



Bandelier National Monument



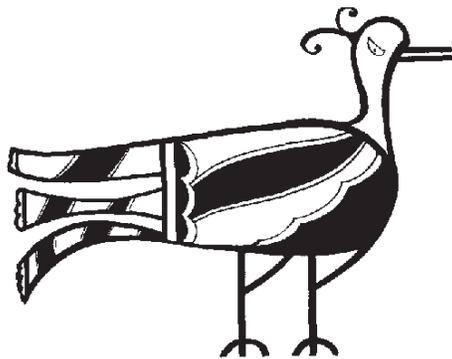
Deputy Ranger Challenge Booklet



7th Grade and up

Name: _____





Map & Directions

Some of the activities in this booklet have to be done in particular places. Look on the map for the location of the next activity you are doing.

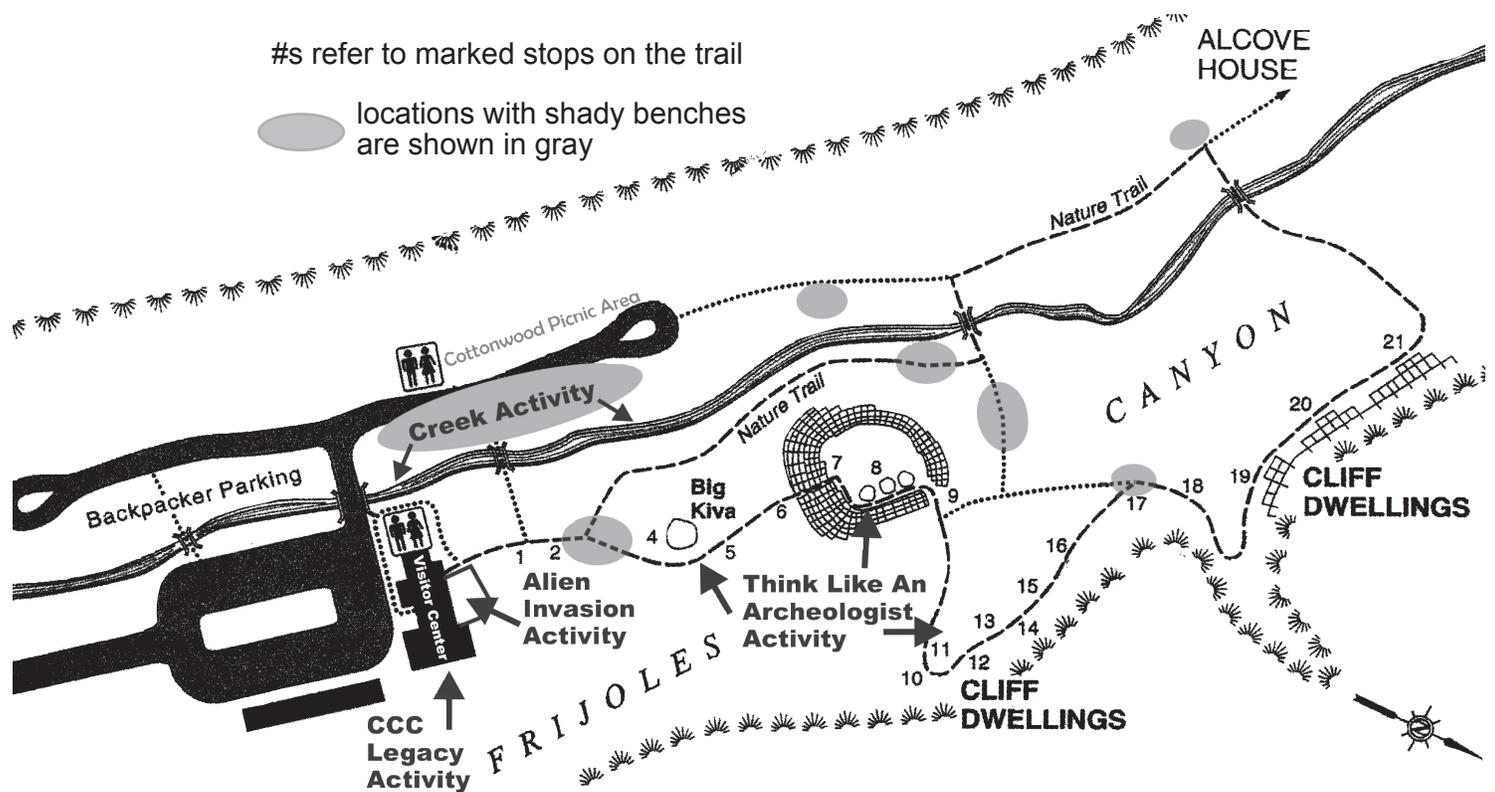
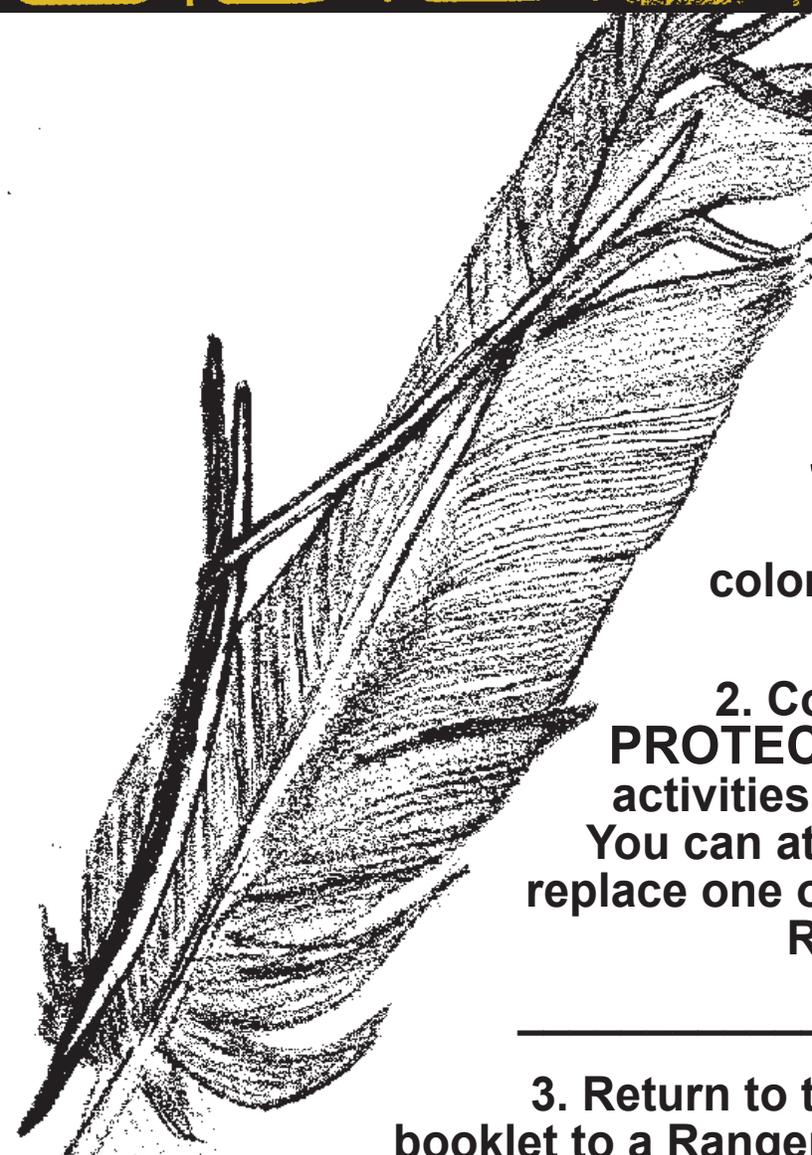


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HOW TO BECOME A Bandelier Junior Ranger:

1. Pick up a pencil, colored pencils, and a clipboard in the visitor center.

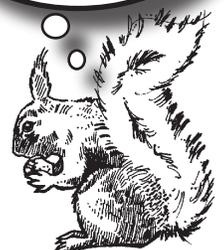
2. Complete the **RESPECT AND PROTECT** activity, plus 5 more of these activities during your visit to Bandelier. You can attend a Ranger-led program to replace one of your activities. Just have the Ranger sign here:

3. Return to the visitor center and give this booklet to a Ranger to complete your challenge.

Make sure to bring the following items on your exploration:

water, snacks, sunscreen, weather appropriate clothing, and shoes you can wear in the water (if you are going to do the creek activity, we suggest saving it for last). **Please refer to the map and find the shady places on the trail to complete your activities.**

DON'T FORGET: water, sunscreen, weather appropriate clothing and SNACKS!!!





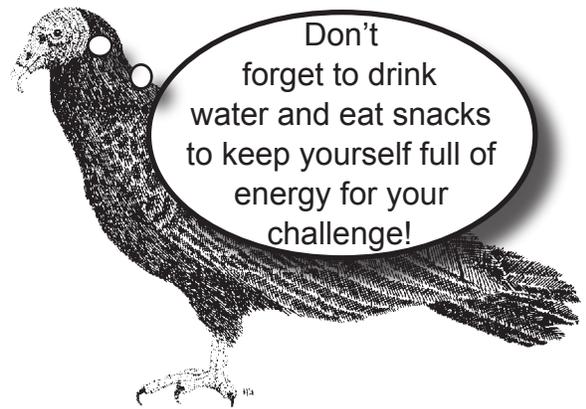
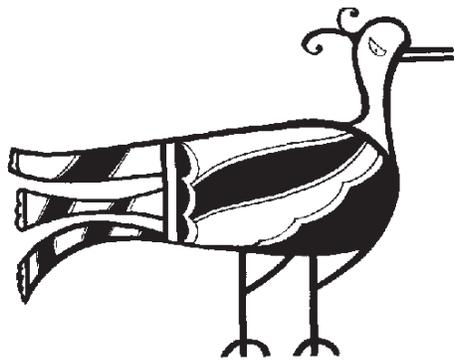
PROTECT and RESPECT Story Puzzle & Word Search

This activity is very important. You must complete it before starting on your challenge in the rest of the park. Fill in the blanks in the story below (required) and find the answers in the word search to the right (optional).

After filling our bottles with _{TRAWE} from the drinking fountain, we started our tour of Bandelier National Monument behind the visitor center. “Stay on the _{LIRAT} , please,” the ranger said to us _{EITLQYU} , “I am using a soft voice to respect wildlife and other visitors,” she added.

She continued, “Bandelier is a National Monument established to protect the cultural and natural _{SRORUCESE} on this land. Today, this land is the _{BIHTATA} for many species of plants and animals. Please help them stay healthy by not feeding them. Human food can make wildlife _{KCST} . You also help them by keeping their home clean and unpolluted when you throw away or _{YCLERCE} your trash and pick up any _{TLRETI} that you see.

A long time ago, the Ancestral Pueblo People lived here, and remnants of their culture are still here today. Let’s go and check them out!” So we continued down the trail. After a while we came to some cliff dwellings called cavates. We explored them by climbing up _{DERLADS} into them. In some of the cave homes, we saw markings on the walls that did not belong there. I would never do that! These marks are called _{FFIGRATI} and were made recently by disrespectful visitors. After we left the cavates, we came to a place called Long House. Above Long House, high up on the cliffs, are pictures carved into the rocks. These are called _{PHEGROTYLPS} and were made by the Ancestral Pueblo people a long time ago. There’s so much mystery to explore at Bandelier!



Don't forget to drink water and eat snacks to keep yourself full of energy for your challenge!

Answers are on page 17.

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

PROTECT



RESPECT

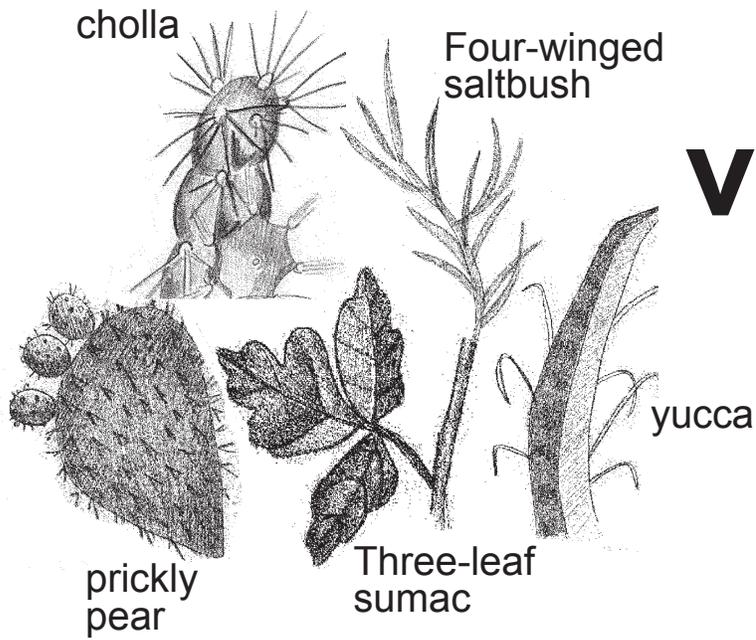


Alien Invasion

Introduction of alien (non-native exotic species) plants onto our public lands is threatening the survival of native plants like the ones you see in this garden. Alien plants take up space or drink scarce water and push the native plants out.

Cheat grass and mullein are two examples of aliens causing problems at Bandelier.

NATIVES



ALIENS



VS.

How do you think these plants were introduced into the park?

What could you do to get rid of them?



Climate Change at Bandelier?

Scientists have been studying changes in weather and plants at Bandelier for over 30 years. They are very concerned that it is getting warmer and drier here.

As this is happening, many of the evergreen trees are dying in the lower elevations of the park. In 2003, over 80% of the pinon pine trees died in the park.

Find an evergreen along the trail and use the key below to identify it.

3 things Bandelier is doing to slow climate change are:

- 1) RECYCLING PAPER, PLASTIC, & ALUMINUM
- 2) BUYING RECYCLED MATERIALS
- 3) USING SOLAR ENERGY

What can you do to fight climate change?

Is this tree an Evergreen?

Yes

No

Does this tree have cones and needles?

Yes

No

Does this tree have scale-like leaves, shaggy bark, and blue berries (only on the female plants)?

Yes

No

This tree is a Juniper

Is this tree tall and straight with long needles?

Yes

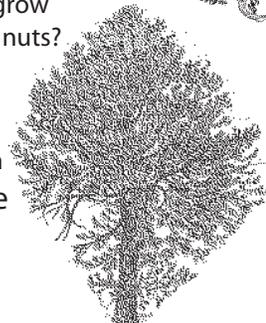
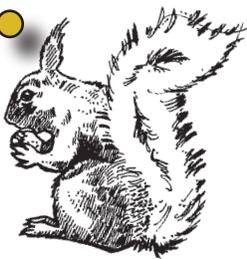
No

This tree is a Ponderosa Pine

Is this tree short and bushy with short needles, and does it grow cones and sometimes small nuts?

Yes

This tree is a Pinon Pine





Think like an Archeologist

As you see each of these structures on the main loop trail, answer these questions about them. If you have a trail guide, read it to learn more.



Big Kiva (stop #4)

What materials do you see that could have been used to put a roof on this structure?

Now that this kiva has been excavated, how could you protect it?



Tyuonyi (stop #7)

What might be the advantage of living in a circular village on the canyon floor with many people?

What might be the disadvantages of this living situation?



Cavates (stop #11)

What is the advantage of these cavates being located on the south facing canyon walls?

Look at the features in the cavate at stop # 15. What activities might have occurred here?

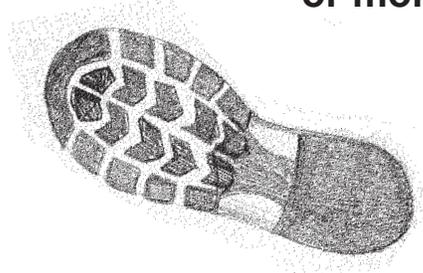
Today, archeologists rarely excavate cultural sites such as these. Once they are exposed, they erode very quickly and preserving them becomes difficult and expensive.

To the descendants of the Ancestral Pueblo people excavating their ancestral homes is disrespectful. This place is sacred to the Ancestral Pueblo people.

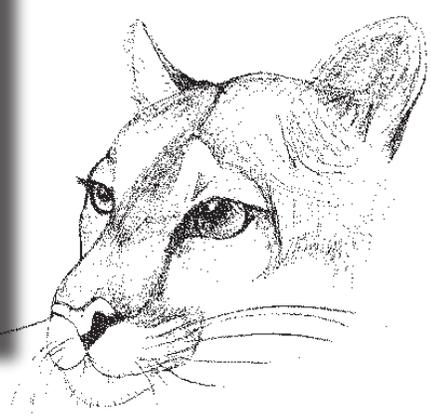
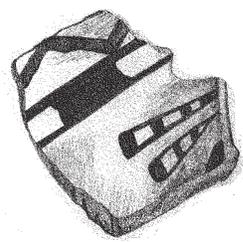


Be a Park Superintendent

Imagine you are the superintendent of Bandelier, which means you would oversee and manage this whole park. Your job would be to make a decision about how to protect this special place for future generations. Choose one or more of these issues and propose a solution:



- Conservation Issues:
- Theft of pottery sherds
 - Graffiti in cavates and on cliffs
 - Poaching wildlife
 - Feeding wildlife
 - Dogs off leash
 - Hiking off designated trails
 - Illegal campfires



Your issue(s) of choice:

Your solution(s):





Reintroduce Native Species?

When the Ancestral Pueblo people lived in Bandelier many animals lived here that are not found here today. Either their habitats have changed too much, like many of the fish in the Rio Grande, or they were hunted out of the area. Many of these species are listed below.

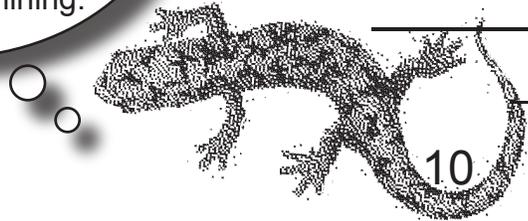
Read them, then decide:

Which species do you think could be reintroduced? Why?

				
Rio Grande Cutthroat Trout	Wolf	Bighorn Sheep	Grizzly Bear	River Otter

What can you do to help keep other species from disappearing from their original habitat or completely from the earth?

I am a Jemez Mountain Salamander. I live only in the mixed conifer forests of the Jemez Mountains. I am endangered because of logging, road construction, disease and mining.





Monitoring Ecosystem Health

National Parks hire researchers to monitor changes in ecosystem health. They often measure the following conditions:

air quality, water quality, insect populations, amphibian & reptile populations, and forest health.

It's important that humans understand how their actions change the earth.

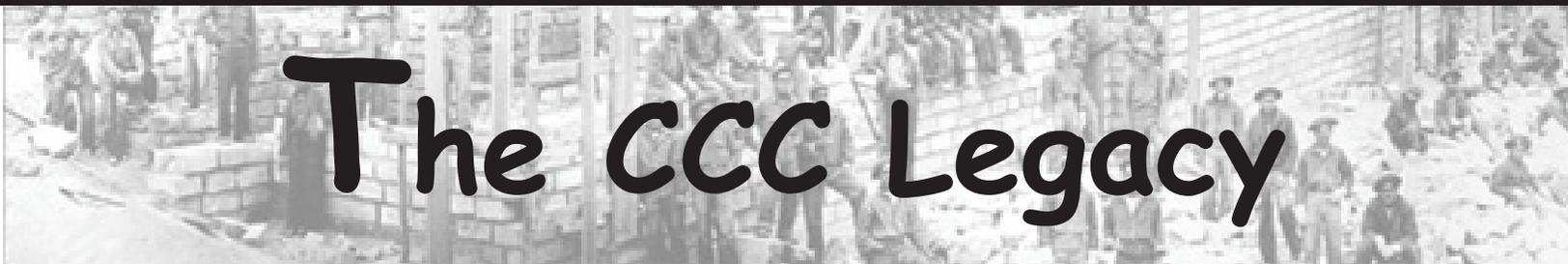


Bandelier has Class I air, some of the cleanest air in the country. How could it affect your visit today if the air quality was poor?

Amphibians and fish are especially sensitive to changes in water quality. Some species may even be eliminated by pollution. Why would it be a problem if all of the frogs and fish disappear?

Prescribed fires and mechanical thinning help keep our forests healthy by reducing the number of trees. Bandelier has some forests that have too many trees because people suppressed natural fires for over 100 years.

Why is it a problem to have heavily treed forests near our homes?



The CCC Legacy

In the years of the Great Depression, President Franklin D. Roosevelt made jobs for thousands of unemployed Americans by creating the Civilian Conservation Corps (CCC). At Bandelier from 1933 to 1941, hundreds of young men in the CCC worked to build the 31 Pueblo Revival style buildings including the visitor center. They also built the road into Frijoles Canyon and many miles of trails.

The CCC workers were not only hard laborers, but skilled craftsmen. Tinwork, furniture making, carpentry, carving and masonry were all taught and practiced at the CCC camp at Bandelier. **CCC craftsmen created wooden bed frames, dressers, chairs, stools, benches, and couches, as well as carved beams, corbels, built-in shelves, tin table lamps, hanging light fixtures, and mirror frames.** Designs incorporated Southwestern motifs, including the wild turkey design, scallops, wheels, sunbursts, rosettes, angles, and curves. Some were highlighted with paint. Tin chandeliers, wall sconces and wooden furniture are still in use at Bandelier National Monument.

For this activity, walk through the visitor center and notice the decorative architectural details. In the boxes below draw or describe 3 features made by the CCC enrollees:

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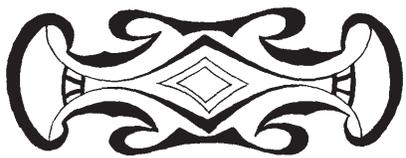


Pueblo Voices

The following quotes were written by the Affiliated Pueblo Committee consisting of members from Santa Clara, San Ildefonso, Cochiti, and Zuni Pueblos.

“We are tied to the land in many ways - the clay used in our pottery, the food grown in our fields, the homes we live in. . . we believe we came from the land, we belong to the land, and we will return to the land - just like our ancestors did before us.”

“For hundreds of years our people have conducted traditional activities. Our people sang, danced, and prayed the same songs, dances and prayers we continue today. We do these things for the good of ALL people - for life, health, and blessings; and continue what we are taught by our elders. When we participate in these activities, we help our communities, our people, and our children to continue as Pueblo people.”



How does this compare to your own cultural heritage? Why is cultural identity important? What do these passages make you think about? Express your thoughts here:



NPS: An Inside Look

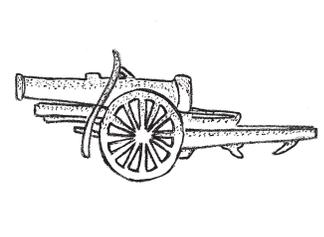
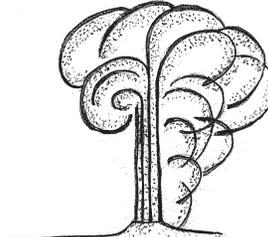
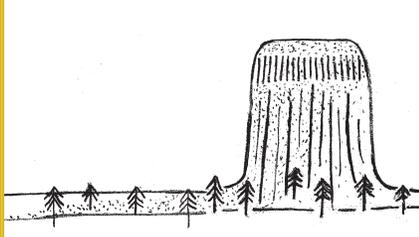
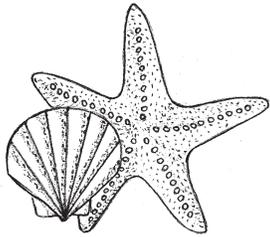
For this activity, you will be thinking about the National Park Service as a whole, beyond your experience at Bandelier. There are over 380 units in the National Park Service (NPS), each established for different reasons.

National Seashores

National Monuments

National Parks

Battlefields



and many more . . .

What is your favorite NPS area? Why?

Why is it important to protect these special places as part of a national park system?



Reflections about Bandelier

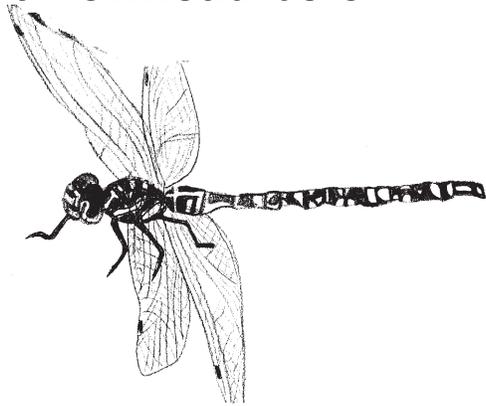
In the space below, write or draw about your experience at Bandelier. Poems, journal entries, or illustrations are just some suggestions. The rangers would love to keep this, if you wouldn't mind!

NAME: _____

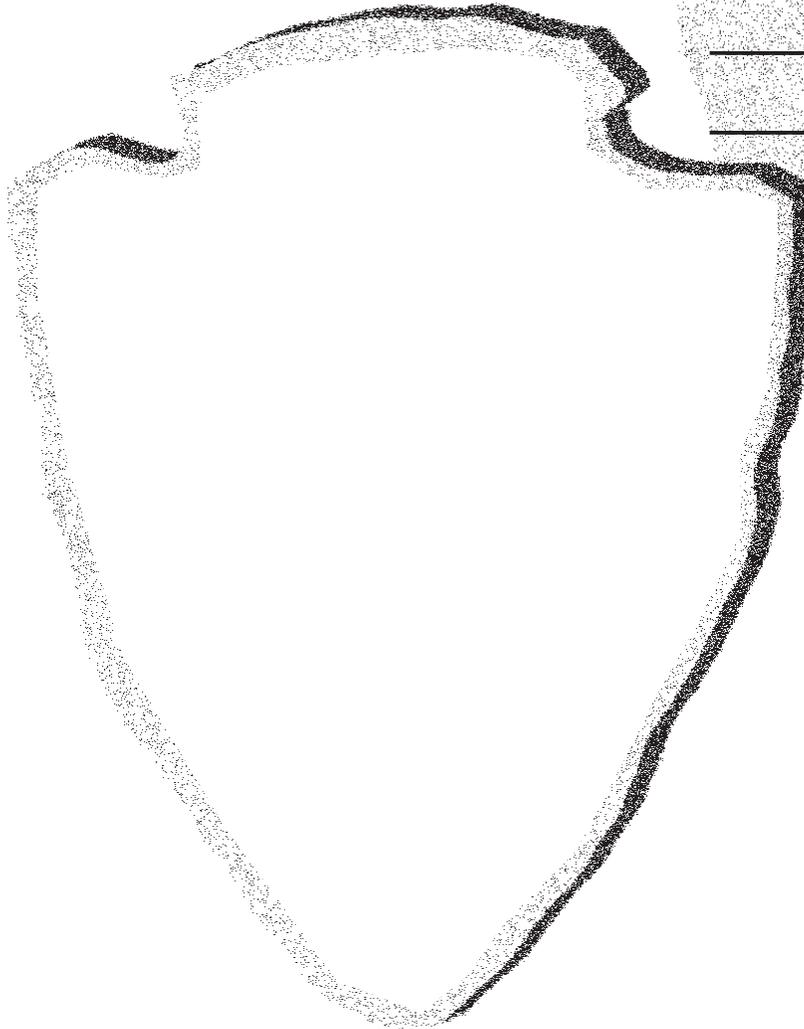


Make your own Deputy Ranger pledge!

Think about what it means to be a Park Ranger, then write your own pledge on these lines, and draw a picture to represent it in the arrowhead below.



As a Deputy Ranger
I promise to



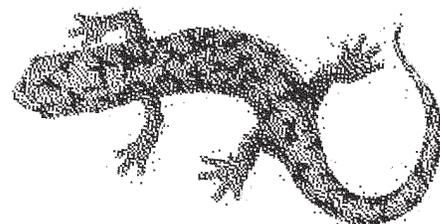
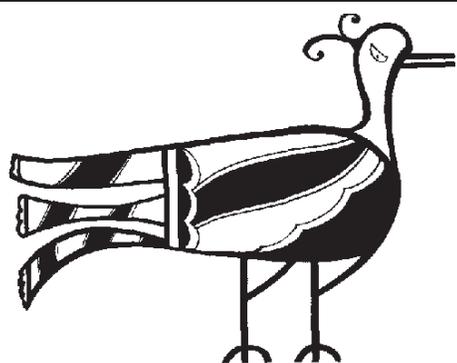


Puzzle Answer Key

On this page you will find the answers to the Protect and Respect word search puzzle on page 5.

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







Deputy Ranger Pledge

**As a Deputy Ranger, I
promise to explore the
wonders of the National
Parks and nature all around
me; to learn the importance
of every living thing;
to live every day as
earth's best friend;
and to help
others do the
same.**

This Deputy Ranger booklet was funded by the National Park Foundation, national charitable partner of America's National Parks with support from the El Pomar Foundation. The National Park Foundation supports the NPS Junior Ranger program as part of their nationwide effort to connect children to America's heritage and ensure the future of our national parks.



To learn more about the online NPS Junior Ranger program, visit www.nps.gov/webrangers.

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