



Bureau of Land Management

Junior Explorer



CASCADE-SISKIYOU NATIONAL MONUMENT

Activity Book
MEDFORD DISTRICT



Exploring on **CASCADE-SISKIYOU** **NATIONAL MONUMENT**

The Bureau of Land Management's (BLM) Junior Explorer program introduces young explorers like you to the lands and resources the BLM manages. This activity book focuses on the unique geology and biological diversity found within Cascade-Siskiyou National Monument.



Rough-Skinned Newt

You can work through the activities on your own or invite a sibling, parent, or another adult you know to join you. After you complete the activities, go to page 21 in the book and say the Junior Explorer pledge, sign the certificate, and you're on your way to exploring and protecting America's public lands. We hope you have fun exploring and learning about this unique area and the wide variety of plants and animals that call it home.

R OAM, WALK, & PLAY ON DESIGNATED TRAILS. This is helpful in preventing damage to soils needed to grow all the beautiful plants and flowers you see.

E XPLORE EVERYTHING ENTHUSIASTICALLY BUT AT A DISTANCE. Remember that Cascade-Siskiyou is home to many unique species and we are the visitors.

S HARE THE TRAIL. BE KIND AND COURTEOUS TO OTHER HIKERS. The monument is host to more than a hundred thousand visitors each year! That's a lot of sharing!

P LEASE BE A "PACKER". IF YOU PACK IT IN - PACK IT OUT. This will help keep the monument clean and beautiful. We love bugs as long as they aren't litter bugs!

E NJOY THE FLOWERS! LET OTHERS ENJOY THEM AS WELL BY NOT PICKING THEM. Take as many pictures as you want so you can share their beauty .

C AREFUL TO DO YOUR PART IN PROTECTING the monument's biological diversity. This is a very special place where an amazing variety of plants and animals is found. We can all work together to keep it that way.

T ELL A BUDDY! It is fun to share your experiences by taking or drawing pictures, but leaving behind what you find.

LEAVE NO TRACE

BIGFOOT HAS BEEN DOING IT FOR YEARS

You've probably heard the words, "be safe, be responsible, be respectful" at school, right? Well, the seven principles of Leave No Trace are very similar.

By following these seven simple rules you can help preserve the biodiversity that makes the monument such a special place.



The Seven Leave No Trace Principles for Kids

- Know Before You Go
- Choose the Right Path
 - Trash Your Trash
- Leave What You Find
- Be Careful With Fire
 - Respect Wildlife
- Be Kind to Other Visitors

To learn more about the Leave No Trace Principles take the LNT interactive online course for kids, go to PEAK Online at <https://lnt.org/teach/peak/peakonline>

A RECIPE FOR BIODIVERSITY

You're probably wondering, "what is biodiversity?" Well, it is short for biological diversity and is the scientific term for lots of different living things. At Cascade-Siskiyou National Monument, we have an amazing variety of plants and animals!

Five different ecoregions come together here. You can think of an ecoregion as a place where certain plants and animals live based on soil-type, temperature, rainfall, and elevation. These five ecoregions are the ingredients in our recipe for biodiversity.



- **Cascade Range**
- **Great Basin Desert**
- **Sierra Nevada Mountains**
- **Klamath Mountains**
- **Siskiyou Mountains**



Cascade Range



Great Basin Desert



Sierra Nevada Mountains



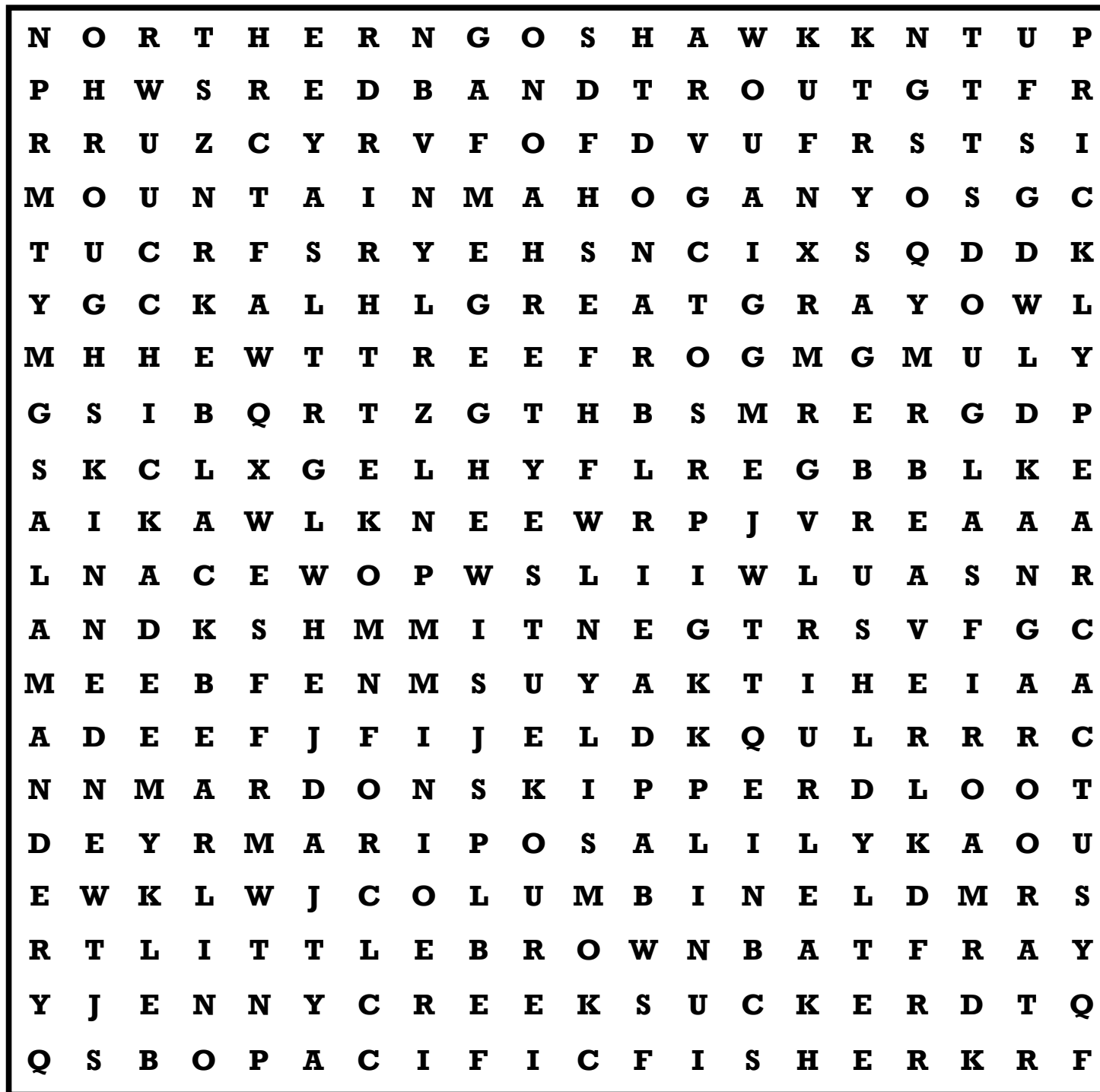
Klamath Mountains



Siskiyou Mountains

BIODIVERSITY WORD SEARCH

Listed below are just a few of the plant and animal species that can be found within the monument.
Now, see if you can find them!



BEAVER
JENNY CREEK SUCKER
PRICKLY PEAR CACTUS
RATTLESNAKE
BLACK BEAR
KANGAROO RAT
REDBAND TROUT
LITTLE BROWN BAT

ROCK WREN
MARIPOSA LILY
CHICKADEE
MARDON SKIPPER
ROUGH-SKINNED NEWT
COLUMBINE
MOUNTAIN MAHOGANY
SAGEBRUSH

DOUGLAS FIR
NORTHERN GOSHAWK
SALAMANDER
SCARLET FRITILLARY
GREAT GRAY OWL
TREEFROG
PACIFIC FISHER
JUNIPER

BIRD IS THE WORD

More than 200 bird species have been reported in the monument! Here, many birds are found near the edge of their range. A bird's range is how far north, south, east, or west they call home. For example, the blue-gray gnatcatcher and California towhee are at the edge of their northern range, meaning that you wouldn't likely find these birds farther north than the monument.

Spell the scrambled bird names correctly in the boxes on the right. The circled letters can then be correctly placed to complete the final phrase below.

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Final phrase

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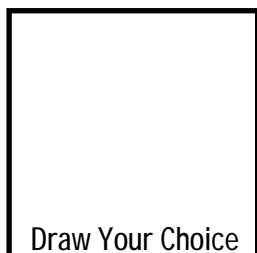
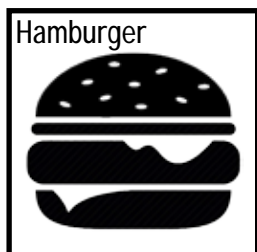
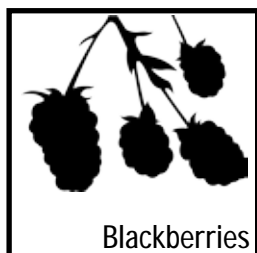
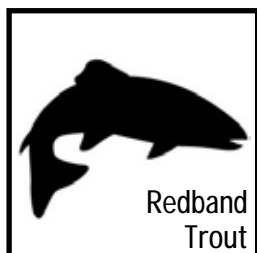
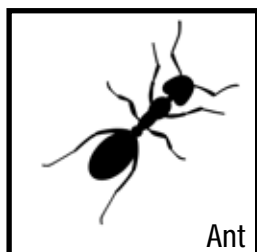
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 ...FLOCK TOGETHER”

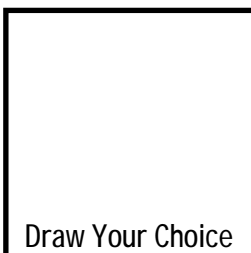
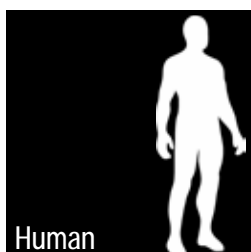
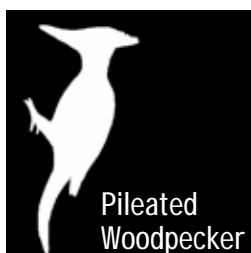
FOOD * WATER * SHELTER * SPACE

These are the four things that all living things require; food to eat, water to drink, shelter for safety, and space to grow and live. Match the animals in the center column with the food they need in the left column and their habitat in the right column by drawing a line. There may be more than one correct answer. Draw an animal of your choice in the blank box, and see if you can identify its food and habitat!

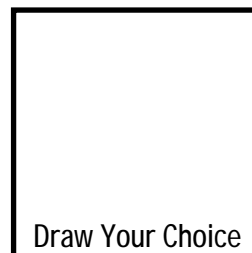
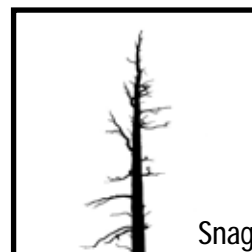
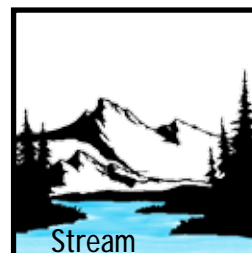
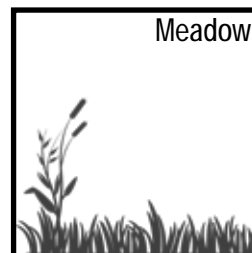
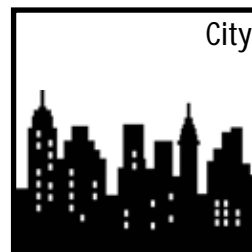
FOOD



ANIMAL



HABITAT



YOU ARE A TRACK STAR

Many animals are hard to see because they're so well camouflaged. Some only come out at night, meaning they're nocturnal. Many animals also make an effort to avoid humans, and disappear before we have a chance to see them. This is discouraging if you're out looking for wildlife, but you can always find evidence that an animal has been there. Hike like a detective, look for clues such as scat, fur, feathers, and tracks.

Tracks found in the mud or sand can help us understand what kind of animals live in a certain area, how many animals live in an area, and even which direction they're traveling.

Can you discover who left these tracks behind? Write the name of the correct animal below their tracks.



Golden Eagle



Black Bear



Beaver



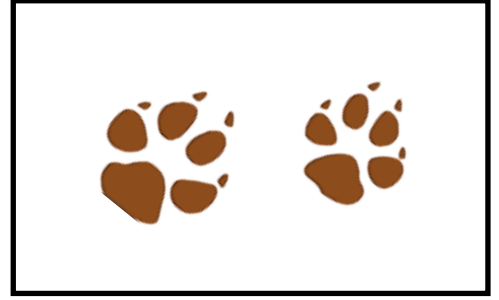
Grey Squirrel



Coyote



1. _____



2. _____



3. _____



4. _____



5. _____

What is a beaver's adaptation to living both on land and in the water?

HINT: study its tracks!

GO FOR THE GOLD Math Challenge Problem

FIGURE IT OUT! Imagine that in a particular part of the monument there are both salamanders and bluejays. Together there are 78 feet and 27 heads. How many salamanders and bluejays live in this part of the monument?

ONE-EYED CHARLEY'S BIG SECRET

Hard Living Catches Up With Stage Coach Legend

No stranger to the Siskiyous, Charley Parkhurst was one of the most famous stagecoach drivers in history. Charley was actually short for Charlotte, but it was a secret she kept until her death. Born in Vermont, she was orphaned at an early age but later dressed as a boy to escape the orphanage. She found the masquerade opened a lot of doors that were closed to girls and women in early 19th century America. She worked as a stable hand before moving west and adopting the rough and tumble lifestyle as a stagecoach driver, where she became known as One Eyed Charlie. She was as tough and gruff as any pioneer

man-known for her colorful language and nights at the saloon. She could break a man's nose in a fight as fast as she could break a rowdy horse, and was rumored to have shot and killed at least one bandit who tried to rob her coach.



She may have also been the first woman to vote in California. She proudly registered to vote in 1868 in order to support Ulysses S. Grant's bid for U.S. President. But in 1879 her hard living lifestyle caught up with her. It wasn't until then that her secret was known by all. At the funeral home, the mortician made an unexpected discovery; One-Eyed Charlie, was really a woman. Newspapers at the time made

much of this scandalous discovery but the facts could not be denied. She held her own as one of the West's most colorful characters and finest stagecoach drivers.

Applegate Trail Opens at Last



In 1843 Charles, Jesse, and Lindsay Applegate led their families west along the Oregon Trail from Missouri to what was then known as Oregon Country. It was a long hard journey, and a particularly sad one for the Applegates. Two of the Applegate children were lost on the journey down the Columbia River. The hardships they faced along the way influenced the family to find an easier and safer way to the Willamette Valley.

Jesse and Lindsay, along with Levi Scott and a host of others, began the task of finding a more southerly route to Oregon in 1846. At Fort Hall, Idaho, the new route departed from the Oregon trail and headed south along the Humbolt River before passing through the Black Rock Desert in present-day Nevada. The trail then entered into northern California before crossing into southern Oregon. It followed Keene Creek to the Siskiyou Mountains, then followed the Rogue River and headed north towards their final destination, the Willamette Valley.

The trail led weary travelers to the Green-springs, located in the heart of the monument. Springs, green glades, lush meadows, and shady towering forests were a welcome relief. Tub Springs, now maintained by the Oregon State Parks and Recreation Department, still flows today, providing modern travelers with the same plentiful fresh source of water it once provided to settlers traveling the Applegate Trail.

Old Reelfoot Strikes Again!

Just to mention the name of "Old Reelfoot," the grizzly, back in the 1870s and '80s, was enough to raise the hair on a brave man's neck--and to make the frontier women call their kids inside their log cabins and drop the bar across the door.

"Old Reelfoot" was one of the worst stock-killing grizzlies the West has ever known—crafty, and with immense strength, he would fell a cow with one blow, and eat his fill. For 20 years, from 1870 to 1890, Old Reelfoot killed literally hundreds of cattle.

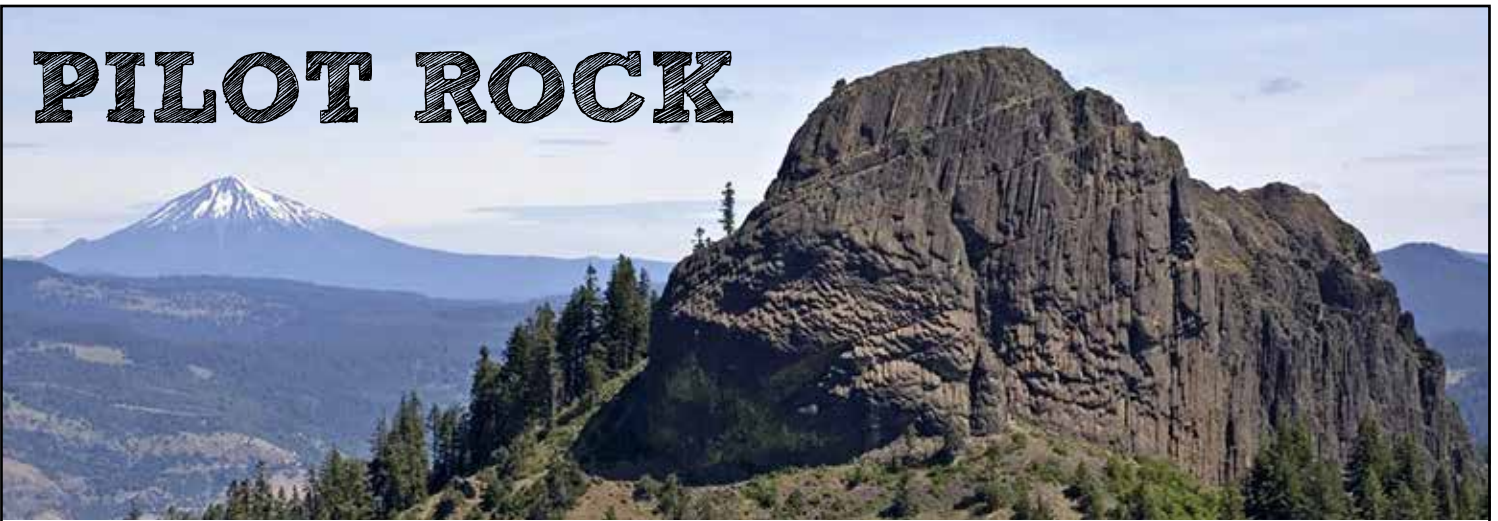
With a combined bounty of nearly \$1700 on his head, Reelfoot was no stranger to being hunted but on April 10, 1890, Reelfoot's luck ran out. Stock-man Bill Wright had sworn revenge after his prized bull was killed. He and Purl Bean finally caught up with the giant bear and shot him near Pilot Rock.



THIS PLACE IS A MAZE-ING



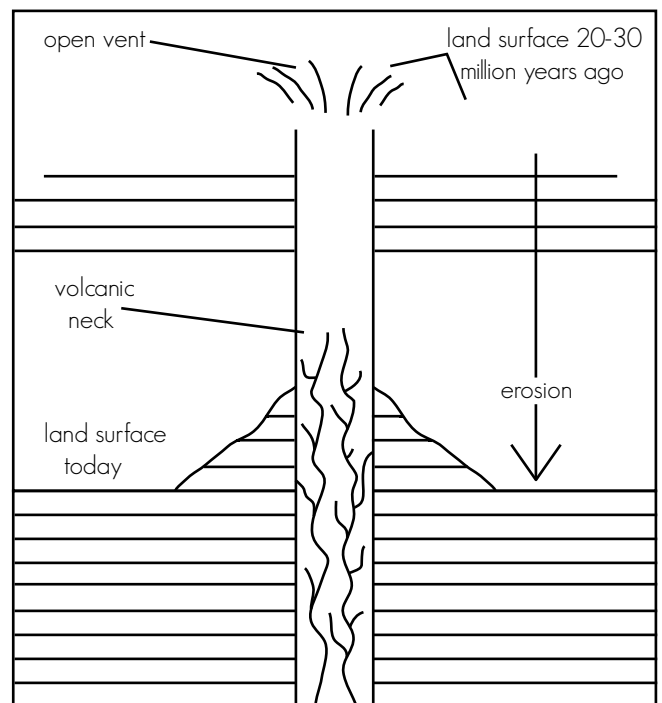
PILOT ROCK



Important both historically and geologically, Pilot Rock stands out as one of the most striking features of the monument. It rises 570 feet to an elevation of 5,910 feet. It is popular with hikers and rock climbers, and provides important habitat for peregrine falcons.

The remnant of an ancient volcano, Pilot Rock is visible from much of the Shasta Valley in northern California and parts of the Rogue Valley in southern Oregon. Over time, the exterior volcano eroded away, leaving behind the impressive columnar basalt of the ancient volcano's central vent. Fossil sites near Pilot Rock contain leaf impressions and conifer cones that became embedded in volcanic ash beds 25-35 million years ago.

Pilot Rock, like Ship Rock in New Mexico and Devil's Tower in Wyoming, is considered to be a volcanic neck or plug. It was exposed after the surrounding sedimentary rocks eroded and fell away.

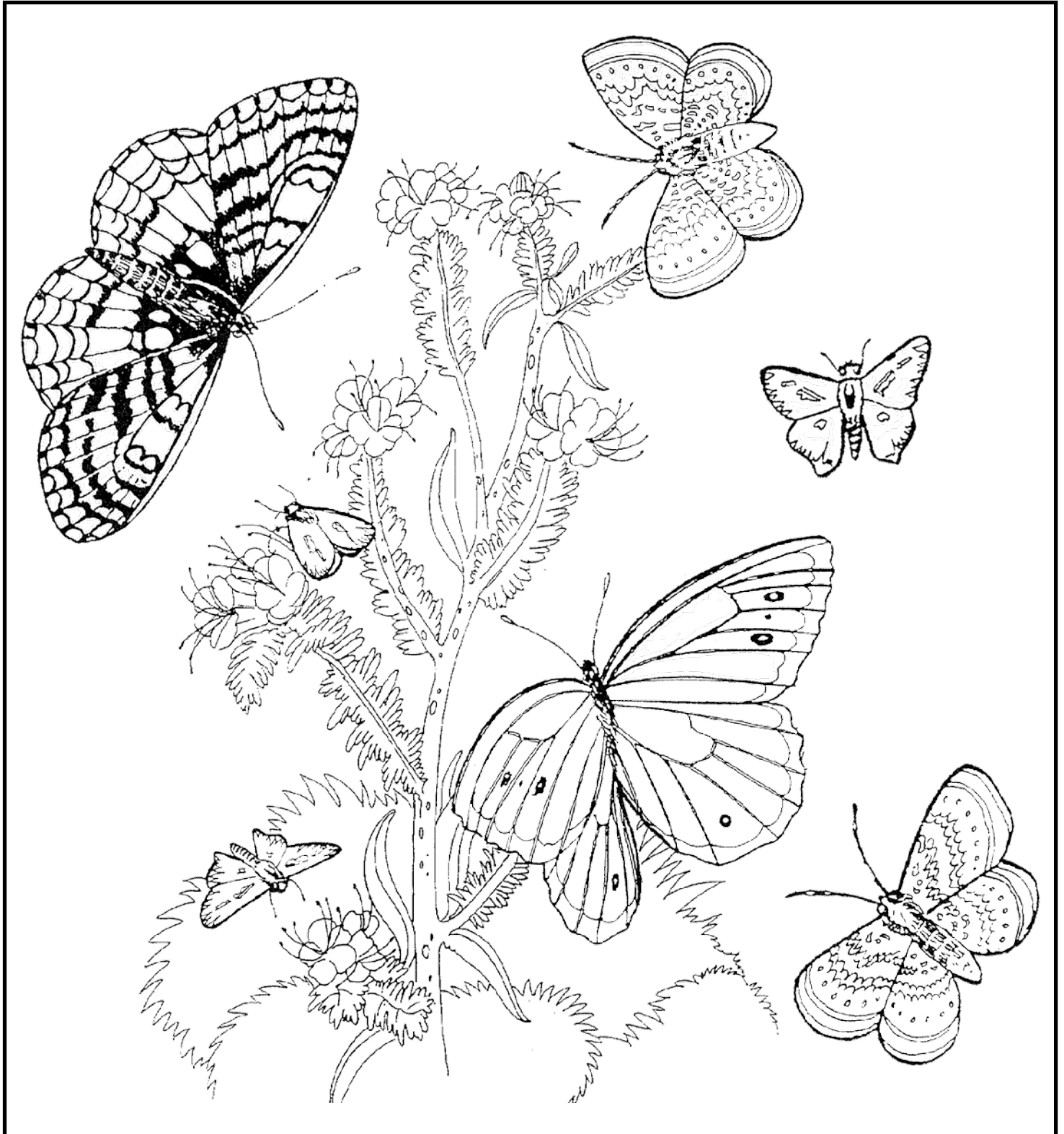


PEREGRINE FALCON FACTS:

- There are known nesting sites on Pilot Rock.
- Like hawks and eagles, falcons are raptors.
- They are sometimes called "duck hawks".
- They can dive up to 200 miles per hour!
- Peregrine falcons can eat songbirds, ducks, and bats.
- They can catch their prey in mid-air.
- There are an estimated 1,650 breeding pairs in the United States and Canada.
- Peregrine falcons are found on every continent except Antarctica.

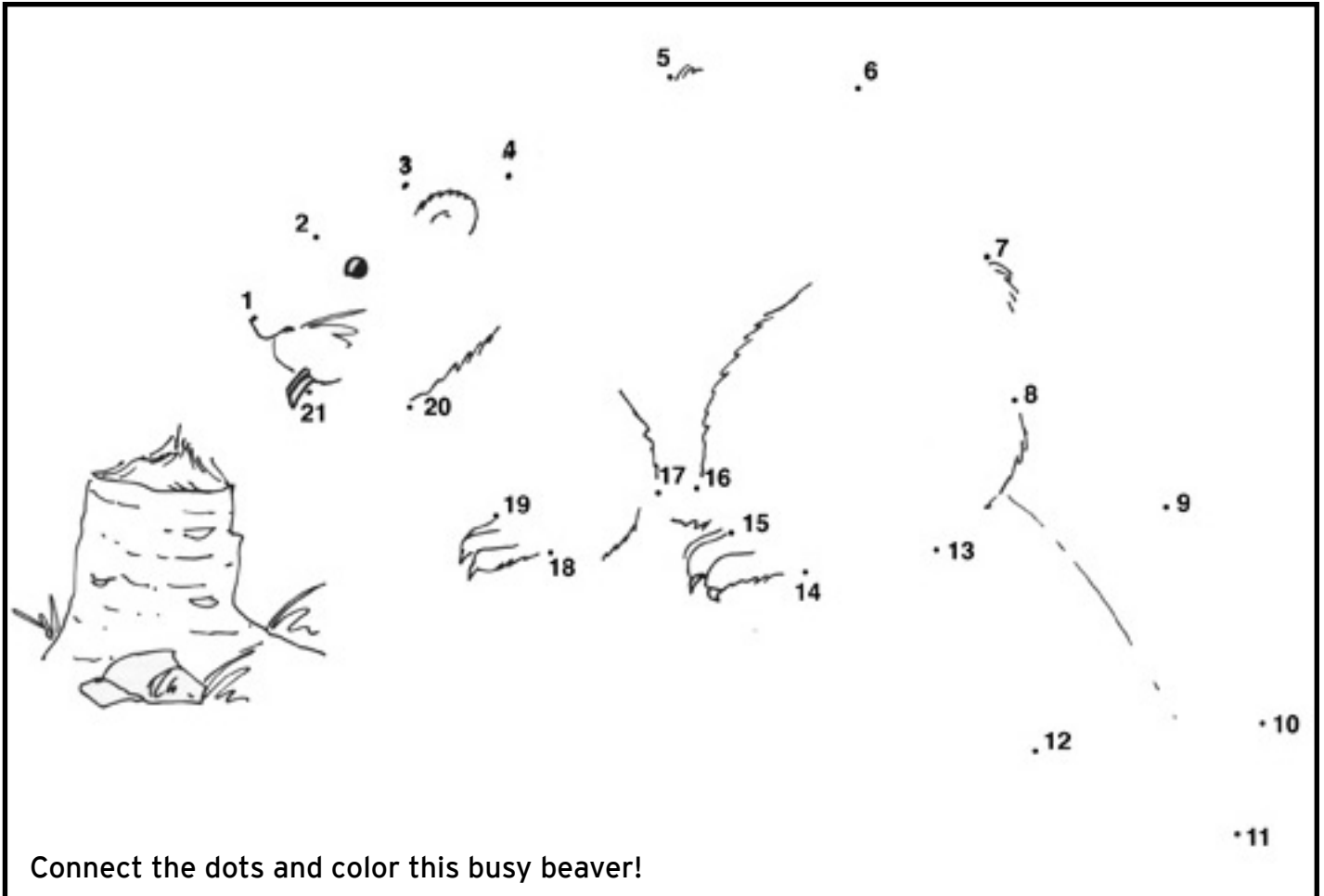
BUTTERFLY COLORING PAGE

There are nearly 120 butterfly species present in the monument. When you consider that there are only 162 known species in all of Oregon, the monument has a pretty amazing assortment of butterflies! Butterflies are good indicators of plant diversity since the caterpillars of individual species only feed on specific plants, called host plants.



CONNECT THE DOTS

Beavers are a keystone species. A keystone species affects many other organisms in an ecosystem, and helps to determine the types and numbers of various other species in the community. Beavers create and protect biodiversity by creating wetlands. The wetlands they create then become home to many other plants, animals, and birds who depend on the beaver for their own survival.



FORMER BOX-O RANCH

After being gone for decades, beavers have returned to Jenny Creek. The BLM and others have worked hard to restore riparian areas along Jenny Creek in and around the old Box-O Ranch. The absence of cattle, riparian restoration efforts, and less human activity, have made Jenny Creek a wonderful habitat for beavers, redband trout, and the Jenny Creek sucker. It's also a great place for birding!

INTERESTING BEAVER FACTS:

- Beavers live in lodges, not dams
- Beavers can swim almost twice as fast as an Olympic swimmer (that's impressive!)
- Beavers don't eat wood, they eat cambium. Cambium is the juicy nutrient-filled tree layer below the bark
- Beavers' ability to change the landscape is second only to humans



HOW THE PEOPLE

In the days when the first people lived, they used to go hunting with arrows that had pine-bark points. They did not know where to get obsidian, or they would have used it, for obsidian makes a sharp, deadly point which always killed the animals that were shot.

Ground Squirrel was the only one that knew that Obsidian Old Man lived on Medicine Lake, and one day he set out to steal some obsidian. Taking a basket filled with roots, he went into Obsidian Old Man's house and offered him some. Obsidian Old Man ate the roots and liked them so much that he sent Ground Squirrel out to get more. While Ground Squirrel was digging for them, Grizzly Bear came along.

"Sit down, " Grizzly Bear said. "Let me sit in your lap. Feed me those roots by the handful."

Ground Squirrel was very much afraid of huge Grizzly Bear, so he did as he was told. Grizzly Bear gobbled the roots and got up. "Obsidian Old Man's mother cleaned roots for someone," he said as he went away.

Ground Squirrel returned to Obsidian Old Man, but there were only a few roots left to give him. Ground Squirrel told him what Grizzly Bear had done and what he had said as he departed. Obsidian Old Man was extremely angry at the insult to his dead mother.

"Tomorrow we will both go find roots," he said.

So early the next morning they set off. Obsidian Old Man hid near the place where Ground Squirrel started digging. Soon Ground Squirrel's basket was filled, and then along came Grizzly Bear.

"You dug all those for me!" he said. "Sit down!"

Ground Squirrel sat down, as he had the day before, and fed Grizzly Bear roots by the handful. But just then Grizzly Bear saw Obsidian Old Man draw near, and the bear got up to fight. At each blow, a great slice of the grizzly's flesh was cut off by the sharp obsidian. Grizzly Bear kept fighting until he was all cut to pieces, and then he fell dead. So Ground Squirrel and Obsidian Old Man went home and ate all the roots and were happy. Early next morning, Obsidian Old Man awakened by Ground Squirrel's groaning.

"I am sick. I am bruised because that great fellow sat upon me. Really, I am sick," he was groaning.

Obsidian Old Man was sorry for Ground Squirrel. "I'll go and get wood," he said to himself. "But I'll watch him, for he may be fooling me. These people are very clever."

GOT ARROWHEADS

A SHASTA LEGEND

So he went out for wood, and on the way he thought, "I had better go back and look."

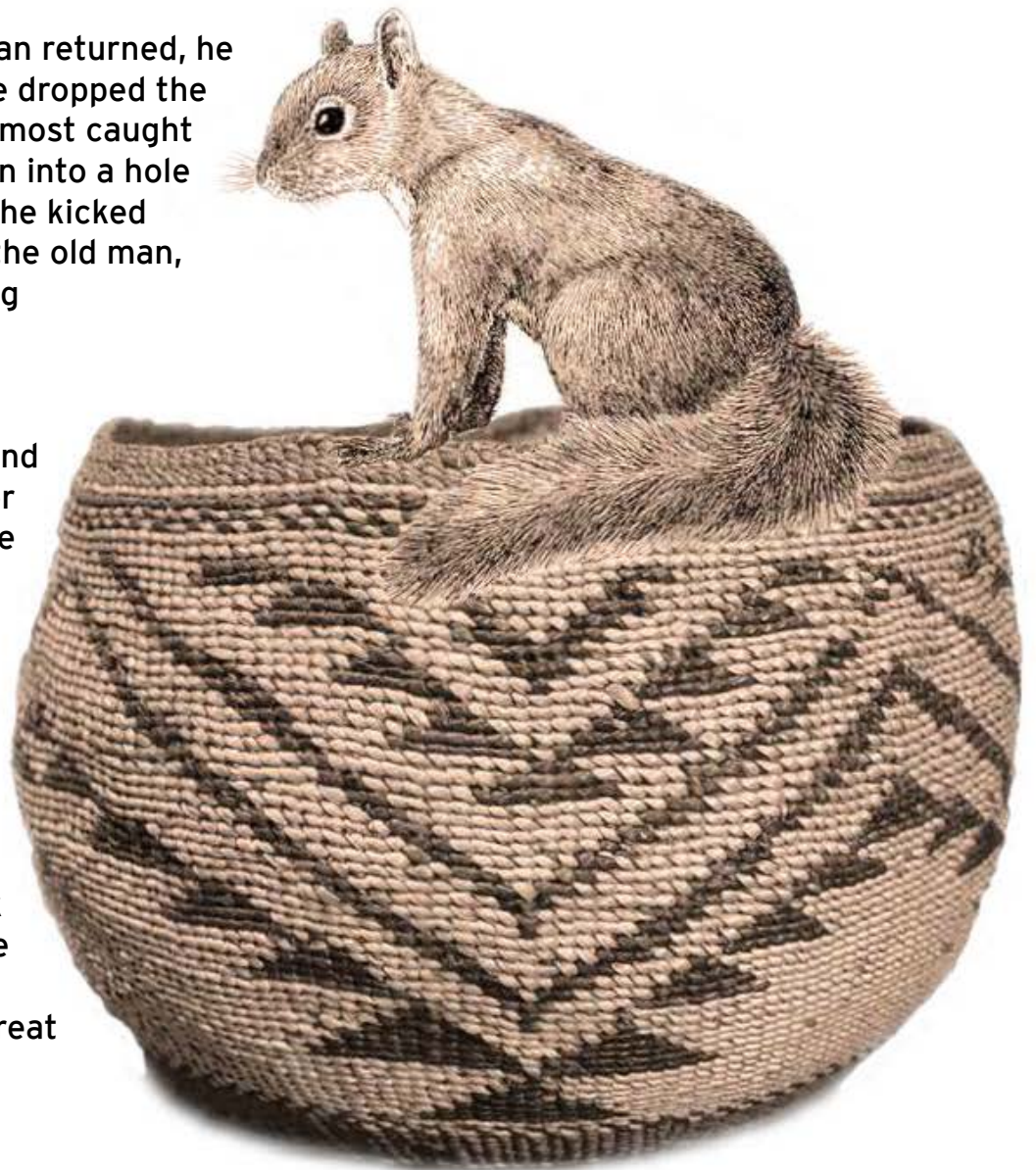
When he crept back softly and peeped in, he saw Ground Squirrel lying there, groaning. "He is really sick!" Obsidian Old Man said to himself, and went off in earnest, this time for wood.

But Ground Squirrel was very clever; he had been fooling all the time. As soon as Obsidian Old Man was far away, he got up. Taking all the obsidian points and tying them up in a bundle, he ran off.

As soon as Obsidian Old Man returned, he missed Ground Squirrel. He dropped the wood, ran after him, and almost caught him but Ground Squirrel ran into a hole in the ground. As he went, he kicked the earth into the eyes of the old man, who was digging fast, trying to catch him.

After a while, Obsidian Old Man gave up and left. Ground Squirrel came out the other end of the hole, crossed the lake, and went home.

He emptied the bundle of points on the ground and distributed them to everyone. All day long the people worked, tying them onto arrows. They threw away all the old bark points, and when they were hunting they used the new arrow points and killed a great many deer.



MAD LIBS

My family and I were on the _____ vacation ever. We decided to visit Cascade-
adjective

Siskiyou National Monument in southern Oregon. As we were driving towards Hyatt Lake
the most

_____ thing happened, we saw a(n) _____. It was _____.
adjective animal adjective

When we got to the campground I went straight to the _____. We looked
place (outdoors)

at the wildflowers and I got to see a(n) _____ butterfly. It was really _____.
adjective adjective

We must have seen _____ different butterflies, and I even found a few _____
number adjective

wild strawberries growing. They were _____!
adjective

The next day we decided to hike a section of the Pacific Crest Trail. We packed some
_____ and plenty of _____ and headed for Hobart Bluff. There were a lot of
food liquid

_____ in the trees and _____ everywhere. I saw the tracks of a(n)
plural noun plural noun

_____ which was pretty cool. The hike was _____ and the views were
animal adjective

_____. _____ even saw a golden eagle soaring overhead.
adjective person

When we returned to camp I was ready to do some fishing. I tied a(n) _____ on
noun

to my line and cast into the lake. I felt a tug and reeled in a _____ inch trout.
number

" _____ "
exclamation

I exclaimed, "that is the _____ fish I ever saw!" We decided to take it back to camp for
adjective

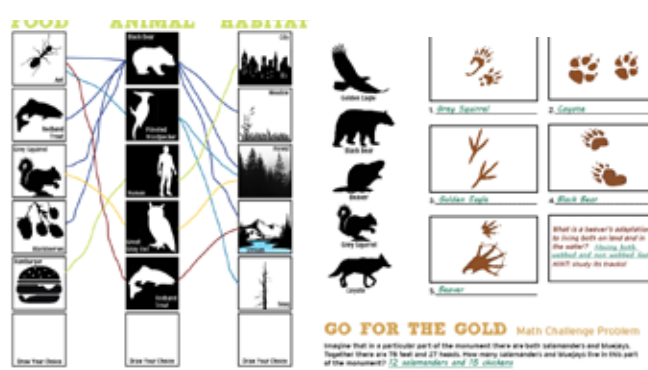
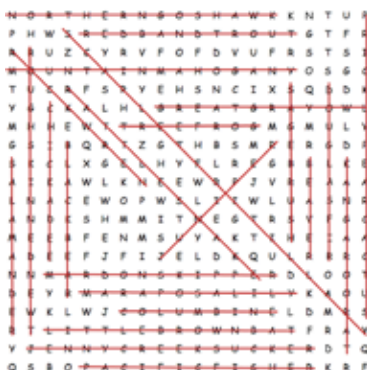
dinner. _____ cooked it over the fire with some _____ and _____,
name food food

it was delicious.

We awoke early the next morning and packed up camp, it was time to drive back to
_____. I can't wait to return again next _____, what a fun trip!
place season

GLOSSARY and KEY

- ADAPTATION** • a change or the process of change by which an organism or species becomes better suited to its environment
- BIODIVERSITY** • the variety of life in the world or in a particular habitat or ecosystem
- BIOLOGY** • the study of living organisms, divided into many specialized fields
- CAMBIUM** • a cellular plant tissue
- CAMOUFLAGED** • an animal's natural coloring or form that enables it to blend in with its surroundings
- CENTRAL VENT** • the place in the earth's surface from where lava and gas are erupted
- CHEMICAL REACTION** • a process that involves rearrangement of the molecular or ionic structure of a substance
- COLUMNAR BASALT** • volcanic rock that shows the vertical cracks or fracturing formed by rapid cooling
- CONIFER** • a tree that bears cones and evergreen needlelike or scalelike leaves
- DIVERSITY** • a range of different things
- ECOREGION** • a major ecosystem defined by distinctive geography and receiving uniform solar radiation and moisture
- ECOSYSTEM** • a biological community of interacting organisms and their physical environment
- ELEVATION** • the height above a given level, esp. sea level
- ENVIRONMENT** • the surroundings or conditions in which a person, animal, or plant lives or operates
- EROSION** • the process of eroding or being eroded by wind, water, or other natural agents
- GEOLOGY** • the science that deals with the earth's physical structure and substance, its history, and the processes that act on it
- HABITAT** • the natural home or environment of an animal, plant, or other organism
- HOST** • an animal or plant on or in which a organism lives
- IGNEOUS ROCK** • rock having solidified from lava or magma
- INDICATOR SPECIES** • an animal or plant species that can be used to infer conditions in a particular habitat
- KEYSTONE SPECIES** • a species on which other species in an ecosystem largely depend, such that if it were removed the eco system would change drastically
- LANDSCAPE** • all the visible features of an area of countryside or land
- LAVA** • hot molten or semifluid rock erupted from a volcano or fissure, or solid rock resulting from cooling of this
- LODGE** • a beaver's den
- NOCTURNAL** • done, occurring, or active at night
- NUTRIENT** • a substance that provides nourishment essential for growth and the maintenance of life
- ORAL TRADITION** • the cultural and historical traditions passed from one generation to the next by word of mouth with out written instructions
- ORGANISM** • an individual animal, plant, or single-celled life form
- RANCHERIA** • (in Spanish America and the western US) a small Indian settlement
- RANGE** • the area over which a thing, esp. a plant or animal, is distributed
- RESTORATION** • the action of returning something to a former condition
- RESERVATION** • an area of land set aside for occupation by North American Indians
- RIPARIAN** • of or relating to wetlands adjacent to rivers and streams
- SEDIMENTARY ROCK** • rock that has formed from sediment deposited by water or air
- SNAG** • a dead tree
- SOIL TYPE** • how soil is defined based on the percentage of sand, silt, and clay in its make-up
- TOPOGRAPHY** • the arrangement of the natural and artificial physical features of an area
- VOLCANIC ASH** • the tiny particles of rock, minerals, and volcanic glass created during volcanic eruptions
- VOLCANIC PLUG** • a column of igneous rock formed by cooled lava in the central vent of a volcano; later exposed by erosion
- WETLAND** • land consisting of marshes or swamps; saturated land
- WILDERNESS AREA** • a region where the land is in natural state; where impacts from human activities are minimal



Bureau of Land Management Junior Explorer



As a Bureau of Land Management Junior Explorer, I promise to:

- *do all I can to help preserve and protect the natural and cultural resources on our public lands,*
- *be aware of how my actions can affect other living things and the evidence of our past,*
- *keep learning about the importance of nature and our heritage, and*
- *share what I have learned with others!*

Date

Explorer Signature

