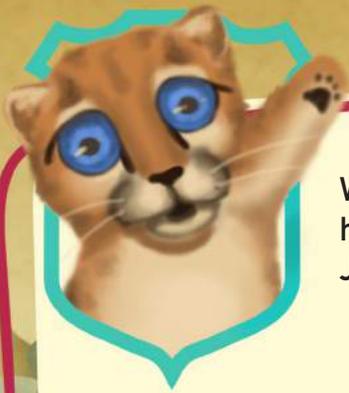





**Junior
Ranger**
Activity Book

El Malpais National Monument



Welcome to El Malpais National Monument! We are excited to have you join the ranger team. In order to become an official Junior Ranger at El Malpais, please follow the instructions below.

- 1 Complete the number of activities listed with your age group below.
- 2 Complete the 'Flat Hat Chat' activity at the end of the book.
- 3 Take a walk in the monument.
- 4 Return your book to the Visitor Center and get sworn in!

Or, if you don't have time to finish while you're here, mail your book to:

El Malpais National Monument
1900 East Santa Fe Ave
Grants, NM 87020

Age Groups: How old are you?

Please complete the number of activities listed next to your age group.

6 years or less	Complete 4 activities
7-9 years old	Complete 6 activities
10-12 years old	Complete 9 activities
13 years old and Up	Complete all 11 activities

This book belongs to _____



Who Lives Here?

Many animals live in El Malpais National Monument. They live in familiar habitats where they can find food, water, and safety. Can you locate the nine animals hiding in this picture?





Safety First

While we explore the monument, we can help keep it safe. Circle the activities that keep the park safe and clean.



RECYCLE



GRAFFITI



PHOTO



FEED



LITTER



PICK

El Malpais National Monument is a great place to hike! Circle the items below that you will need to take with you for a safe and fun hike.





Up in the Sky

When is the last time you looked at the stars? Constellations are groups of stars that can make a picture. These pictures tell stories that connect us to the past.

Connect the dots to discover the Big and Little Dippers.



Bonus! Light from buildings or air pollution can make it hard to see stars. How can people help keep stars visible?



Desert Word Search

What do you see when you look around the monument? El Malpais is home to many animals, plants, peoples and geologic wonders. How many of them can you find in the word search below?

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

CACTUS
 TUBE
 ZUNI
 PUMA
 BAT
 AA

PAHOEHOE
 BASALT
 VOLCANO
 SHIELD
 CINDER
 LAVA

BEAR
 PRONGHORN
 RABBIT BRUSH
 MONUMENT
 ACOMA
 ELK





Lava Tube Maze

Lava tubes are caves formed from molten lava. As the molten lava flowed over the land, it cooled and under-ground tubes were often left behind.

These visitors are trying to hike through Big Skylight Cave. Can you help them find the exit? Don't forget to lead them past the signs that tell visitors what they will see in the cave.

Break Down
Large boulders that fell from the ceiling of the lava tube.

Moss Garden
At the entrance of the cave, there is a green mossy area that is home to many unique and tiny living things.

Bat Roost
A spot where bats like to gather and sleep.

Lava Side – rock shape formed when molten lava hardened while dripping from the ceiling.

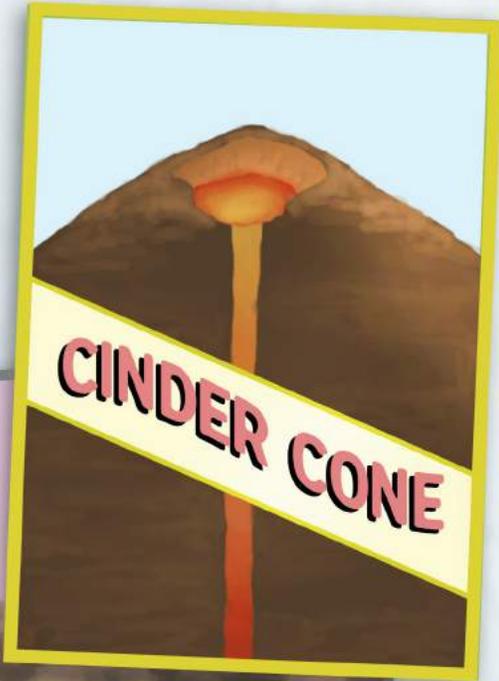
START





What's That Thingamabob?

All of these geologic features can be found in El Malpais National Monument. Match the term with its definition. Explore the Visitor Center exhibits for help.



Pahoehoe



?
A volcanic rock made of angular blocks of lava with a very rough surface

?
A broad, domed volcano with gently sloping sides

?
A dark, fine grained volcanic rock

?
Basaltic lava that forms smooth or rope-like surfaces

?
A cone formed around a volcanic vent that is made up of bits of lava, ash and cinders thrown out during eruptions



Monument Bingo

There are many treasures to discover as you explore El Malpais. Look for the things listed below. When you find one, draw a picture in the box of each item or place. Get five in a row to make Bingo!



Brown park sign	El Calderon Crater	Something larger than a car	Lava tube	Volcanic rock
Bird	Something wet	Squirrel	Map	National Park Service arrowhead
Ponderosa pine tree	Rock cairn	FREE SPACE!	Rabbit	Something smooth
Park ranger	Hiking trail	Continental Divide Trail	Something rough	Douglas Fir Tree
Something smaller than a quarter	Bug	Visitor Center	Flower	Sandstone Bluffs Overlook



Fact or Opinion?

When learning about history and nature, park rangers do a lot of research to be sure they have the best information about the environment.

Below are statements about El Malpais National Monument. Can you help rangers figure out if they are facts or opinions? Place an F next to the statement if it's a fact or an O next to the statement if it's an opinion.



- 1 _____ Black bears, mountain lions, elk, deer and pronghorn are some of the largest animals living in the monument.
- 2 _____ It would be awesome if the volcanoes erupted molten lava again.
- 3 _____ El Malpais is the coolest national monument in the National Park Service.
- 4 _____ A cinder cone is a type of volcano.
- 5 _____ There are too many bats living in the monument.
- 6 _____ Animals are sad when people leave trash and pollute the environment.
- 7 _____ Lava tubes are the best type of cave in the world.
- 8 _____ There are 30-40 volcanoes in the El Malpais area.
- 9 _____ Lava here is basaltic, a type of rock that is rich in iron and magnesium.
- 10 _____ El Malpais was made a national monument in 1987.





A Changing Land

Many changes have occurred in the monument. They have happened recently and in the ancient past. Through careful study and research, scientists and park rangers can understand why these changes may have happened. This research starts by creating a hypothesis, a possible explanation, as to why something happened.

Below, read about some important changes.
Create a hypothesis as to why each change occurred.

Grizzly bears once lived in El Malpais. They no longer do.
What's your hypothesis as to why they are gone?

People mined guano (bat poop) from caves. When they stopped, more bats began living in the caves. Why did the number of bats increase?

Ancestral Puebloans left their homes and buildings. Why did they leave?

Pronghorns returned to El Malpais after being hunted out of the area. Why did they return?

Name one change the monument might go through in the future and its cause.



Reflections

Find a spot in the park that is away from human noise and traffic. Set an alarm and sit quietly for three minutes. Pay attention to the things you can see, touch, hear, and smell.

Circle the emotions you feel during this experience. Use the blanks to add your own emotions if you wish.



Who would you like to share this experience with? Why?



Lava, Lava Everywhere!

Hello, Captain! You are an explorer, and after weeks of traveling on foot, you arrive at the lava flows of El Malpais. How will you get to the other side? The Spanish called the area El Malpais, meaning “the badlands,” because it’s so hard to cross. Many people went around the flows; but some, including native peoples who have lived in the area for over 5,000 years, found ways to navigate across the flows.

Like all good explorers, write a journal entry about the day you came to El Malpais. Describe how you, as the leader, felt when you saw such a beautiful but difficult landscape. Do you want to go around the flows or go through them? Why?





Flat Hat Chat

Find a park ranger and ask him or her the following questions.
Write down your discoveries.

What is your favorite part about being a park ranger?

How do you protect the monument?

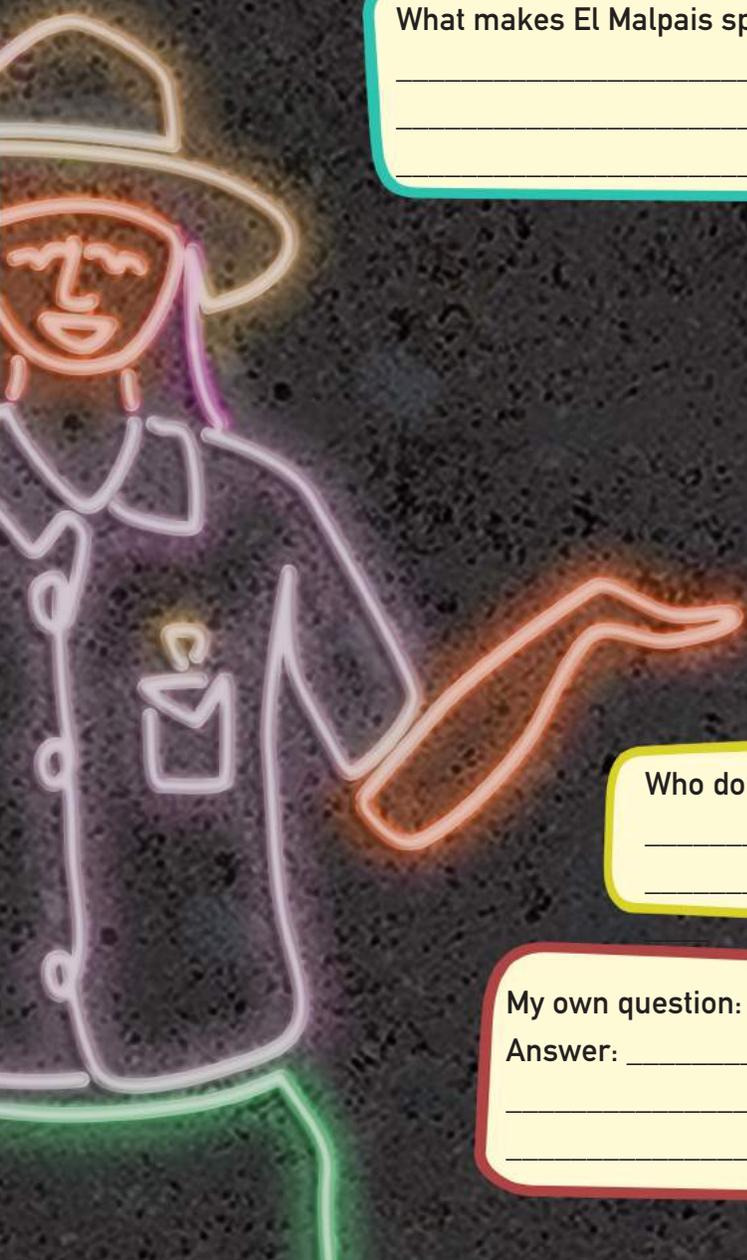
What makes El Malpais special?

Can you share one symbolic piece of your uniform?
What does it represent?

Who do national parks belong to?

My own question: _____

Answer: _____



Junior Ranger

Certificate of Achievement



National
Monument

Presented to _____

By Ranger _____

On this date _____



Didn't have time to finish?

Completed books can be mailed to:

El Malpais National Monument

1900 East Santa Fe Ave

Grants, NM 87020

Content by El Malpais National Monument Park Rangers

Illustrated and designed by Ray Radigan, 2018