



Junior Ranger

Activities Booklet



Become a Junior Ranger

Just like park rangers, Junior Rangers are important people who help preserve and protect Lassen Volcanic National Park. You can become a Junior Ranger by exploring and learning more about Lassen. Follow the steps below to become a Junior Ranger.

1. Complete at least 8 pages in this booklet and the box below.
2. Share your book with a park ranger.

Share your completed booklet with a park ranger at the Kohm Yah-mah-nee Visitor Center or Loomis Museum.



Something new that I learned at Lassen Volcanic National Park:



Be Prepared

Hiking is a great way to explore the park and to get moving in the outdoors! Junior Rangers safely explore Lassen by being prepared. This starts with packing everything you need to be safe while hiking.

Directions: Circle the ten essential items to take with you on your hike. Cross out the items that you don't need to take with you.



Green Bingo

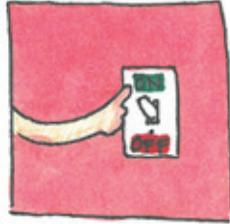
Did you know that the choices you make at home and during your visit can affect Lassen Volcanic National Park? Climate change and global warming threaten the air, water, and snow at Lassen. These changes can harm wildlife habitat, farming, and even drinking water!



Directions: When you see someone making a green choice or if you make them at home, put a big X on the square. You win every time you complete a row (up, down, or diagonally).



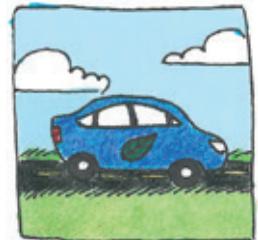
Recycle



Turn off lights when not in use



Use a reusable bag



Drive a hybrid vehicle



Walk instead of driving



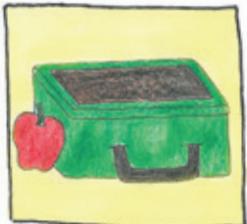
Donate old clothes or toys



Dress warmly instead of turning up the heat



Use energy efficient lights



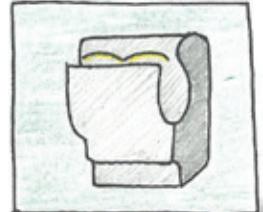
Use reusable containers



Use or buy recycled products



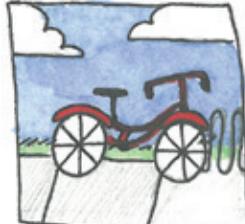
Hang dry clothes



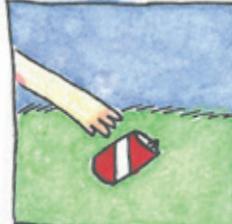
Use a hand dryer instead of paper towels



Shop at a farmer's market



Ride a bike instead of driving



Pickup litter



Plant native plants

Forest Fire Matching

Not all forest fires are bad. Wildfires that start by natural causes, such as lightning, play an important role in nature. Fire is part of a natural cycle that helps keep forests healthy. Most plants and animals are able to adjust to survive a wildfire. These adaptations, or changes, are similar to the way you wear a coat to stay warm in the winter.



Directions: Draw lines to match the animals and plants below with the matching fire adaptation.



Burrows deep underground during a fire



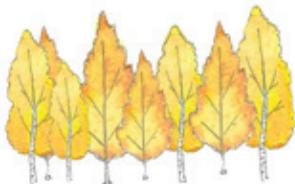
Flies away from fire



Thick bark resists fire



Produces new growth shoots from roots after a fire



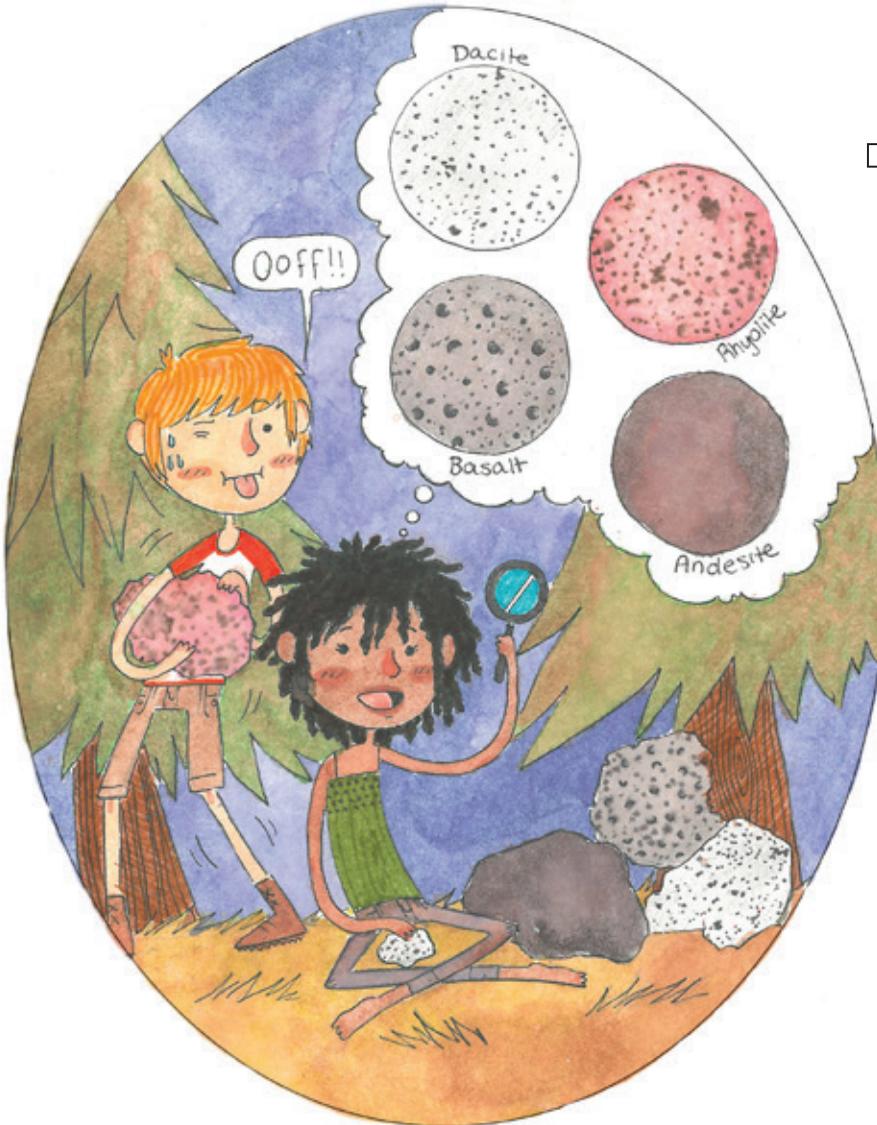
Runs away from fire



Rock Hunt

Every rock in Lassen was formed by a volcano. Some flowed as thick lava like toothpaste and are smooth and heavy. Other rocks exploded under pressure of volcanic gases like a shaken soda can and are jagged and lightweight.

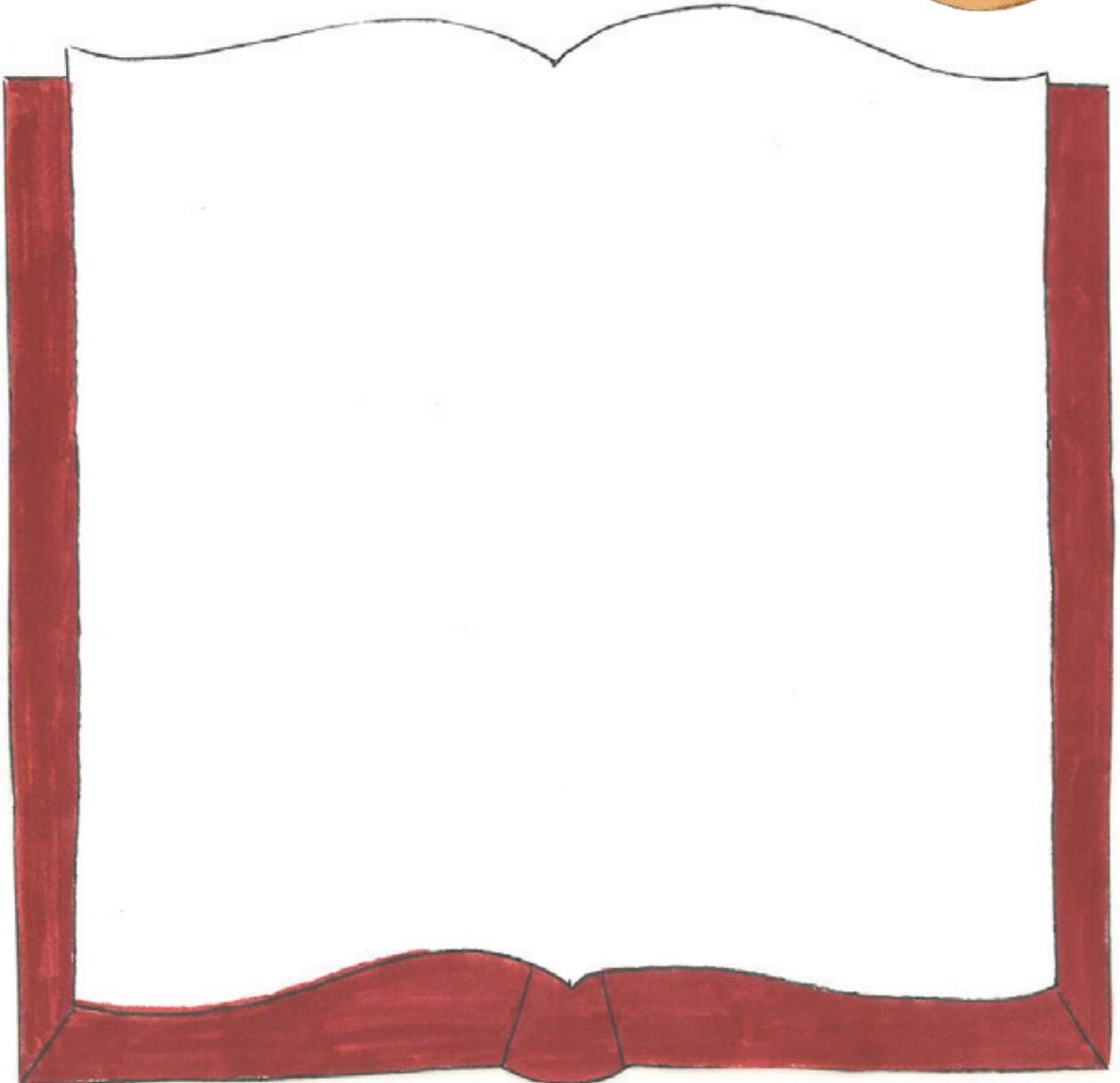
Directions: As you visit the park, check off the kinds of rocks you find. See if you can find one of each type of rock listed below. Can't see rocks under all the snow? Look inside the visitor center.



- A rock bigger than you
- A rock that sparkles
- A striped rock
- A smooth rock
- A jagged rock
- A lava rock
- A light-gray rock
- A pink rock
- A black rock
- A rock with a crack in it
- A rock with a plant on it

Write and Ramble

Directions: Hike a park trail or explore an area of the park then write a story or poem. Can you share what you see and how you feel? What plants, animals, or natural objects did you observe?



Nature's Kaleidoscope

Lassen hydrothermal (*hot water*) features are part of an active volcanic system. In these areas, heat, water, gases, minerals, and tiny life forms called microorganisms combine to create a colorful landscape that reminds us that this area is continually changing.



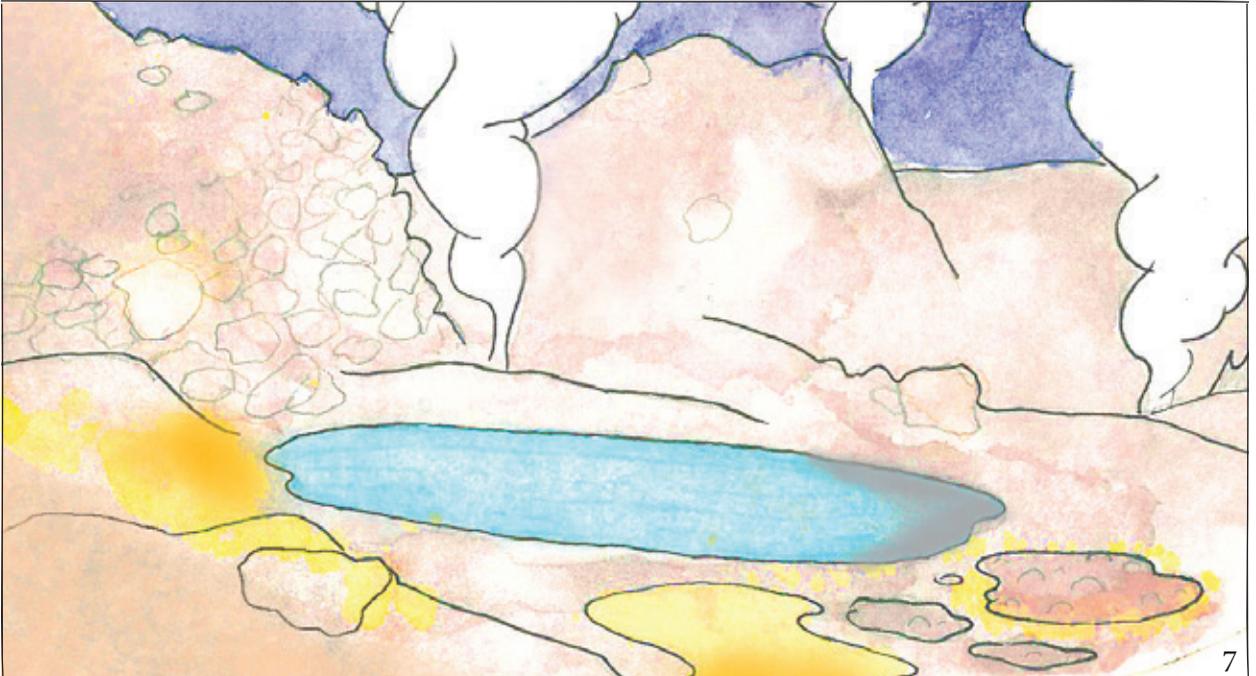
Directions: Write down the colors you see in each feature at Sulphur Works or Bumpass Hell. For your safety, be sure to stay on the sidewalk or boardwalk. If you are not able to visit a hydrothermal area, you can use the picture below.

Stained ground: _____

Boiling springs: _____

Mudpot: _____

Fumarole/Steam Vent: _____



Life in a Hot Spring

Scientists from NASA, America's space agency, are studying special tiny life forms called microorganisms that thrive in extreme environments like Lassen's hydrothermal areas. Kids like you help astrobiologists learn more about these areas and what they might tell us about similar environments on early Earth, moons, and other planets like Mars!

Directions: Locate each word below in the word search.
Words may run down, across, or diagonally.

- ACID
- ALGAE
- ASTROBIOLOGY
- BUMPASS HELL
- EARTH
- EXTREME
- FUMAROLE
- GASES
- HOT
- MARS
- MICROORGANISM
- MINERAL
- SCIENTIST
- STEAM
- SULFUR

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



Animal Detectives

Lassen is home to animals both big and small. You may spot some of these creatures during your visit, or you may see signs that they have left behind, just as you leave footprints on a trail. When you find an animal track, see if you can tell what the animal was doing when it left its footprint.

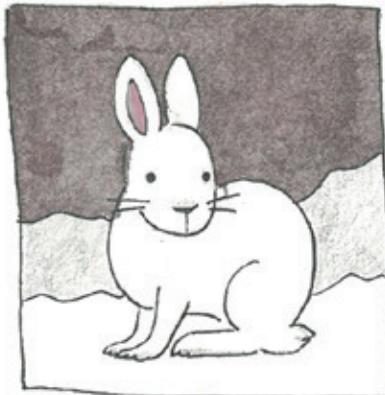




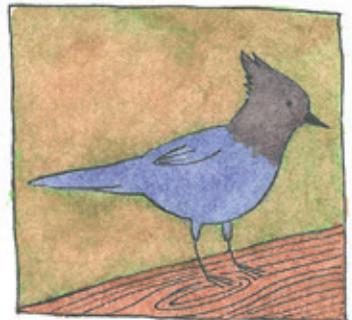




American (pine) marten



Snowshoe hare



Stellar's Jay

Directions: Write the name of the animal below each track or draw a line to its picture. Check the box if you spotted the animal or a sign of the animal in the park.





Black-tailed deer



Golden-mantled ground squirrel

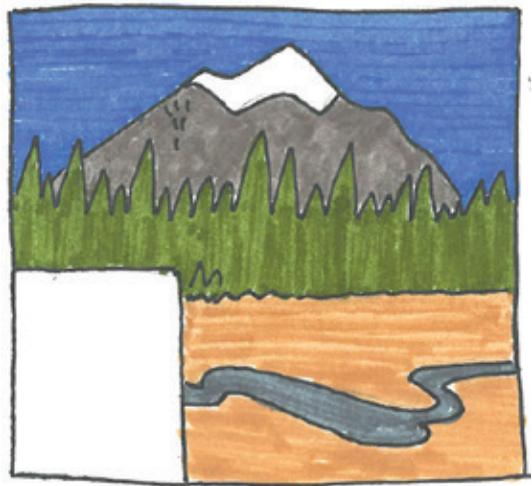
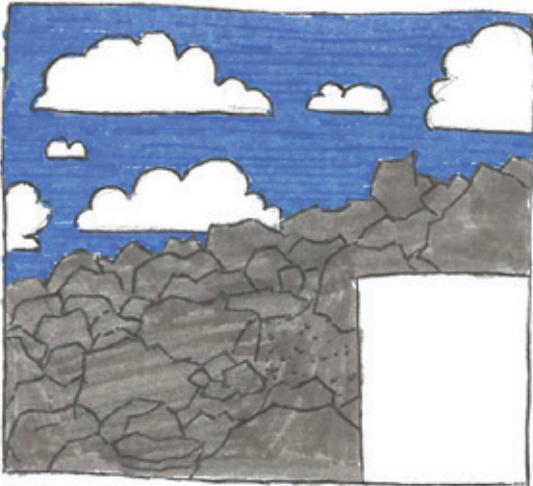
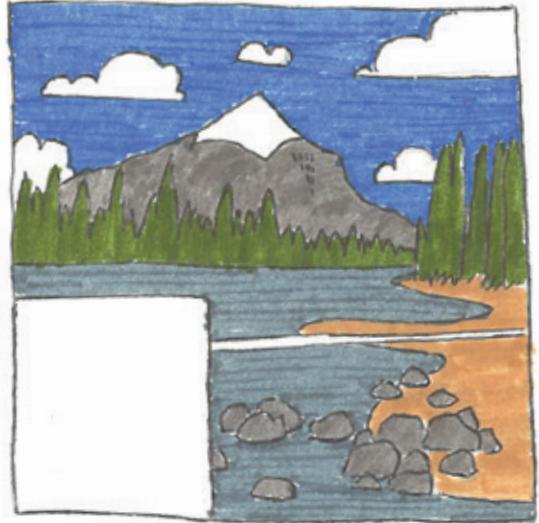
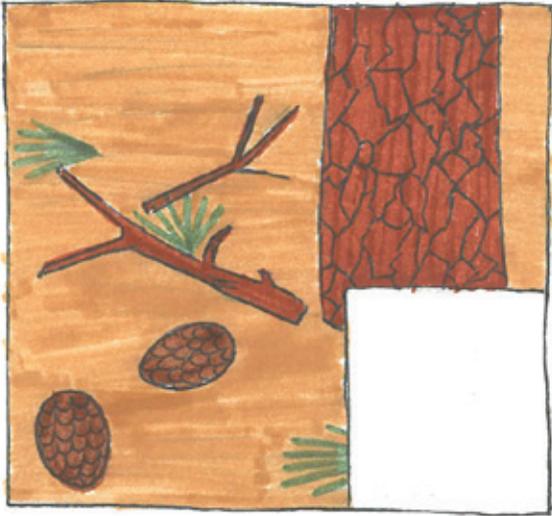


Coyote

Bug Discovery

Animals and plants live in a variety of places, just as people live in different neighborhoods. A habitat is the place where an animal or plant lives. Some creatures live in and around lakes, while others make their homes in meadows, forests, or rocky areas.

Directions: Draw an insect or arthropod (like a spider) that can live in each habitat below. You can use the examples below or draw others you know of or have seen.



Pinecone Parade

Trees are an important part of the system of life (*ecosystem*). Most trees in the park produce pinecones which contain seeds that can sprout new trees or provide food for animals. Trees provide homes for animals, shade for visitors like you, and even help keep air clean!



Directions: Draw a line from each description to its pinecone and tree.

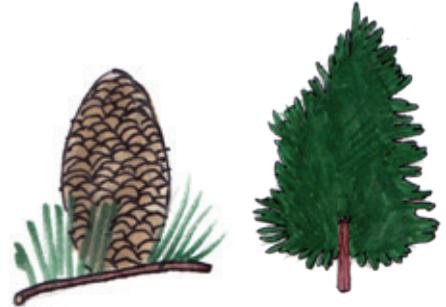
Mountain Hemlock

Needles attached individually

Needles area attached all around the branch

Cones are small about 1.5"-3.5" long and round

Tops of trees droop like a sorcerer's hat



Red Fir

Needles attached individually

Needles twist up and away from the branch like a "white twisty tie"

Cones are 3-5 inches long and break easily

Cones grow upright on branches near the top

Tree is shaped like a typical Christmas tree



Jeffrey Pine

Needles attached in bunches of 3

Cones 5-10 inches long and round

Bark smells like vanilla or butterscotch in summer

"Gentle Jeffrey" cones have sharp turned in prickles but are smooth to hold



Ranger Jobs

There are many types of park rangers. Every ranger helps preserve and protect Lassen with the special job they do.

Directions: Read the riddle and match the type of ranger with the job.

My job is to take care of the trails.
I put in new steps, bridges, and rails.
I make sure there are no rocks in the way,
So you can hike safely today.

Who am I? _____

I work with the creatures who call Lassen home,
Those that flutter, scurry, fly, or roam.
I watch and protect things that grow,
And research things we don't yet know.

Who am I? _____

With a smile I meet and greet,
At a visitor center or on the street.
I help visitors know which way to go,
And discover what Lassen has to show.

Who am I? _____

I help ensure our forests have plenty of space.
I protect buildings and keep people safe.
I wear special clothing when I work in the park,
To protect me from heat like a tree uses bark.

Who am I? _____



Firefighter



**Park Guide
(Interpreter)**



Trail worker



Biologist

Preserve and Protect Poster

Directions: Junior Rangers **EXPLORE**, **LEARN**, and **PROTECT!**
Draw a poster of what being a Lassen Volcanic
National Park Junior Ranger means to you.



A large, empty rectangular box with a thin black border, intended for drawing a poster.

Lassen Volcanic National Park

This certifies that

is an official

Junior Ranger

I promise to help take care of and protect

Lassen Volcanic National Park and all national parks.

I also promise to continue to explore, learn about,
and protect the natural world wherever I go.



Park Ranger

Date

