

Explore the Lost Coast from Land to Sea

KING RANGE

National Conservation Area

— Junior Explorer Activity Book —



**NATIONAL
CONSERVATION
LANDS**



Legend

- 1 Growing a Basket
- 2 Bear Creek Critters
- 3 Hidden Valley Scavenger Hunt
- 4 Tidepool Exploration

Welcome, Junior Explorer!

The activities in this book will help you explore King Range National Conservation Area (NCA) history and natural wonders.

King Range NCA covers 68,000 acres and extends along 35 miles of the northern California coastline. Here the land was too rugged for highway building, leaving the area remote. The region is known as California's Lost Coast. The Lost Coast attracts hikers, hunters, campers, mushroom collectors, surfers, and mountain bikers to name a few. In October 2006, Congress designated two-thirds of the King Range NCA as wilderness, which makes it an extra special place. The King Range NCA is part of the Bureau of Land Management's National Conservation Lands.

Work through the activities on your own or ask a sibling, friend, or parent to join you. Say the Junior Explorer pledge on page 27, sign the certificate, and you're on your way to exploring and caring for America's public lands. Have fun!

This Activity Book Belongs To:

What is a Junior Explorer?

- Junior Explorers explore the environment around them.
- Junior Explorers care for plants, animals and the land.
- Junior Explorers encourage others to care for the land and its inhabitants.



Public Lands Belong To You!

The Bureau of Land Management (BLM) is a federal government agency that takes care of more than 245 million acres of land. Most of these lands are in the western part of the United States. These public lands belong to all Americans.

The BLM manages public lands for many uses such as recreation, supplying natural resources like minerals, providing rangeland where cattle graze, maintaining natural wildlife habitat, and studying history and science.



Backpacking the Lost Coast

GROWING A BASKET

how to find the BEAR CREEK NATURE TRAIL

Located along Chemise Mountain Road, just 2 miles south of Shelter Cove Road between Wailaki and Nadelos campgrounds. Activity location **#1** on the map.

Walk along the Bear Creek Nature Trail and read the information panels with an adult. It is a great way to learn how Native Americans use the land to make baskets. Once you've finished reading the panels, find these plants for basketmaking, be sure to leave them in place for others to find:



If you were going to make a basket, what would it look like? Design your basket.



Bracken Fern

Pteridium aquilinum

Did you know?

The roots may grow as deep as three feet.

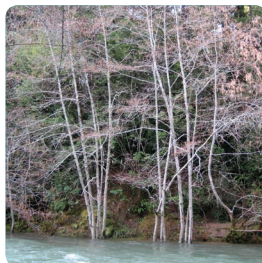


Slough Sedge

Carex obnupta

Did you know?

It grows between 2-5 feet tall and is important food and shelter for wildlife.



Red Alder

Alnus rubra

Did you know?

It has a straight trunk and prefers to grow in a moist area.



California Hazel

Corylus cornuta

Did you know?

It grows up to 12 feet tall and has fuzzy leaves that turn yellow in the fall.



Douglas Iris

Iris douglasiana

Did you know?

It grows in clumps that get bigger every year and has purple to white flowers in the spring.

BEAR CREEK CRITTERS

how to find BEAR CREEK

Located along Chemise Mountain Road, just 2 miles south of Shelter Cove Road. Activity location #2 on the map.

Hi, I'm Sylvester the Stonefly.

This is me as a child. I hear scientists call me nymph all the time. They say I go through metamorphosis, which means I change as I grow from an egg to an adult. You will find me hiding under rocks and leaves. I live in fairly clean water.

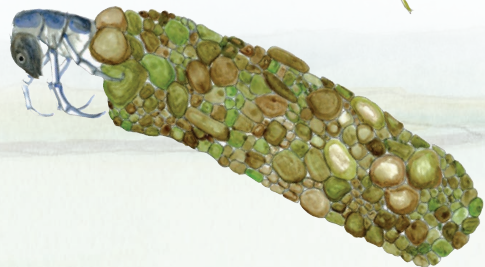
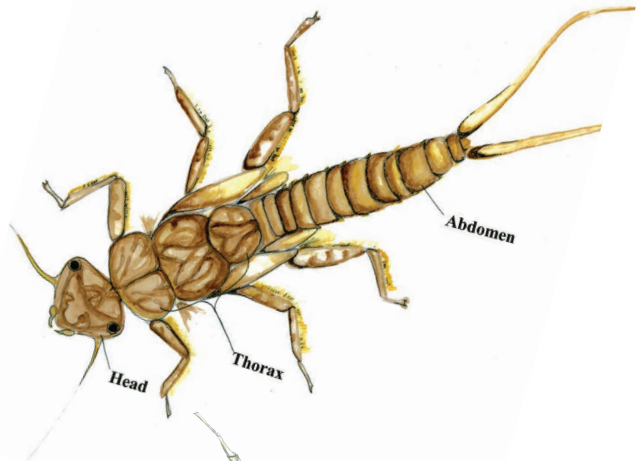
Hi there! I'm Drake the Dragonfly.

Yeah, those scientists are always calling me a nymph too, but I like to call myself dragonfly. They say I look a lot like an adult dragonfly. You will find me crawling around the rocks. I can live in polluted or clean water.

Hello! I'm Cathy the Caddisfly.

This is me as a baby or in scientific terms, a larva. I go through more stages of growth than Sylvester or Drake. I like to protect myself by making a cover with tiny rocks or sticks. You will find me attached to the bottom of large rocks. I am very sensitive to pollution. I only live in the cleanest water.

If you camp at Wailaki or Nadelos campgrounds, then Bear Creek is right outside your tent. If you're not camping, then get your parents to take you there! You will find little critters in the creek called aquatic macroinvertebrates. These critters can be signs of water quality.





Now that you've gotten to know some of the Bear Creek critters, it's time to see if you can find a few of their friends. Be gentle with them and be sure to put them back. Plus, take a look around and see if you can observe conditions that may affect the critters.

1 Number of species found

Stonefly: _____ Dragonfly: _____ Caddisfly: _____

Draw other critters you find:

2 Weather Conditions

- ☐ clear
- ☐ cloudy
- ☐ rainy
- ☐ other: _____

3 Water Appearance

- ☐ scum
- ☐ foam
- ☐ muddy
- ☐ milky
- ☐ clear
- ☐ oily sheen
- ☐ brownish
- ☐ algal
- ☐ other: _____

4 Stream Bed Color

(bottom of the creek)

- ☐ orange to red
- ☐ yellow
- ☐ black
- ☐ brown
- ☐ none
- ☐ other: _____

5 Odor

- ☐ rotten egg
- ☐ musky
- ☐ odd
- ☐ chemical
- ☐ metallic
- ☐ chlorine
- ☐ none
- ☐ other: _____

Based on your observations, how would you describe Bear Creek's water quality?

LEAVE NO TRACE WORD SEARCH

What does Leave No Trace mean to you?

DIRECTIONS:

There are seven Leave No Trace principles of outdoor practices. These principles are in bold below. See if you can be an observant Junior Explorer and circle all 20 ways you can practice the principles of Leave No Trace.

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

Know Before You Go

- 1. Prepare
- 2. Map
- 3. Tide chart

Choose the Right Path

- 4. Trail
- 5. Hike
- 6. Camp

Trash Your Trash

- 7. Dig a hole
- 8. Bury poop
- 9. Pack it out

Leave What You Find

- 10. Preserve the past
- 11. Take pictures

Be Careful with Fire

- 12. Water
- 13. Stove
- 14. Out and cold

Be Kind To Other Visitors

- 15 Listen
- 16. Nature
- 17. Yield

Respect Wildlife

- 18. Never feed
- 19. Bear can
- 20. Control pets



BEAR CAN PUZZLER



Help keep the wildlife in the King Range NCA wild by using a bear canister for overnight trips. Circle the **scented** items that belong in the bear canister.





HIDDEN VALLEY

SCAVENGER HUNT



DIRECTIONS:

Be sure to read all the clues before you begin your hike. This will help you be an observant Junior Explorer during the scavenger hunt.

how to find the HIDDEN VALLEY

Located along Chemise Mountain Road, just .25 mile south of Shelter Cove Road. Activity location #3 on the map. You will hike on the Hidden Valley Interpretive Trail for approximately 1.5 miles. It makes a loop around the meadow.

Find proof of elk. Write your observations here.
Hint: Look for scratch marks on a tree, bedded down grass, or their poop.

Spy on a bug for 30 seconds. Draw a map of the bug's route here.

Find a pattern in nature. Draw the pattern here.

Listen. How many different birds do you hear? Write the number here.

Look for evidence that people lived here. Write down what you see here.
Hint: Do you see any trees that don't belong?

Count the different kinds of plants you see. Write the number here.

Find a flower. Draw it here.

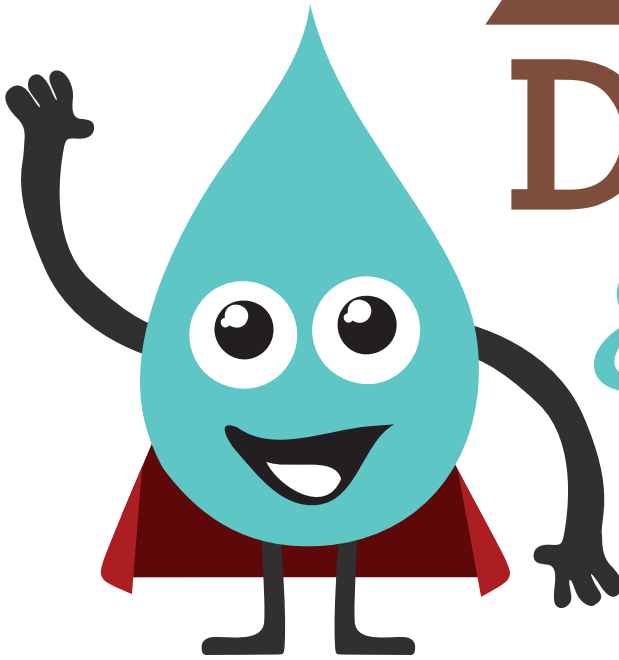
Create a circle on the ground. Count the number of living things that are inside the circle. Write the number here.



Find an animal home. Take a picture.

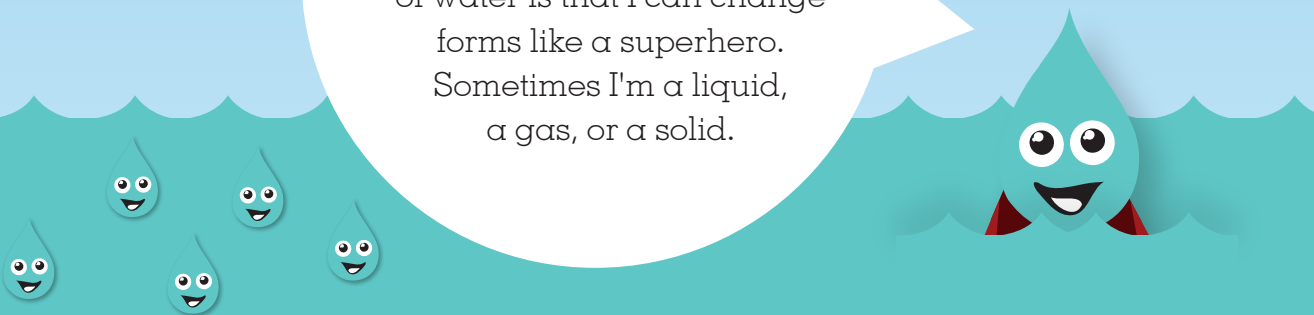
THE JOURNEY OF

Droplet & friends



Hi! I'm a drop of water. You can call me Droplet. I can't tell you where I was born, but I can tell you about my journey around the King Range NCA.

Here I am as a liquid,
flowing with zillions of friends
in the Pacific Ocean. The cool
thing about being a drop
of water is that I can change
forms like a superhero.
Sometimes I'm a liquid,
a gas, or a solid.



The sun warms the ocean and I'm able to escape by turning into gas. Once I'm gas, I head for the sky and join my friends in the clouds.



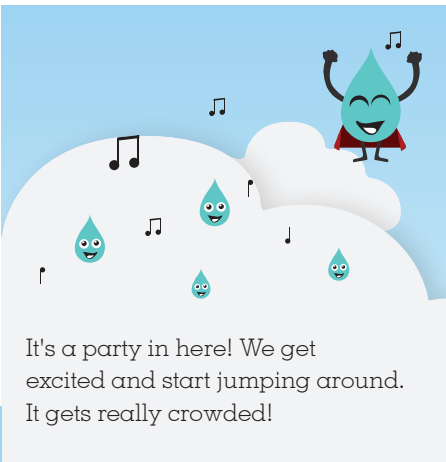
This is called **evaporation**.

Some of my friends hang out in the trees on King Peak then they rise up to the clouds.



This is called **transpiration**.

It's a party in here! We get excited and start jumping around. It gets really crowded!



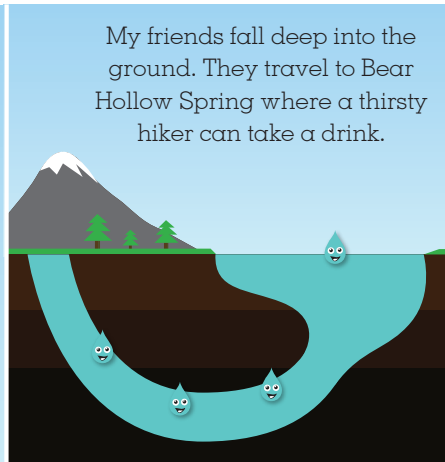
This is called **condensation**.

As it gets cold, we huddle together. We turn into a liquid or solid and fall back to earth as rain, snow, hail or sleet.



This is called **precipitation**.

My friends fall deep into the ground. They travel to Bear Hollow Spring where a thirsty hiker can take a drink.



This is called **transportation**.

I fall to earth and run into Big Flat Creek. This takes me back to the Pacific Ocean. This is also called transportation.



Whew, what a ride! Time to start the cycle all over again. I wonder where my journey will take me next time. Maybe to the California Coastal National Monument in Trinidad!

TIDEPOL EXPLORATION

Time to Tip Toe into the Tidal Zone

how to find the TIDAL ZONE


Located in Shelter Cove at Mal Coombs Park next to the Cape Mendocino Lighthouse. Activity location **#4** on the map.

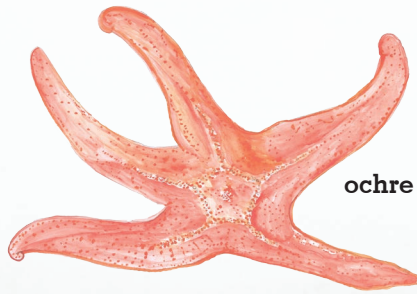
REMEMBER

- Plan tidepool exploration at low tide. Check the tide calendar at the kiosk.
- Walk on bare rocks or sand.
- Return everything to its home.
- Do not pry animals from the rocks, it rips off their tiny tube feet.
- To really understand life in the tidepools, watch the animals from the water's edge.

Sea Stars

Sea stars are the rulers of the tidepools. They use their strong legs to pry open shells, and then they place their tiny stomachs inside the shell to eat the animal. Do you know what happens if a sea star loses a leg? They grow another leg! Don't you wish you could do that too?

 Find more than one kind of sea star.



ochre star



bat star



leather star

Anemones

Be gentle with the anemones because they are soft and squishy. You can touch their tentacles.

- 🔍 What does it feel like?
- 🔍 What happened when you touched it?



anemone

Sea Urchins

Sea urchins like to stay in water, even at low tide. To find the sea urchins, look in a pool full of water. Once you find them, find these parts:

- 🔍 Purple spines
- 🔍 Tiny tube feet
- 🔍 Shell bits stuck to it
- 🔍 Plant or animal living on it



sea urchin

Mussels & Barnacles

Up high on the rocks, you'll find mussels and barnacles. California mussels like to live in colonies just like one big happy family. You will often find different kinds of barnacles hanging out with them.

- 🔍 Can you find any empty mussel shells on the sand?



gooseneck barnacle

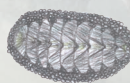


California mussels

Chitons

There are many chitons (kai-tins) around the tidepools, both large and small. See if you can find a small one attached to a rock or a large one hiding in the seaweed.

- 🔍 Find a small chiton attached to a rock.
- 🔍 Find a large chiton hiding in the seaweed.



mossy chiton



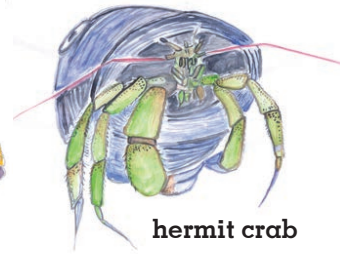
giant gumboot chiton

Crabs

Most likely you'll find a hermit crab hanging in the tidepools. Gently pick it up and place it in the palm of your hand. If it's being a little shy, try singing the "Happy Birthday" song to bring it out of its shell. If you want to find a Purple Shore Crab, then look in the cracks of the rocks above the tidepools. **WATCH OUT!** One of them might be staring back at you!



purple shore crab



hermit crab

Black Turban Snails and Periwinkles

These are the most common snails in the tidepools. They scrape the rocks for algae to eat. Snails can live for 25 years!

- 🔍 Find the biggest snail in the tidepools.
- 🔍 How many swirls does it have?



dogwinkle



periwinkle

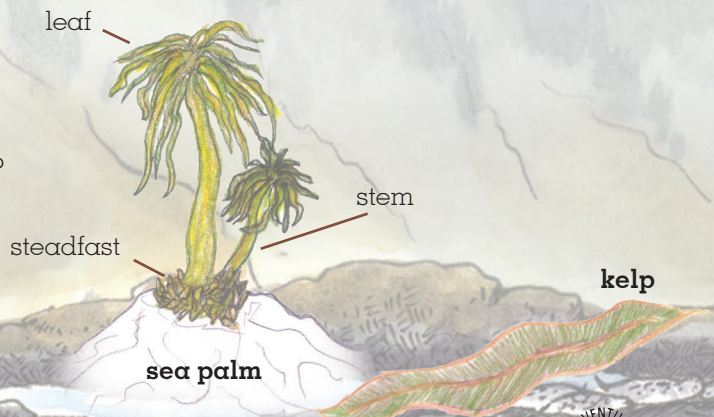


black turban snails

Seaweed

Seaweed protects itself from the hot sun and pounding waves by being slimy and floppy like a noodle.

- 🔍 How many different types of seaweed do you see?
- 🔍 Which color seaweed is most common?
- 🔍 Can you find the different parts of the seaweed?



WATER SAFETY EXPERT



DIRECTIONS:

Become a Water Safety Expert by using one of these words to complete the sentences below:

swimming
back
caves

high tides
cliff
ground



Go to high _____.



Watch for _____.



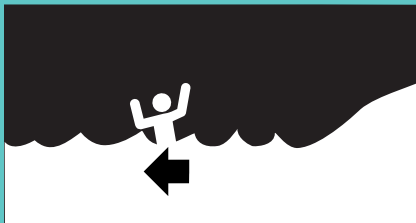
Never turn your _____.



Stay away from _____ edges.



Don't dig pits or _____.



Avoid _____ or wading.

You Get Paid To Do This?

CAREER PROFILE

Paul Sever
Wilderness Ranger
King Range National
Conservation Area



WHAT HE DOES

Paul hikes over 80 miles of trails a month. While hiking, he talks with visitors and answers their questions. Paul keeps the trails and campsites clean so you can enjoy them. His goal is to teach people how to "leave no trace." By doing this, he hopes the environment is not damaged and other visitors can enjoy the area. He is also prepared to give first-aid and help people in need. He does everything on foot with all of his tools and equipment on his back because no vehicles are allowed in the King Range Wilderness.

EDUCATION

Paul studied natural resources planning and interpretation in college. Some of his favorite classes were about recreation, visitors, environmental education, and map making. Paul started his career working as a wilderness ranger during his summers in college. He is also a Wilderness First Responder, a Leave No Trace Master Educator, and an Eagle Scout.



Helping hikers find their way.



Using a global positioning system (GPS) map making tool.

SOMETHING TO THINK ABOUT

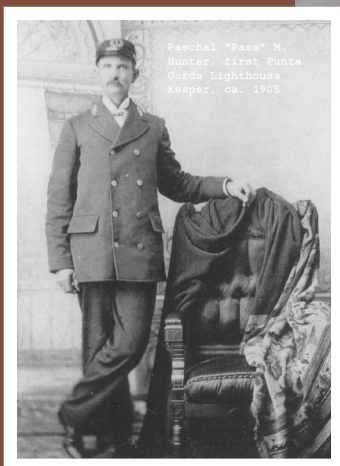
Paul enjoys caring for the wilderness area. He says, "Places like this are important to protect so people can enjoy them, and plants and wildlife can thrive." Paul believes that cities will keep getting bigger and will take more from the environment. He thinks this is why it is important for us to make sure we save special places in their natural condition for you, future generations, and the earth.

LONELIEST LIGHTHOUSE

Did you see the Cape Mendocino Lighthouse in Shelter Cove while tidepooling? It's not the only lighthouse along the Lost Coast. The Punta Gorda Lighthouse is located in the northern section of the King Range NCA.

The Punta Gorda Lighthouse was known as the "Alcatraz of lighthouses" because of its remoteness.

The Punta Gorda Lighthouse began operating in 1912. It is believed that Paschal "Pass" M. Hunter was the Light Keeper. Pass Hunter died that very same year. His son Perry became a Keeper when he grew up.



Paschal "Pass" M.
Hunter, First Punta
Gorda Lighthouse
Keeper, ca. 1905

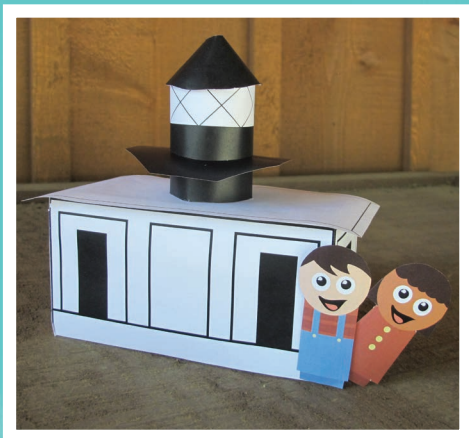


"Pass" Hunter and F.A. Harrington
First Keepers, Punta Gorda Lighthouse
1911

Supplies to the Punta Gorda Lighthouse were brought in by horseback, wagons, and sleds from the town 10 miles away. One career horse, named Old Bill, served the light station for thirty years until the station closed in 1951. Jeeps were used during the last few years.

The light station had several buildings. Plus, a barn for cows, chickens, goats, horses, lambs, and other animals that were needed due to the remote location, extreme weather conditions, and distance to nearest town. A small creek on the south side of the light station supplied the water.

Photos: (Left to Right, Top to Bottom) Lightkeepers sitting on the light station gate (circa 1946), the light station through the years (circa 1946 and 1960), Punta Gorda Lighthouse today, and a model of the lighthouse. Now it's time to make your own Punta Gorda Lighthouse model.



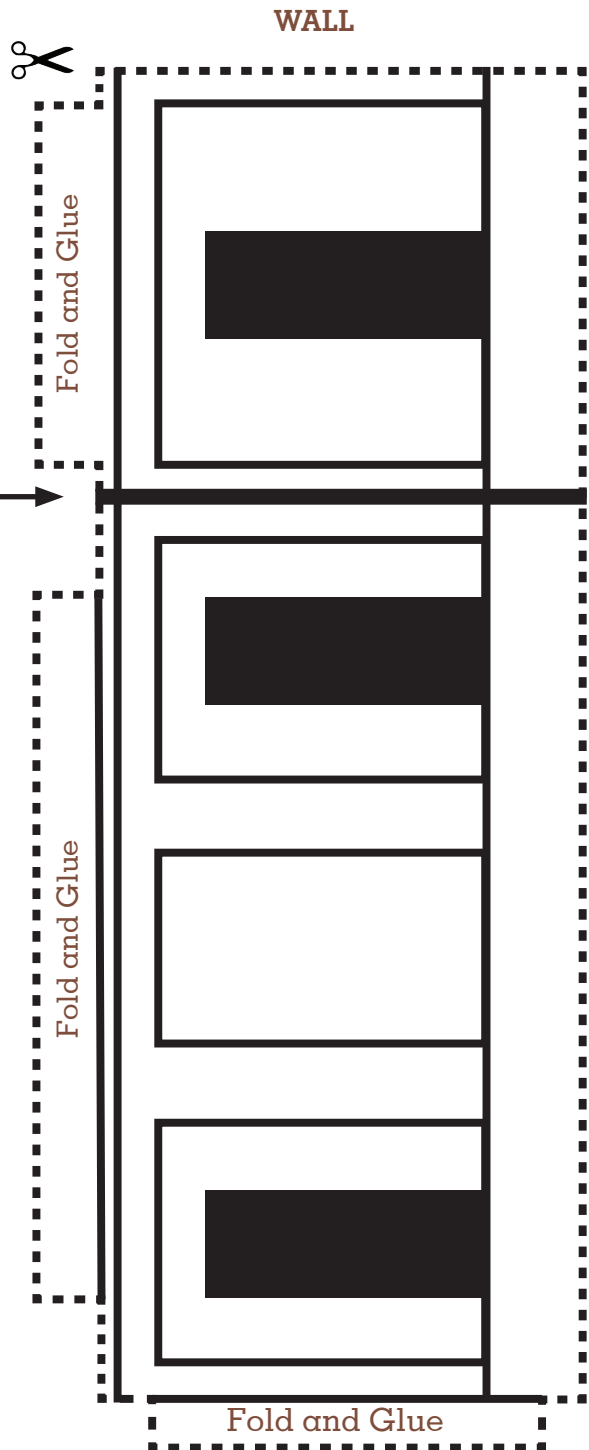
Lighthouse Model

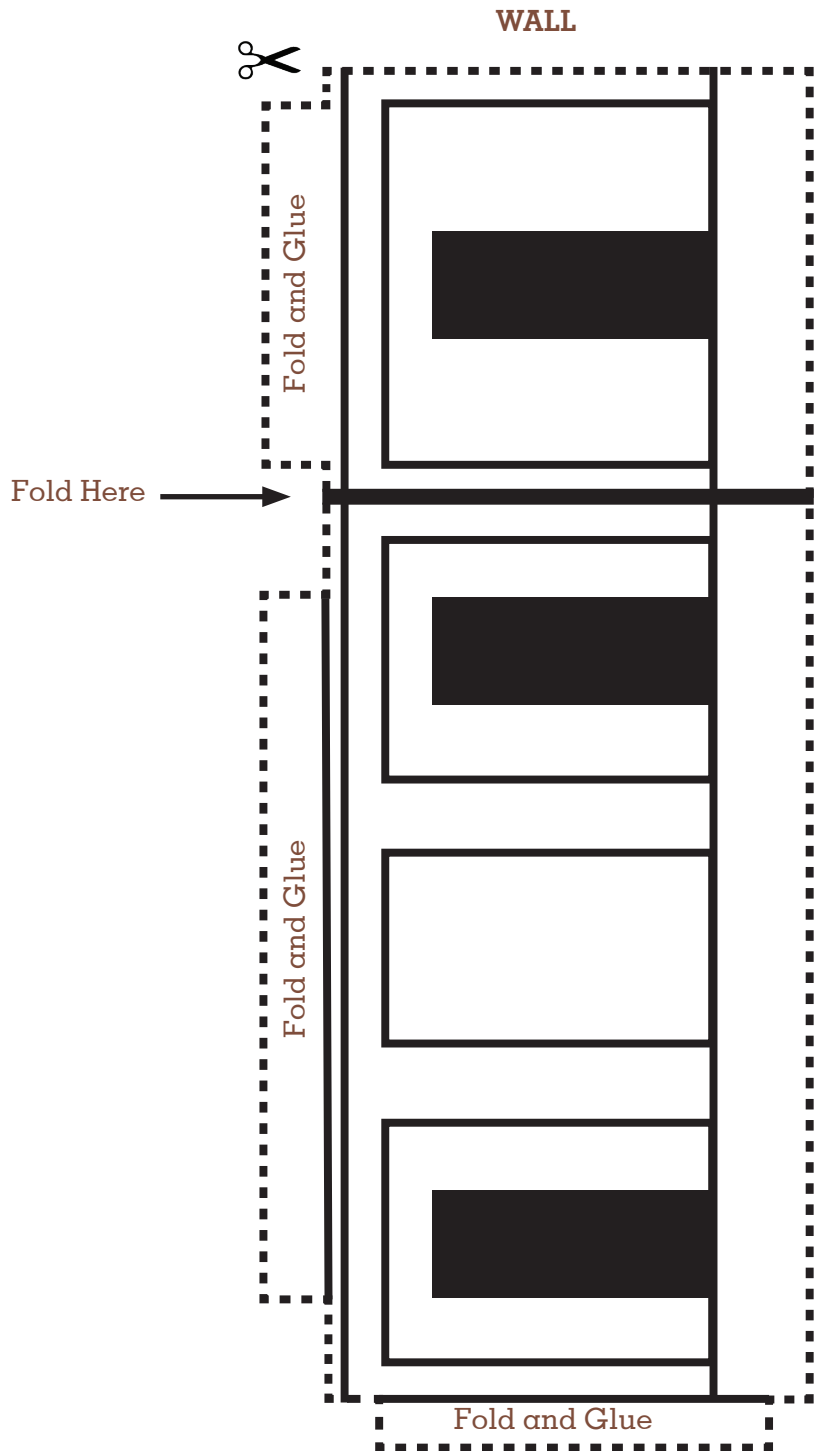
To Start

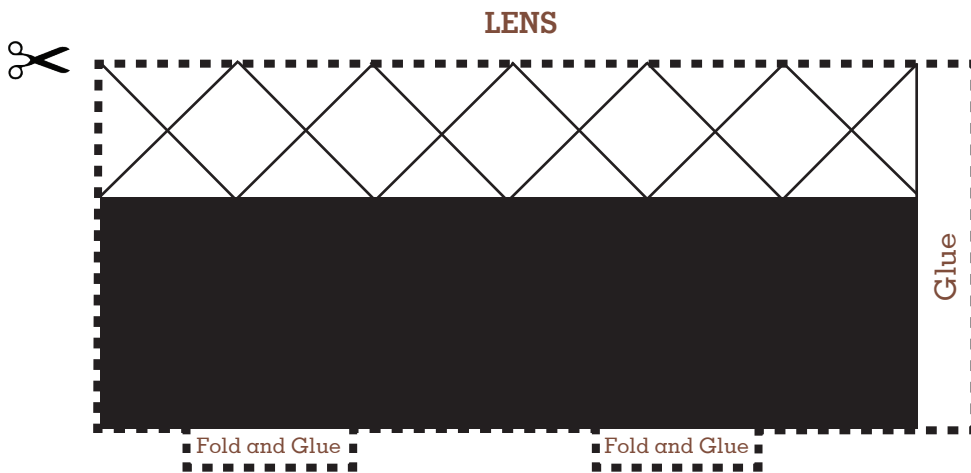
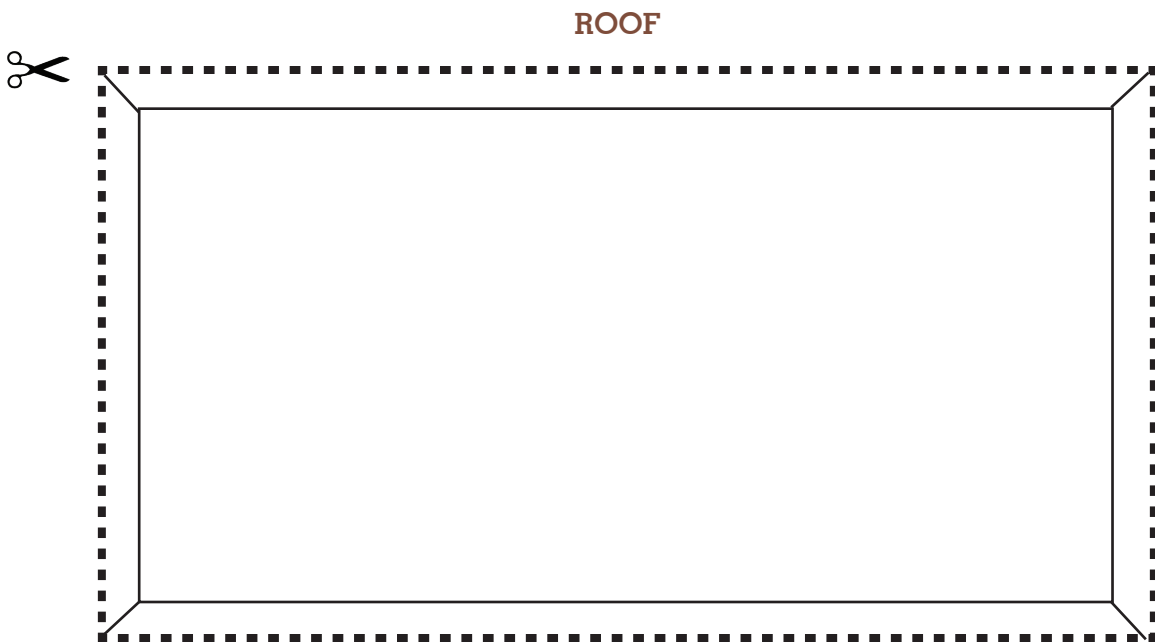
- 1 Grab a pair of scissors, glue, and tape.
- 2 Cut out all the model pieces.
Be sure NOT to cut off the tabs.
You'll need those to connect all the pieces together.

Create The Base Of The Lighthouse

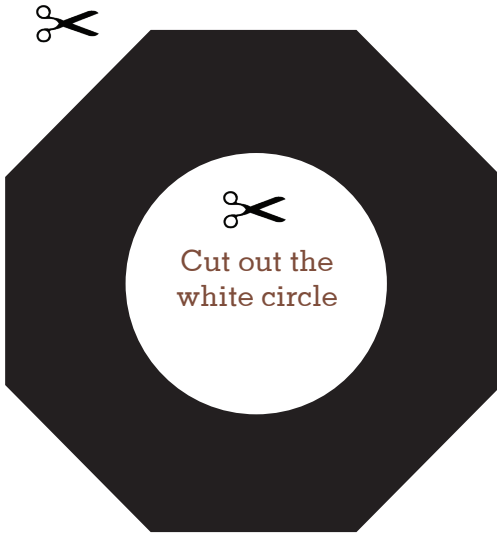
- 1 Fold the tabs and the line between the walls.
- 2 Place the top of the roof top down.
- 3 Glue the tabs to the roof. Do this with both walls.
- 4 Now connect the walls to each other.
- 5 The base will be upside down so flip it around.



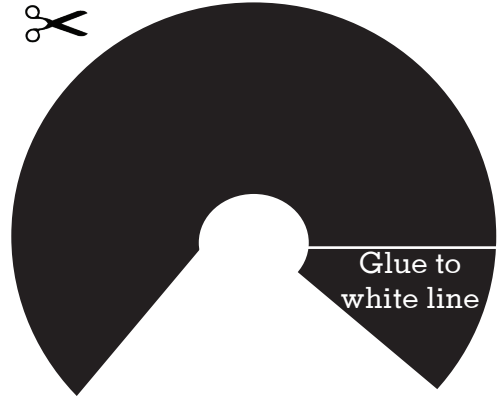




PLATFORM



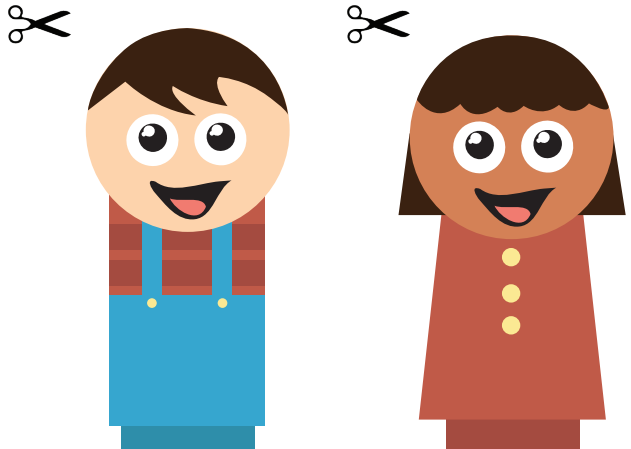
CONE TOP



Create the Top

- 1 Glue the tab on the lens and attach to the inside to create a cylinder
- 2 Slide the lens through the hole in the platform. The platform should rest in the middle of the black part of the lens.
- 3 Glue the lens to the center of the roof.
- 4 Glue the tab on the cone top and attach to the inside to create a cone shape.
- 5 Tape cone top to the top of the lens.

LIGHTHOUSE KEEPERS



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 our heritage, and
- share what I have learned with others.

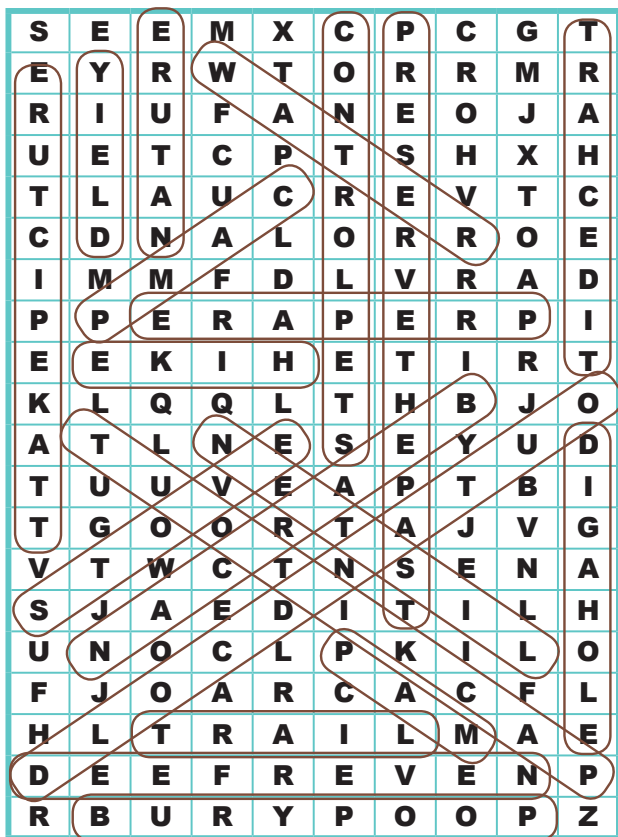
Date

Explorer Signature



ANSWER KEY

Word Search



Bear Can Puzzler



Water Safety Expert

Go to high GROUND.

Watch for HIGH TIDES.

Never turn your BACK.

Stay away from CLIFF edges.

Don't dig pits or CAVES.

Avoid SWIMMING or wading.

READY MORE?

COLLECT ALL 3!

- 1 Pick up the Headwaters Forest Reserve and California Coastal National Monument Junior Explorer activity books at the BLM Arcata Field Office or the King Range Project Office. Once you complete all three books, bring them back to one of the offices and receive some new exploration tools!

BLM Arcata Field Office website: <http://blm.gov/t9kd>

BLM Junior Explorers website: <http://blm.gov/v9kd>

- 2 Find other public lands to explore in Humboldt County by visiting: www.redwood-edventures.org

Extra Assignment: Watch the King Range NCA Outdoors Cool video at: www.outdoorscool.com and answer this question:

What are some fun activities you can do in the King Range NCA?



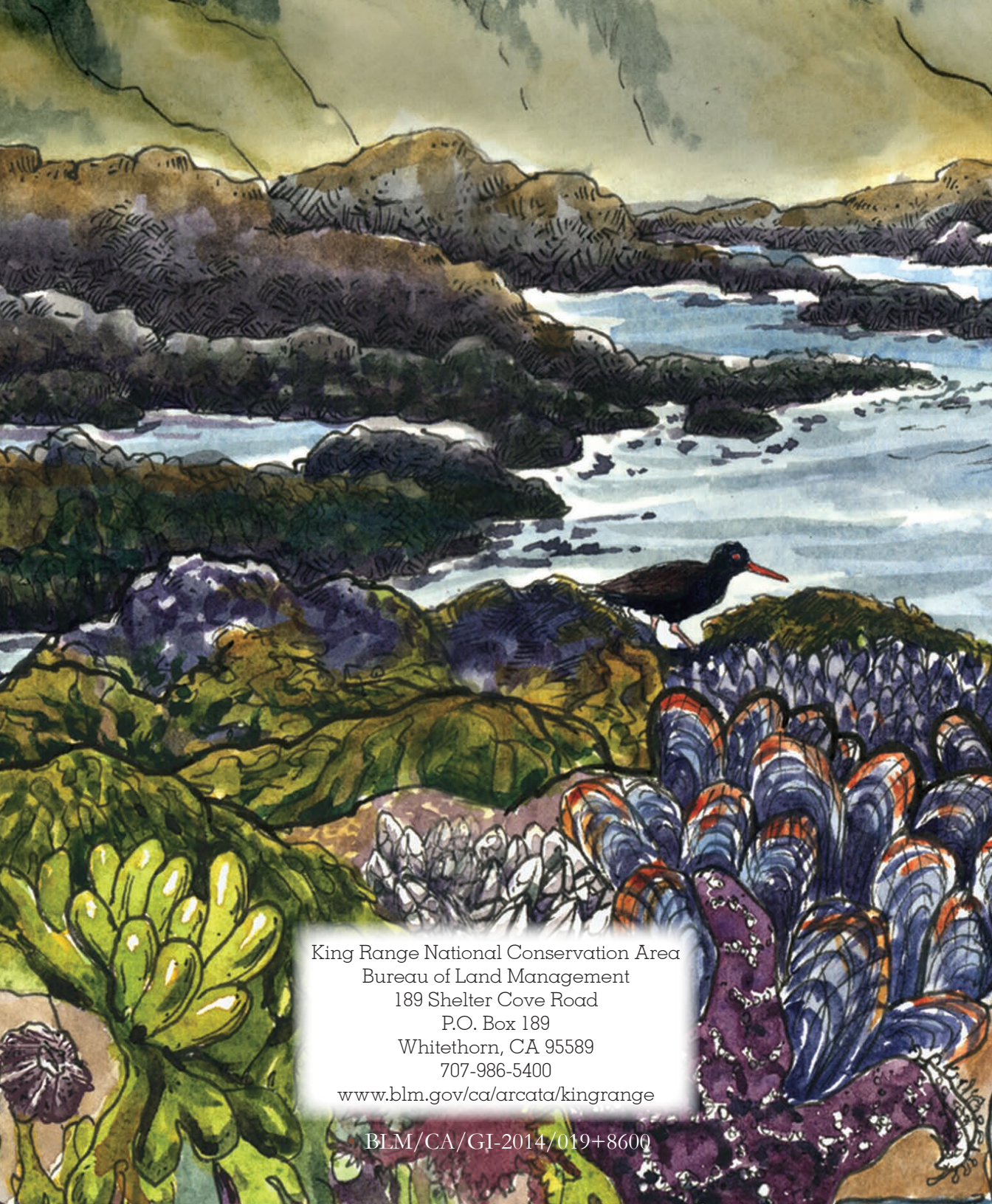
Use your smartphone to scan the QR code and find out more about Redwood EdVentures!



Use your smartphone to scan the QR code and watch the King Range NCA Outdoors Cool video.

Front and back cover art, elk art, tidepool boot art, and additional background art by Gary Bloomfield
Tidepool Exploration art by Nick's Interns and Amanda Cocking
Bear Creek Critters art by Amanda Cocking | Graphic art by Josh DeWare





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