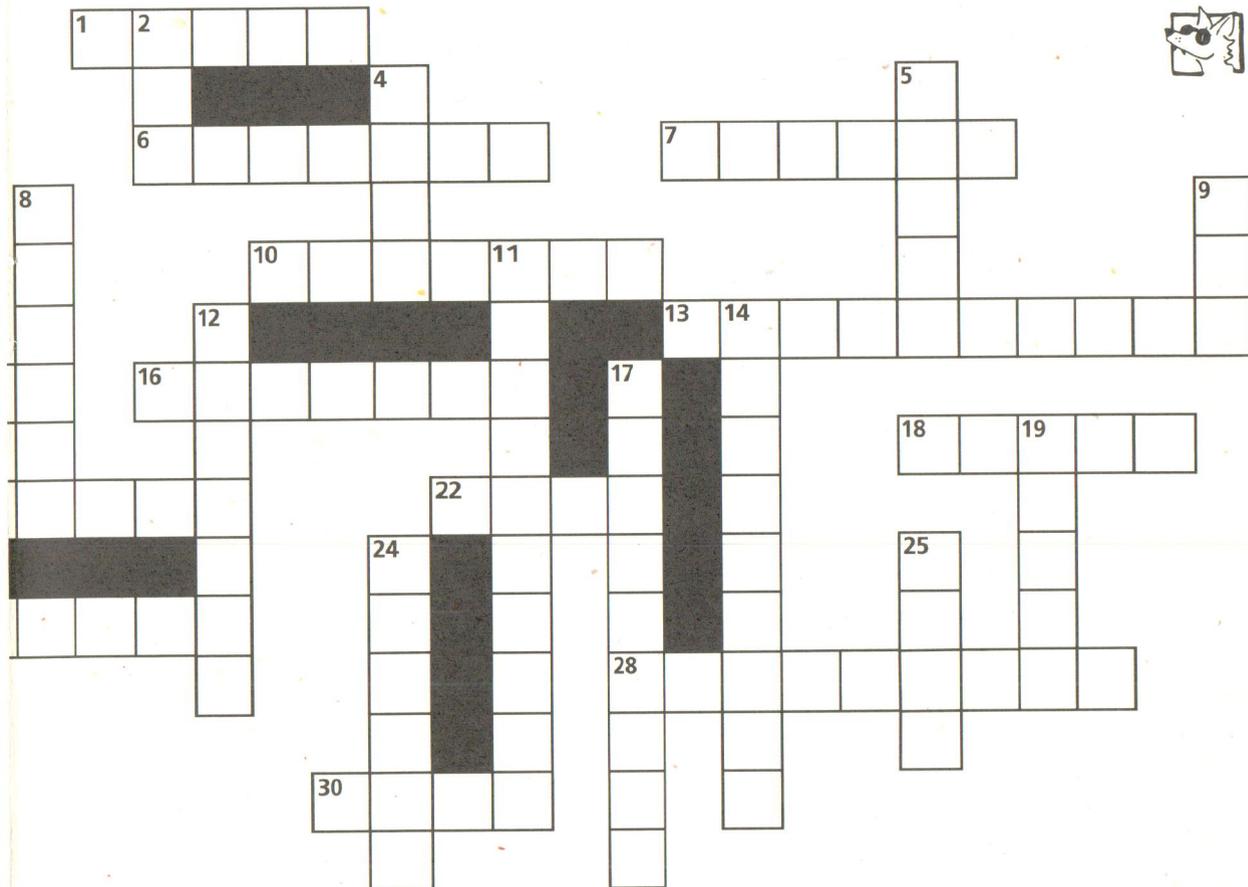
1. These natural bridges are formed in the _____ Mesa Sandstone.
6. This bridge was named for the rock art symbols found on it.
7. The _____ pine tree is known for the tasty nuts that come from its cones.
10. This tree has small blue "berries" and is sometimes called a cedar.
13. This animal is known for its powerful back legs and long ears.
15. Native people used this plant's fibers to make ropes and sandals.
16. Food, water, shelter and space make up an animal's _____.
18. Bridges differ from arches in that bridges are formed by flowing _____.
21. Before "Owachomo," the third bridge was named _____.
22. All three bridges have names that come from this Native American language.
26. This bridge looks thin and fragile.
28. This president declared Natural Bridges a national monument in 1908.

29. Sometimes animal's feet leave these behind when they walk through mud or snow.
30. The state in which Natural Bridges National Monument is found.



Down

2. This large mammal has antlers that weigh more than 30 pounds.
3. _____ is the second largest bridge in the world and the largest in the monument.
4. Another name for a cougar: mountain _____.
5. Most of Natural Bridges' electricity comes from this kind of power.
8. You may see a collared one of these sunning itself on a rock.



9. This creature flies at night hunting for insects.
11. A picture carved or pecked into stone by native peoples long ago.
12. This is the largest natural bridge in the world.
14. The canyon that lies between Kachina and Owachomo.
17. This word describes the smooth sandstone of the Southwest.
19. When you hike in a national park, always stay on the _____.
20. Sometimes heavy rains cause flash _____ in the canyons.
23. This common black bird is often seen soaring through the canyons.
24. You can sometimes hear this animal howl at night in the desert.
25. An underground room where some native peoples hold special ceremonies.
27. The Spadefoot _____ spends the majority of its life buried underground.

Make the Connection



Connect the dots.

What is this animal?



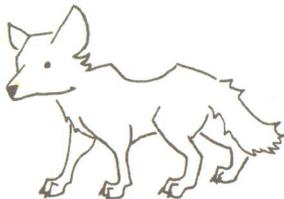
This animal is fast! It can run up to 35 mph when chased! But don't make fun of his big ears. They help him stay cool by releasing one-third of his body heat.

Watch Your Step!

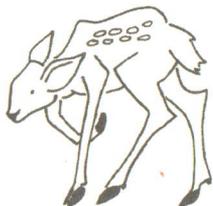


Junior Rangers also use their detective skills. By looking at evidence that animals have left behind, like their tracks, we can tell what animals have been there.

Can you match these tracks with the correct animal?



Coyote



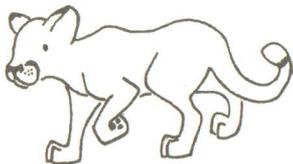
Mule Deer



Rabbit



Lizard



Mountain Lion



Rock Art Adventure



Rock art was one way people communicated long ago, kind of like writing a letter to a friend. People used paints to make pictographs and pecked the rock to make petroglyphs. Create your own rock art in the space below.

What story does your rock art tell? _____



Interview a Ranger



Find a Park Ranger and ask them four questions. If you need help writing, ask an adult to help you.

1. What does a Park Ranger do? _____

2. Why is Natural Bridges a National Monument? _____

3. How did you become a Park Ranger? _____

4. Make up your own question: _____

Park Ranger Signature

Date

Natural Bridges

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Natural Bridges Junior Ranger Program

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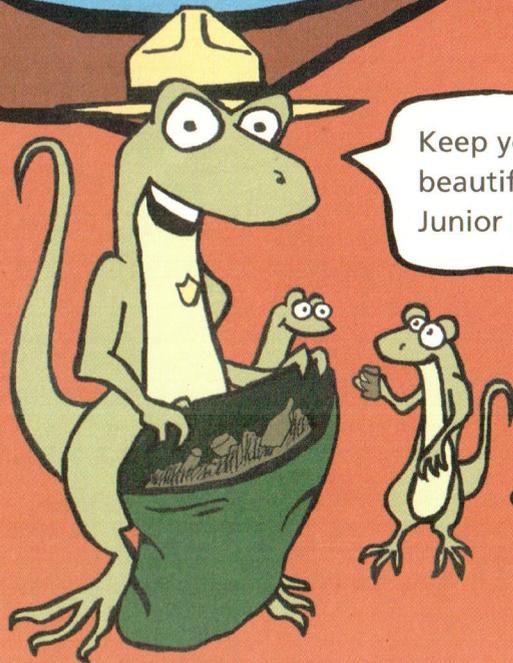
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Keep your parks
beautiful and clean,
Junior Rangers!