



U.S. Department of the Interior
Bureau of Land Management



Cascade-Siskiyou National Monument

Activity Book

JUNIOR RANGER

Medford
District
Office



Illustration of Pilot Rock by Jennifer Kapus

WHAT'S INSIDE?

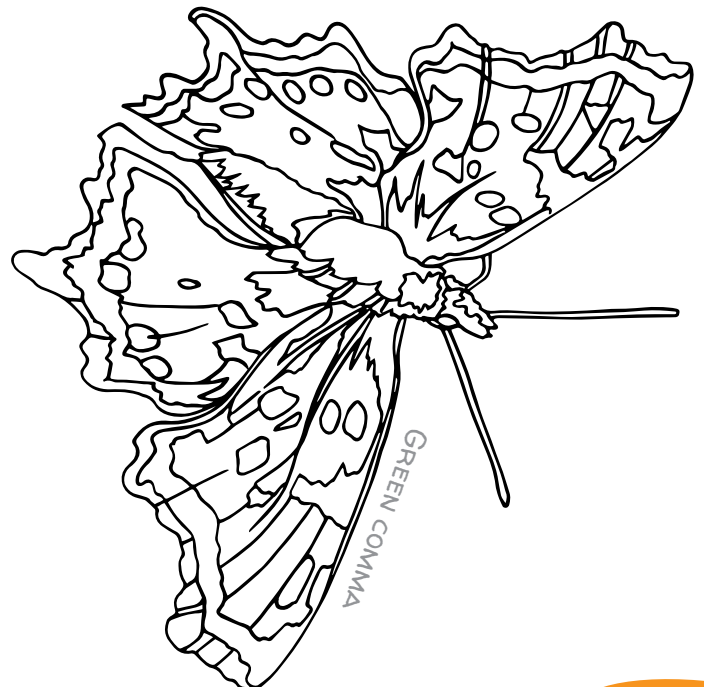
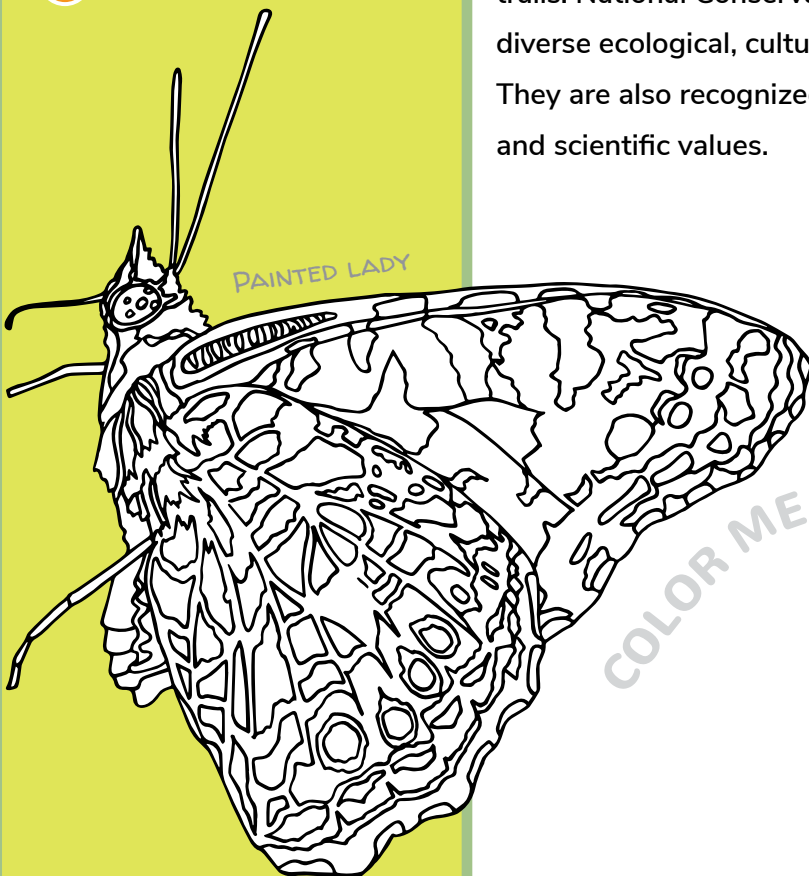
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EXPLORE BLM MEDFORD DISTRICT, CASCADE-SISKIYOU NATIONAL MONUMENT

On June 9, 2000, this special area was proclaimed a national monument in recognition for its unique geology, biology, climate, and topography. At nearly 113,000 acres, this national monument is mostly located in Oregon, with a small portion in northern California. The Cascade-Siskiyou National Monument is situated at the crossroads of the Cascade, Klamath, and Siskiyou mountain ranges, with elevations from 2,100 to 6,100 feet. This convergence of three geologically distinct mountain ranges represents an outstanding ecological wonderland, an area with unparalleled biological diversity, and a tremendously varied landscape.

The Cascade-Siskiyou National Monument is a part of the National Conservation Lands, which is more than 900 areas including national monuments, national conservation areas, wilderness areas, wilderness study areas, wild and scenic rivers, and national scenic and historic trails. National Conservation Lands are designated to conserve the diverse ecological, cultural, and historical resources found within them. They are also recognized for their recreational, educational, and scientific values.



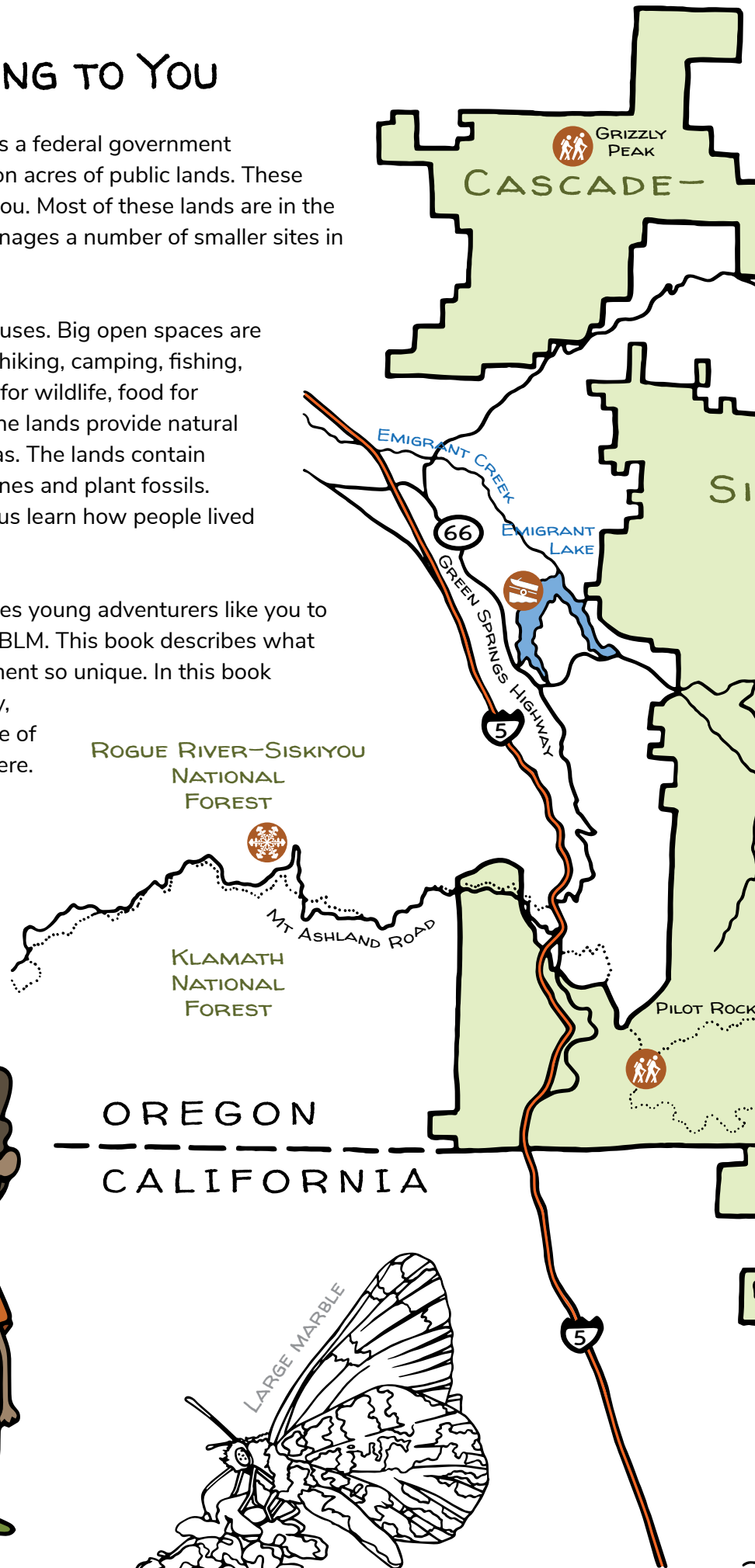
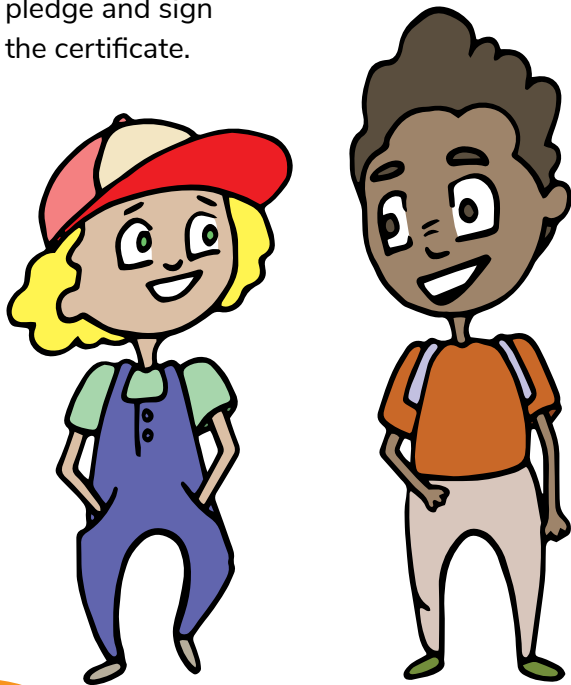
PUBLIC LANDS BELONG TO YOU

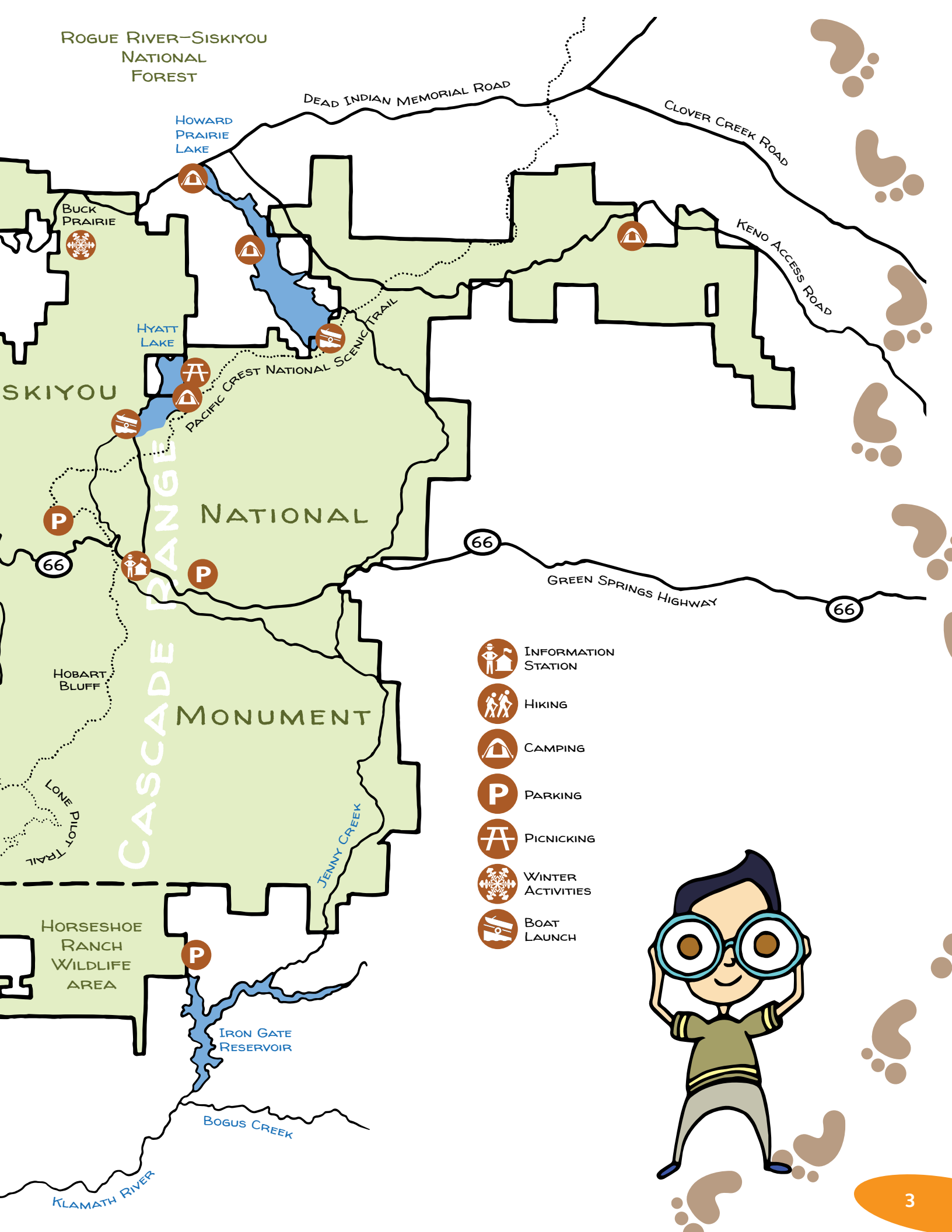
The Bureau of Land Management (BLM) is a federal government agency that takes care of about 245 million acres of public lands. These lands belong to all Americans, including you. Most of these lands are in the Western United States. The BLM also manages a number of smaller sites in the Eastern United States.

The BLM manages public lands for many uses. Big open spaces are available for recreation activities, such as hiking, camping, fishing, and hunting. These lands provide habitat for wildlife, food for grazing animals, and timber for people. The lands provide natural resources, such as coal, oil, and natural gas. The lands contain evidence of the past, such as dinosaur bones and plant fossils. Archaeological sites on public lands help us learn how people lived in North America long ago.

The BLM Junior Ranger Program introduces young adventurers like you to the lands and resources managed by the BLM. This book describes what makes Cascade-Siskiyou National Monument so unique. In this book you will learn about the area's biodiversity, geology, mountains, ecoregions, and some of the specific animals and plants that live here.

We hope you enjoy the activities in this book and exploring and learning about this special place. When you are finished with the activities, cut out the Junior Ranger certificate in the back. Then, say the Junior Ranger pledge and sign the certificate.





ROGUE RIVER-SISKIYOU NATIONAL FOREST

DEAD INDIAN MEMORIAL ROAD

CLOVER CREEK ROAD

HOWARD PRAIRIE LAKE

BUCK PRAIRIE

KENO ACCESS ROAD

HYATT LAKE

SKIYOU

PACIFIC CREST NATIONAL SCENIC TRAIL

P

P

66

GREEN SPRINGS HIGHWAY

66

HOBART BLUFF

NATIONAL MONUMENT

CASCADE RANGE

JENNY CREEK

LONE PILOT TRAIL

HORSESHOE RANCH WILDLIFE AREA

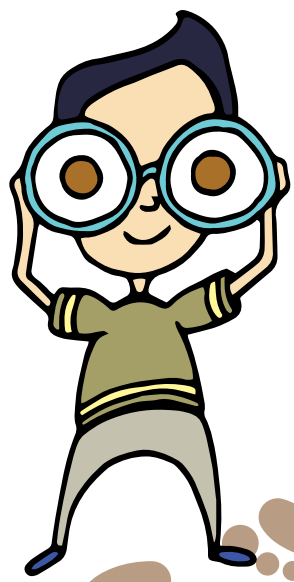
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IRON GATE RESERVOIR

BOGUS CREEK

KLAMATH RIVER

-  INFORMATION STATION
-  HIKING
-  CAMPING
-  PARKING
-  PICNICKING
-  WINTER ACTIVITIES
-  BOAT LAUNCH



BE LIKE BIGFOOT AND LEAVE NO TRACE



Whether hiking, camping, fishing, hunting, skiing, or stopping for a picnic at Cascade-Siskiyou National Monument, it is important to be a responsible visitor here and in all outdoor settings. Before exploring the monument, let's review the seven Leave No Trace principles. These simple guidelines help keep the area the same or better than when you arrived. To learn more about the Leave No Trace principles online, go to lnt.org/research-resources/for-parents-educators-and-youth-programs.

1. Plan ahead and prepare.

- Learn rules or concerns before visiting a location.
- Only bring pets if they are allowed.
- Tell others where you are going and when you will be back.

2. Travel and camp on durable surfaces.

- Stay on designated roads and trails.
- Camp on existing or designated campsites.

3. Dispose of waste properly.

- Pack out anything you bring with you and dispose of human waste properly.

4. Leave what you find.

- Do not alter or remove historic features or archaeological evidence.

5. Minimize campfire impacts.

- Keep fires small and under control.
- Ensure fires are completely out when finished or before leaving.

6. Respect wildlife.

- Control pets.
- Do not feed, follow, or approach wildlife.

7. Be considerate of other visitors.

- Respect the sacred nature of archaeological sites.
- Do not disrupt other visitors.



BIODIVERSITY IS BIOVARIETY

At Cascade-Siskiyou National Monument, three distinct mountain ranges meet. The meeting of the Cascade, Klamath, and Siskiyou mountain ranges creates an incredibly unique area with a wide range of weather, terrain, habitats, and animal and plant species. The variety of life found in an area is called biodiversity. The amount of biodiversity in the monument is astounding.

Directions: In the puzzle, find some of the species that live in the monument.

TREES AND SHRUBS

bigleaf maple
incense cedar
serviceberry
sugar pine
white oak

PLANTS

bluehead gilia
coffee cliffbrake
fragile fern
rock buckwheat
tall bugbane

MAMMALS

beaver
cougar
coyote
elk
pallid bat

BIRDS

blue grouse
merlin
osprey
peregrine falcon
purple martin

AMPHIBIANS AND REPTILES

black salamander
boreal toad
Cascade frog
Oregon spotted frog
western pond turtle

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

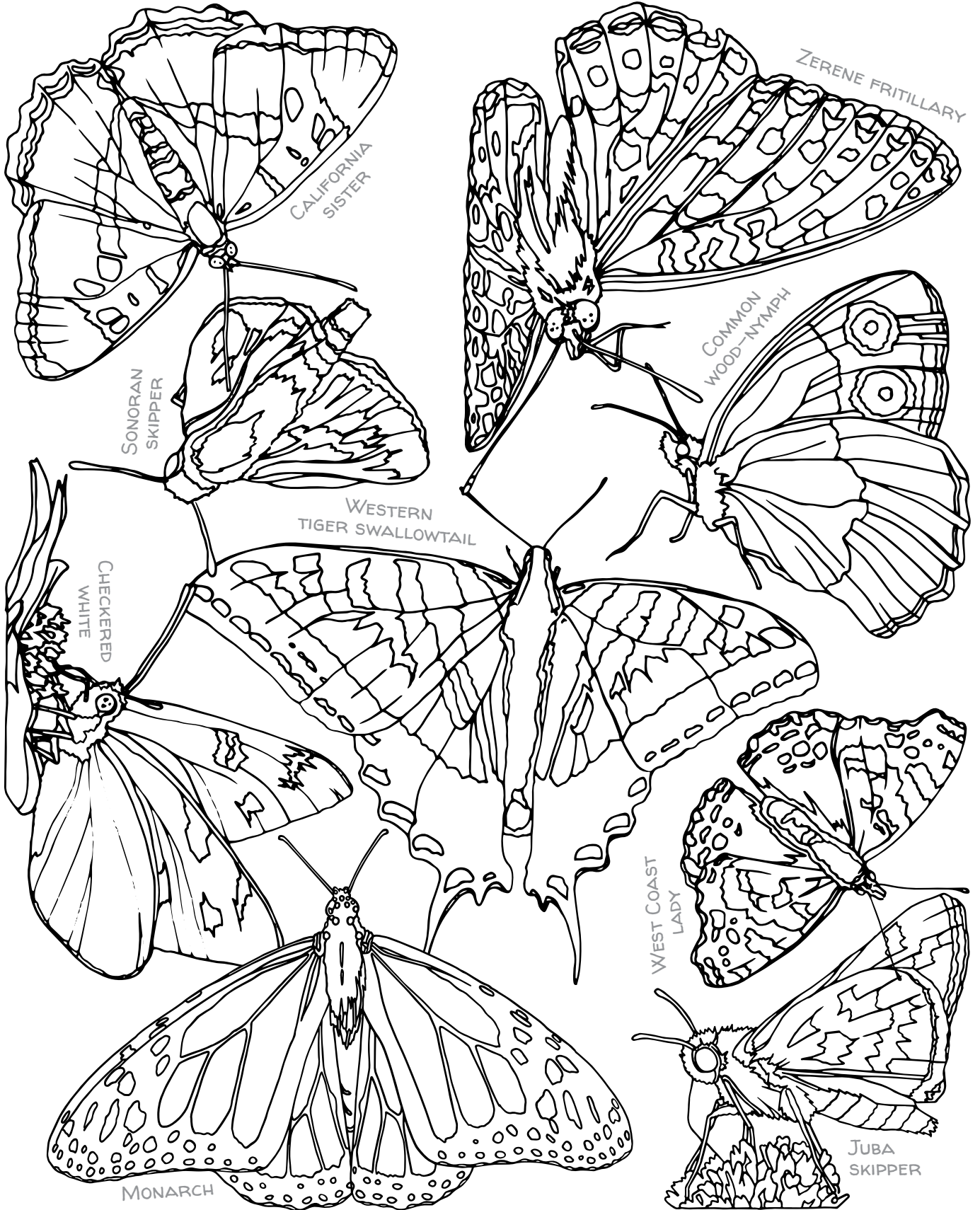
BURSTING WITH BUTTERFLIES

In addition to the large variety of trees, shrubs, plants, mammals, birds, amphibians, and reptiles that live in Cascade-Siskiyou National Monument, there's another important category of animals that is often overlooked. These are invertebrates. Invertebrates are animals that do not have a backbone. Some examples are earthworms, snails, spiders, and insects. Did you know invertebrates make up 95% of the animal species of the world? There's an impressive amount of one type of invertebrate in Cascade-Siskiyou. Butterflies! At least 120 species of butterflies have been identified in the monument. This is the most butterfly species in one area in the entire United States.



COLOR THE COLLAGE

Directions: Add color to the butterfly collage, which includes some of the species found here.



TRAVERSE THE TERRAIN

The variety of terrain and scenery throughout the monument is spectacular. While exploring the monument's hiking trails, you can be in oak woodlands one moment and wildflower-filled meadows the next. Elevations ranging from 2,100 to 6,100 feet also take visitors to ancient conifer forests, chaparral, wet meadows, shrublands, grasslands, and swiftly flowing streams. You can also reach incredible 360-degree views from 10 mountain peaks.

Directions: Find your way through the maze to experience the exceptional scenery at the monument.



MONUMENT SCIENCE LESSON DECODER

An ecoregion is a large area where the parts of the environment are generally similar. For example, an ecoregion has similar species of animals, plants, soil, sunlight, rainfall, and temperature ranges. The reason there is so much variation in the living organisms in Cascade-Siskiyou National Monument is because five different ecoregions come together here.

Directions: Decode the message below to learn more about the ecoregions and geology of Cascade-Siskiyou National Monument. The numbers stand for the letters of the alphabet. For example, 1 = A, 2 = B, 3 = C, etc. Fill in the correct letters to learn why the monument is so unique.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
A	B	C	D	E	F	G	H	I	K	L	M	N	O	R	S	T	U	V	W	Y

The Cascade-Siskiyou National Monument sits where five _____ meet.
 5 3 14 15 5 7 9 14 13 16

Because each ecoregion has specific animals and plants, the combination of these ecoregions creates an abundance of _____ in the national monument.
 4 9 19 5 15 16 9 17 21

_____ is science of the earth's physical structure, such as _____ layers, its composition, and how it has changed over time. The ecoregions are partly determined by the three _____ that converge here—Cascade Range, Klamath Mountains, and Siskiyou Mountains.
 7 5 14 11 14 7 21 15 14 3 10
 12 14 18 13 17 1 9 13 15 1 13 7 5 16

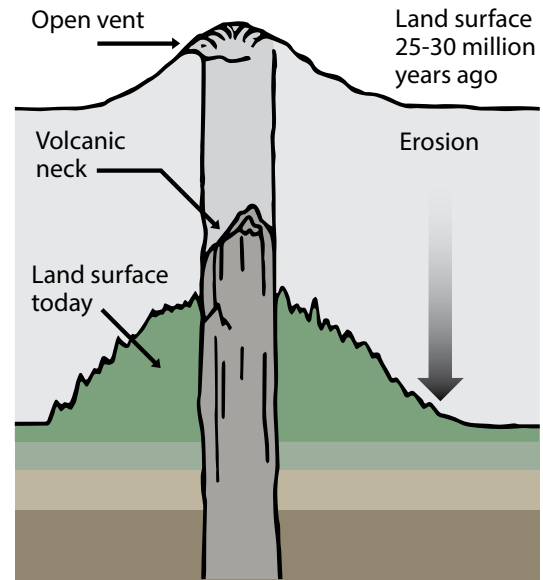
The _____ activity that formed the Klamath and Siskiyou Mountains occurred more than 130 million years ago. Tectonic activity includes earthquakes, _____, and mountain building activities.
 17 5 3 17 14 13 9 3 19 14 11 3 1 13 14 5 16

The _____ in the monument ranges from 2,100 to 6,100 feet, which includes several distinct _____ zones. Some parts of the monument can get more than _____ inches of rain a year, whereas others only get around 25 inches.
 5 11 5 19 1 17 9 14 13 3 11 9 12 1 17 5 14 13 5 8 18 13 4 15 5 4

The various ecoregions, mountain ranges, and climate zones all contribute to a _____ diversity of life. Some plants and animals are _____ to Cascade-Siskiyou National Monument. An endemic species means a species is found in a distinct geographic location and _____ else in the world. Some endemic species in the monument include redband trout, Siskiyou Mountains _____, and Gentner's fritillary.
 17 8 15 9 19 9 13 7 5 13 4 5 12 9 3 13 14 20 8 5 15 5 16 1 11 1 12 1 13 4 5 15

ORIGIN OF PILOT ROCK

Located near the southern boundary of the monument, Pilot Rock stands out as one of the most striking features. It is 570-feet tall and is popular for hiking and rock climbing. The structure also provides important habitat for peregrine falcons. Pilot Rock is a remnant of an ancient volcano and is visible from much of the Shasta Valley in northern California and parts of the Rogue Valley in southern Oregon. Over time, the exterior of the volcano eroded and fell 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 to 35 million years ago.



Directions: Follow the steps to make your own volcano at home, preferably with an adult.

Materials:



Step 1: Gather all materials.

Step 2: Mix the dish soap, $\frac{1}{2}$ cup water, white vinegar, and food coloring and pour it into the empty plastic bottle.

Step 3: While outside, dig a small hole in sand or dirt, place the bottle in the hole, and mound the dirt around the bottom of the bottle.

Step 4: Mix $\frac{1}{2}$ cup baking soda and $\frac{1}{2}$ cup warm water until the baking soda is completely dissolved.

Step 5: Quickly but carefully pour the baking soda mixture into the bottle and step back. Watch the volcano erupt!

TEST YOUR MONUMENT KNOWLEDGE

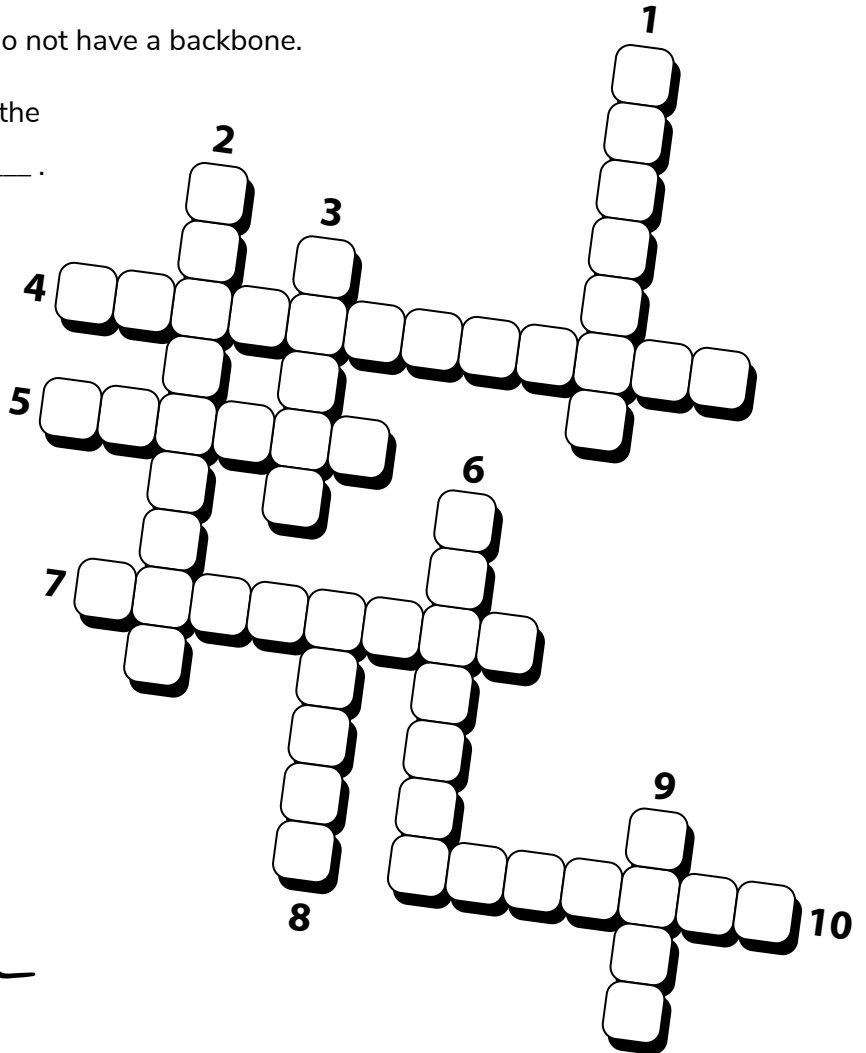
Directions: Use the information you learned so far about Cascade-Siskiyou National Monument to complete the crossword puzzle.

Across

- The variety of life found in an area is called _____.
- The monument is mostly in _____ and a small part of northern California.
- The meeting of three _____ ranges is one factor in the monument's biodiversity.
- Invertebrates make up 95% of the animal _____ of the world.

Down

- An _____ species means it is found in a distinct geographic location and nowhere else in the world.
- An _____ is a large area where the parts of the environment are generally similar.
- One of the most striking geologic features, popular among rock climbers, is _____ Rock.
- Invertebrates are _____ that do not have a backbone.
- An endemic fish species that lives in the monument is the redband _____.
- One of the Leave No Trace principles is "Leave what you _____."



BIRD IS THE WORD

More than 200 bird species have been recorded 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 would not likely find these birds farther north than the monument.

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

1. WOCKOEREDP

2. LBEUBRDI

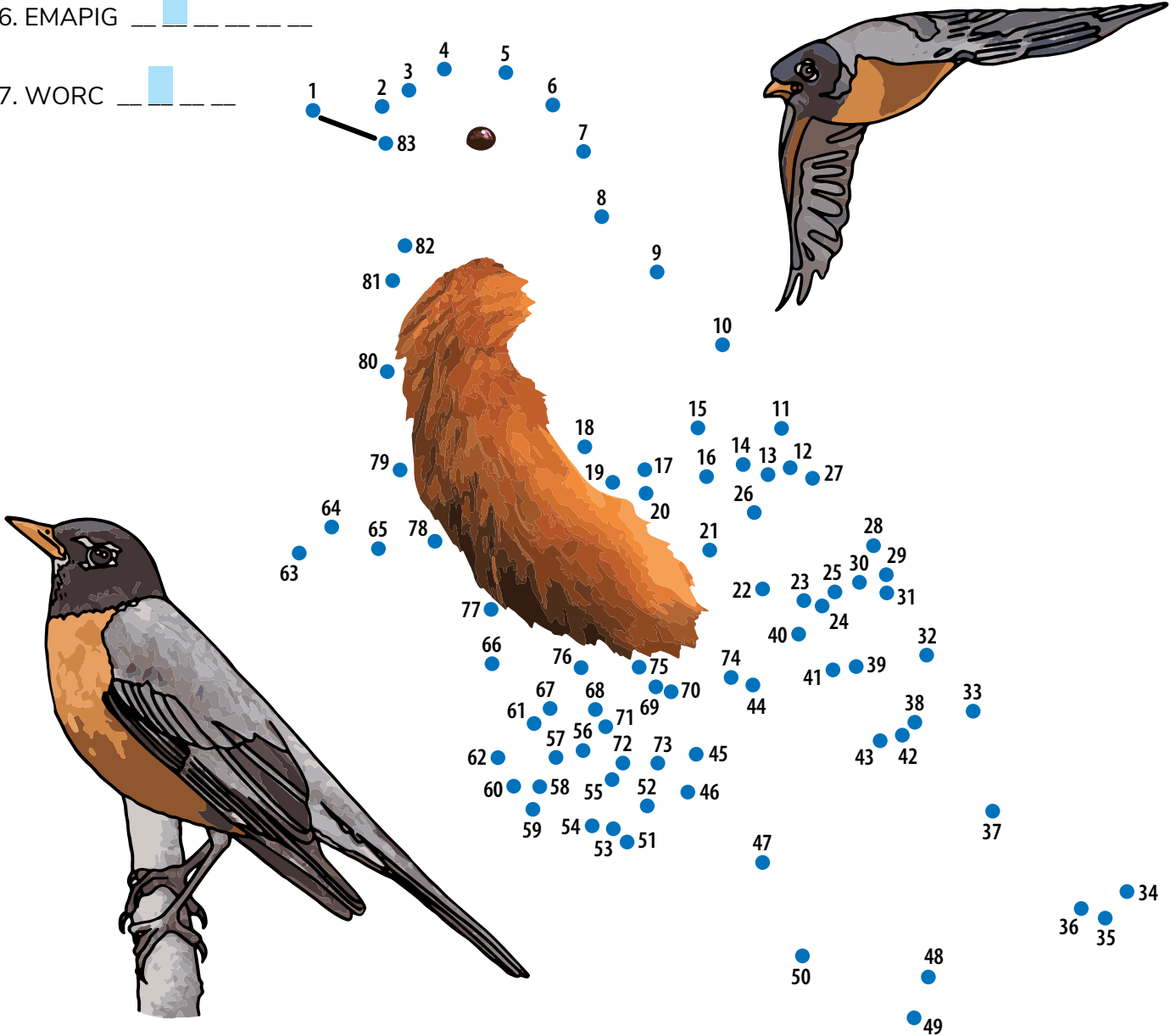
3. SARPRWO

4. ORBNI

5. HKWA

6. EMAPIG

7. WORC



Final phrase: "B I _ _ _ _ F _ _ F E _ T H E _ FLOCK TOGETHER"

FUN FACT POSTCARDS

TRAVELING SIDEBAND

Scientific name: *Monadenia fidelis celeuthia*



I LOVE TO LEARN

- The traveling sideband is a snail species. Snails are mollusks, a large group of invertebrate animals with soft bodies. Some other types of mollusks are squids, octopus, clams, and mussels.
- A snail's shell protects it from predators. As snails grow larger, the snail's shell grows as the snail grows. Some other animals, such as hermit crabs, have to find new shells as they grow.
- Thousands of species of snails live in marine, freshwater, and terrestrial habitats around the world. The traveling sideband is a terrestrial snail endemic to southwest Oregon and northwest California.
- While they cannot see, most snails have two sets of tentacles that help with sight and smell. The larger set at the top of their head contains the eyes, while the small, lower set is used to smell and feel.



North American Beaver

Scientific name: *Castor canadensis*



I LOVE TO LEARN

- The North American beaver is the largest rodent in North America and the second largest in the world. Rodents are mammals with four front teeth that continuously grow throughout their lives. Some other rodents are mice, squirrels, and porcupines.
- At Cascade-Siskiyou National Monument, beavers inhabit the landscape's streams and rivers. For shelter and protection from predators, beavers build lodges out of sticks, grass, moss, and mud. They enter and exit their lodges through underwater tunnels.
- Beavers use their long sharp teeth to cut down trees for dams. Beavers are the only animal, other than humans, who can completely change their environment by cutting down trees, building dams, and creating ponds. Many other animals depend on the habitat the beavers create. Because they create so much habitat, beavers are known as a keystone species.



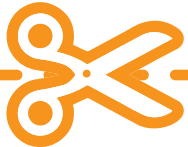
Peregrine Falcon

Scientific name: *Falco peregrinus*



I LOVE TO
LEARN

- The peregrine falcon is a type of raptor. Some other raptors are eagles, hawks, and owls. Raptors, also known as birds of prey, are birds that hunt and feed on vertebrates. The peregrine falcon hunts medium-sized birds and some small mammals, diving down on them from high above.
- Pilot Rock serves as important nesting habitat for peregrines at Cascade-Siskiyou. These birds are found on all continents except Antarctica. They can live in many types of habitats, including tundra, deserts, along the coast, and even in cities, where they build nests on building ledges.
- The peregrine is one of the world's fastest birds, reaching speeds of up to 200 miles per hour while diving for prey.



OREGON SPOTTED FROG

Scientific name: *Rana pretiosa*

I LOVE TO
LEARN

- The Oregon spotted frog is an amphibian. Amphibians are small vertebrates that live part of their lives on water and part on land. Other amphibians are toads, salamanders, and newts.
- Oregon spotted frogs eat mostly insects. Frogs quickly flick their sticky tongues to catch prey and pull the prey into their mouths. Other frogs will eat spiders, worms, or even small fish. Frogs are preyed upon by many predators, such as great blue herons, mammals, and even other frogs, like the American bullfrog.
- With more than 6,000 frog species around the world, frogs are known for their jumping abilities, croaking sounds, and often slimy skin.
- Frogs are social and live in groups called an army, colony, or knot. Similar to fish, young frogs will swim together in schools.

GLOSSARY

biodiversity: the variety of life found in an area.

ecoregion: a large area where the parts of the environment are generally similar.

endemic species: a species found in a distinct geographic location and nowhere else in the world.

geology: the science of the earth's physical structure.

invertebrate: an animal that does not have a backbone.

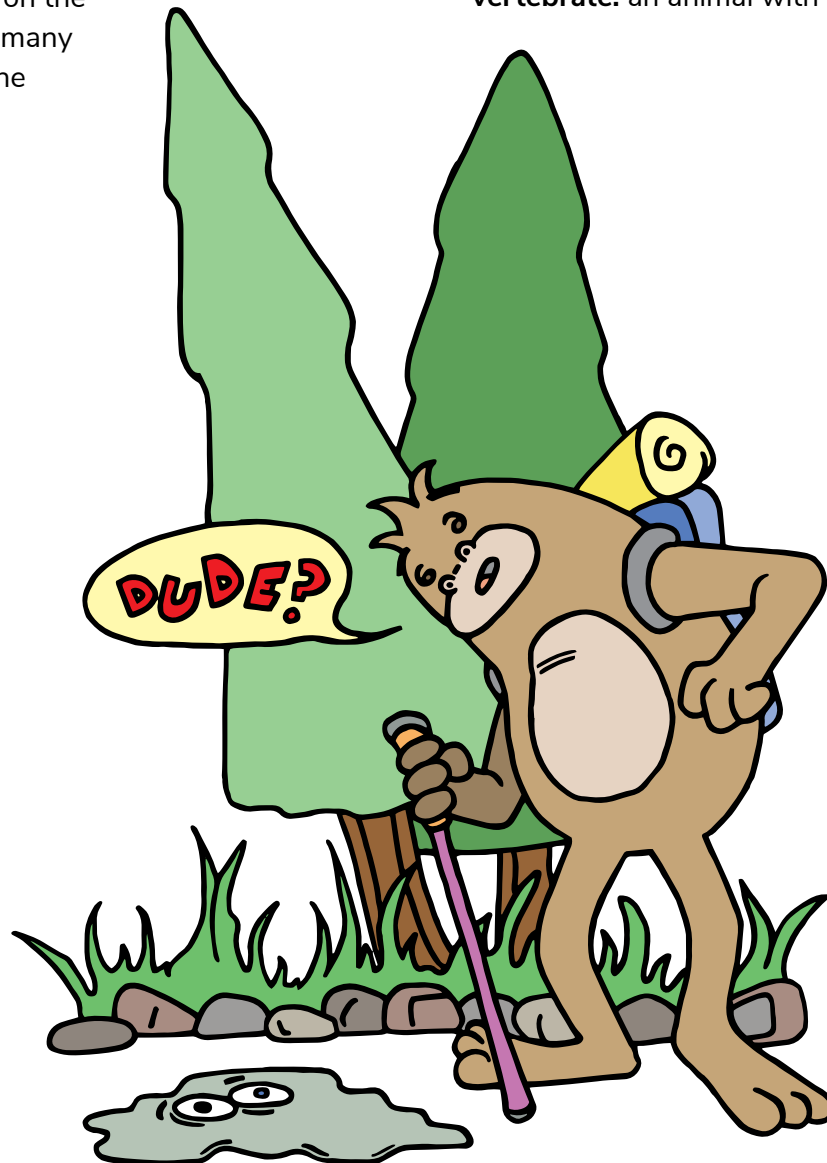
keystone species: a species that has a large effect on the environment and many other species in the environment.

National Conservation Lands: an organized system of public lands managed by the Bureau of Land Management that have received special designation for their scientific, cultural, educational, ecological, and other values.

national monument: an area designated to protect objects of scientific and historic interest by proclamation of the President under the Antiquities Act of 1906 or by Congress through legislation.

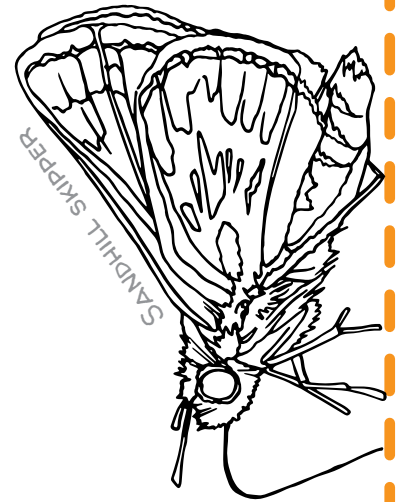
tectonic activities: processes that control the structure and properties of the earth's crust and its change through time.

vertebrate: an animal with a backbone.



Bureau of Land Management

JUNIOR RANGER



As a Bureau of Land Management Junior Ranger, 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 our important heritage.
- Share what I have learned with others.

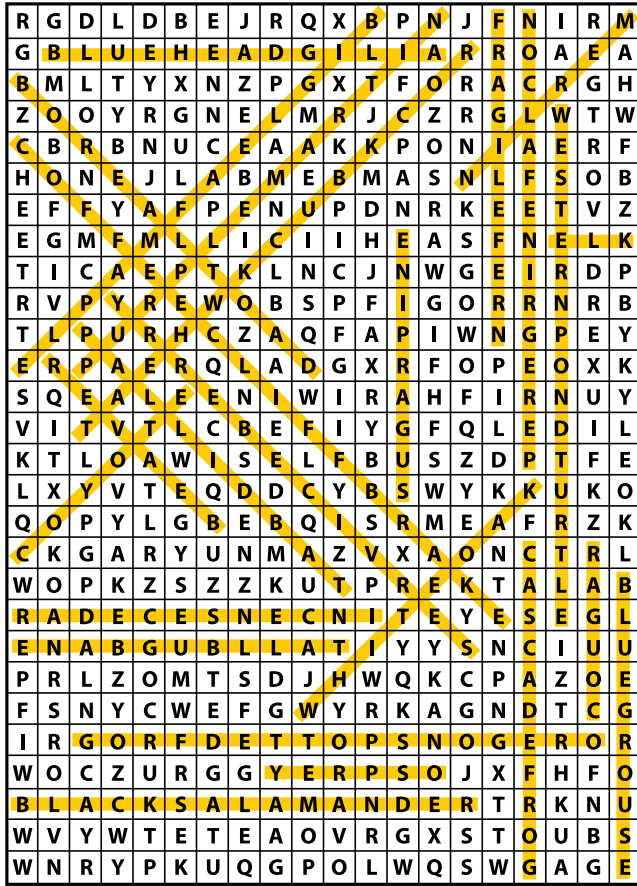
Ranger Signature

Date

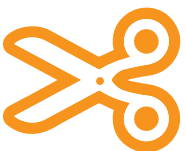


ANSWER KEY

Biodiversity is Biovariety



Traverse the Terrain



Monument Science Lesson Decoder

The Cascade-Siskiyou National Monument sits where five **ECOREGIONS** meet. Because each ecoregion has specific animals and plants, the combination of these ecoregions creates an abundance of **DIVERSITY** in the national monument.

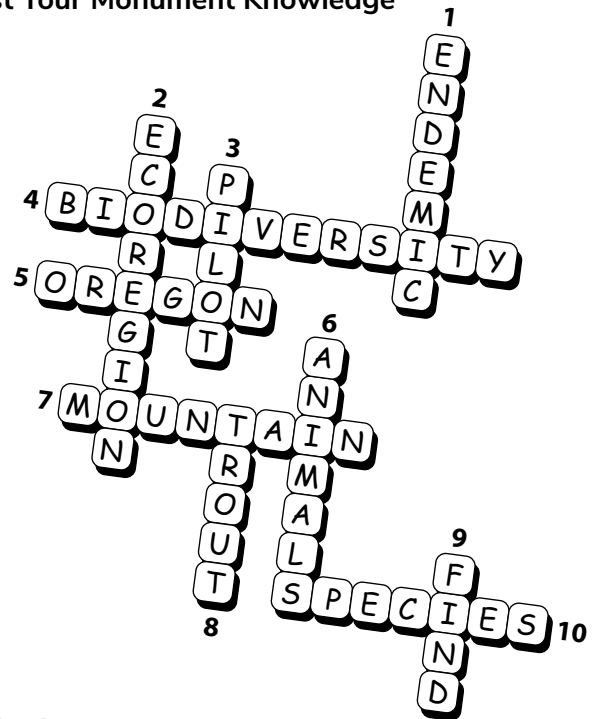
GEOLOGY is science of the earth's physical structure, such as **ROCK** layers, its composition, and how it has changed over time. The ecoregions are partly determined by the three **MOUNTAIN RANGES** that converge here—Cascade Range, Klamath Mountains, and Siskiyou Mountains.

The **TECTONIC** activity that formed the Klamath and Siskiyou Mountains occurred more than 130 million years ago. Tectonic activity includes earthquakes, **VOLCANOES**, and mountain building activities.

The **ELEVATION** in the monument ranges from 2,100 to 6,100 feet, which includes several distinct **CLIMATE** zones. Some parts of the monument can get more than **ONE HUNDRED** inches of rain a year, whereas others only get around 25 inches.

The various ecoregions, mountain ranges, and climate zones all contribute to a **THRIVING** diversity of life. Some plants and animals are **ENDEMIC** to Cascade-Siskiyou National Monument. An endemic species means a species is found in a distinct geographic location and **NOWHERE** else in the world. Some endemic species in the monument include redband trout, Siskiyou Mountains **SALAMANDER**, and Gentner's fritillary.

Test Your Monument Knowledge



Bird is the Word

- 1. WOODPECKER
- 2. BLUEBIRD
- 3. SPARROW
- 4. ROBIN
- 5. HAWK
- 6. MAGPIE
- 7. CROW

Final phrase: BIRDS OF A FEATHER FLOCK TOGETHER

