



Have Fun Exploring!

Write Your Field Notes Below

A big thanks to everyone who helped create this Handbook. Thanks to the National Landscape System and Community Partnerships for the grant; thanks to the BLM employees for their career profiles; thanks to all the photographers for the great pictures; and thanks to Zachary Pratt, Lesli Ellis-Wouters, and Victoria Anne for help with editing and ideas.

The photos of Tabor Creek and the train rails on the front cover are by Ayla Anderson. The photo of the hawk is by Mike Shaw a volunteer for Hawkwatch International.



Bureau of Land Management

Junior Explorer



Adventure Handbook



Activity Book
Elko District BLM

Public Lands Belong to You!

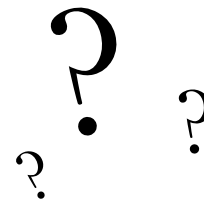
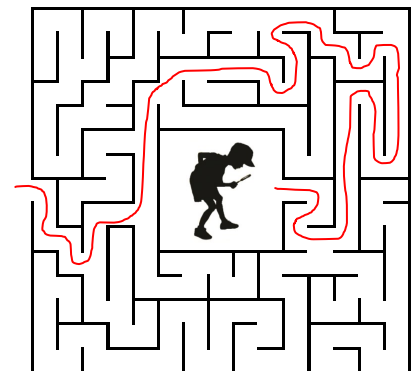
The Bureau of Land Management (BLM) is a federal government agency that takes care of more than 245 million acres of land. Most of these lands are in the western part of the United States. These lands are America's public lands, and they belong to all Americans. These public lands are almost equal in area to all the land in the states of Texas and California put together.



The BLM manages public lands for many uses. The lands supply natural resources, such as coal, oil, natural gas, gold, and other minerals. The lands provide habitats for plants and animals. People enjoy the big open spaces on the lands by hiking, wildlife watching, camping, and taking photos. The lands also contain evidence of our country's past, ranging from fossils to Indian artifacts to ghost towns.



Fossil Maze (Page 18)



Tip Cryptogram (Page 17)

R U B Y O U R H A N D S
W I T H B U T T E R
O R O I L .

What are some things you could spot in the night sky? (Page 11)

Planets _____ Moon _____
Galaxies _____ Meteor _____
Constellations _____ Satellite _____

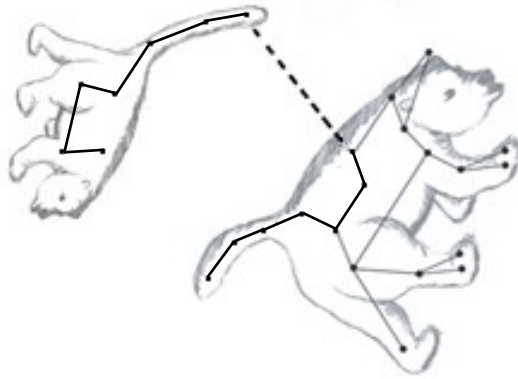
These are just suggested answers, there are many correct answers.

The large bear is known as Ursa Major, or the [Big Dipper](#).
The little bear is known as Ursa Minor, or the [Little Dipper](#).



Did You Know?

The Elko District Office has a fire suppression organization that is responsible for fighting wildland fires on 7.5 million acres of public land!



Fill in the Food Table (Page 12)

	Fruits & Berries or Flowers	Carrion	Small Mammals	Seeds, Grass, & Grain	Fish, Frogs, Snakes, & Lizards	Insects
American White Pelican					X	
Bald Eagle		X	X		X	
Burrowing Owl	X		X	X	X	X
Mallard Drake				X	X	X
Northern Mockingbird	X			X		X
Rofus Hummingbird	X					X

Junior Explorers

BLM's Junior Explorer program helps introduce young explorers like you to the lands and resources that the BLM manages. This "Adventure Handbook" focuses on showing ways you can explore and recreate on your public lands. Let's get outside and have an adventure!



You can work through the activities on your own or invite a sibling, parent, friend, teacher, group leader, or an adult you know to join you. When you complete the activities, check them against the Answer Key in the back of the booklet. Then say the Junior Explorer pledge on page 23, sign the certificate, and you're on your way to exploring and protecting America's public lands. Have fun!



Fishing Below the South Fork Dam

Did you know the only reason South Fork Reservoir exists is because of the South Fork Dam? The dam was built in 1988 to control floods and create recreation opportunities. There are many different ways to recreate at the Reservoir, but there is also recreation below the dam too. Not only are there hiking trails down there, there is also great fishing. Grab your fishing and hiking gear and check it out!



Goldfish



Rainbow Trout



Largemouth Bass



Great White Shark



Yellow Tang



Catfish

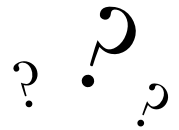


Sockeye Salmon

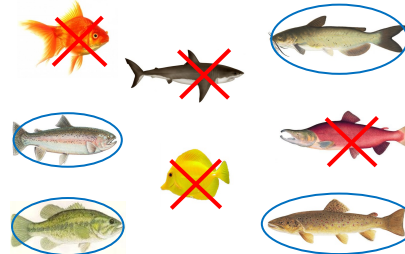


Brown Trout

Answer Key



Fishing Below the South Fork Dam (Page 4)



BLM Campground Math (Pages 6 and 7)

$$22 - 4 = 18 \text{ Campsites}$$

$$7 \times 3 = 21 \text{ Campsites}$$

$$7 + 11 = 18 \text{ Campsites}$$

$$50 \div 5 = 10 \text{ Campsites}$$

Backpack Checklist Scramble (Page 5)

- ☒ Water
- ☒ First aid kit
- ☒ Compass
- ☒ Map
- ☒ Hat
- ☒ Sunscreen
- ☒ Bug spray
- ☒ Whistle
- ☒ Bandana
- ☒ Snacks
- ☒ Flashlight
- ☒ Extra socks
- ☒ Sweatshirt
- ☒ Watch



Fun Fact!

There are or were 892 species of mammals, reptiles, fish, birds and amphibians in Nevada. Of that, 790 species are native, 64 are only found in Nevada, 102 have been brought into the state and 32 are extinct.

List the 10 WSAs (Page 10)

- 1) Owyhee Canyon
- 2) Little Humboldt River
- 3) Rough Hills
- 4) Bad Lands
- 5) Red Spring
- 6) Cedar Ridge
- 7) South Pequop
- 8) Bluebell
- 9) Goshute Peak
- 10) South Fork Owyhee Canyon

Campground Crossword (Page 8)

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

To be informed of Jr. Explorer activities in Elko County, make a copy of your signed Junior Explorer Adventure Handbook certificate on the back of this page and drop off or mail to: Jr. Explorer Program, BLM, 3900 E. Idaho St., Elko, NV 89801. Or you could email a copy to: zpratt@blm.gov.

Include your Name: _____

Address: _____

Email: _____

Thanks! Have Fun Exploring.



Backpack Checklist

Descramble the words to find out what items you need to have in your backpack when you go exploring. Once you have that item in your backpack, check it off.

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
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aetwr

ifrts adi tik

mscoasp

apm

tha

nucressne

gbu sypar

stiwehl

dnabnaa

sanskc

sfhalghitl

retxa kcross

ahrwesitts

htacw

Anytime you go out exploring, always tell someone at home where you are going, what you are doing, and when you will be back!

BLM Campgrounds

The Elko District BLM maintains four campsites. Circle the one that you would like to camp at next! Do the math to find out how many campsites are at each campground.



Wildhorse Reservoir

Camping, fishing, boating, picnicking, hunting, mountain biking, and wildlife viewing.

$22 - 4 = \underline{\hspace{1cm}}$ Campsites

Campsites have tables, fire rings, grills, vault toilets, and trees or shade ramadas.

Tabor Creek

Camping, fishing, picnicking, mountain biking, hiking, wildlife viewing, and hunting.

Campsites have tables, fire rings, and vault toilets.

$7 + 11 = \underline{\hspace{1cm}}$ Campsites



Bureau of Land Management Junior Explorer

Adventure Handbook



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!

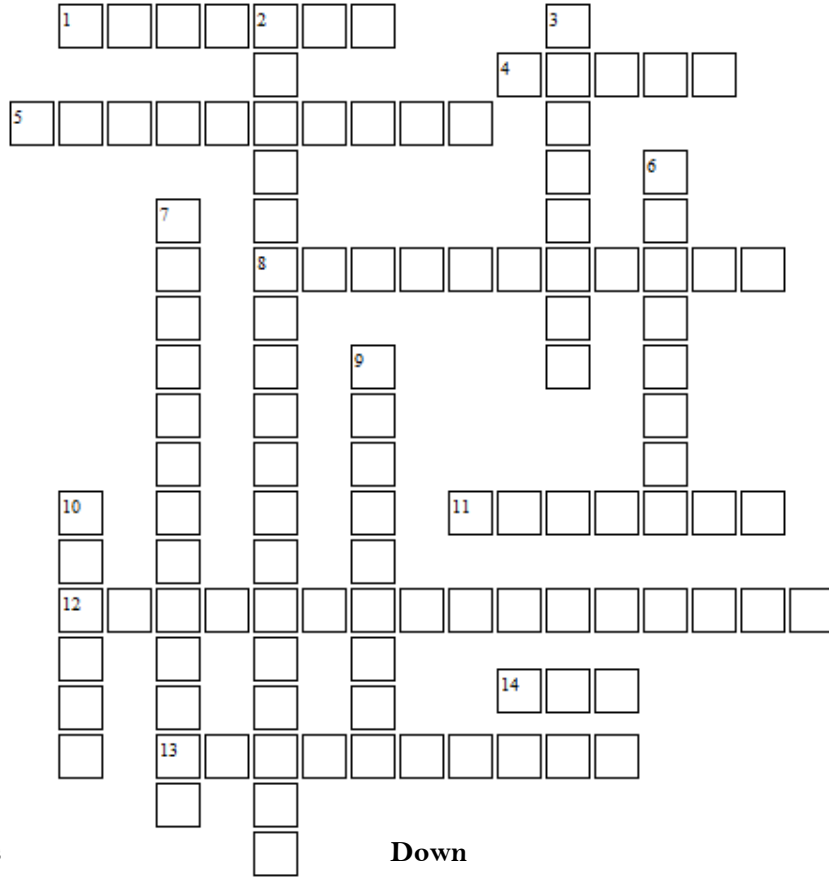
Date

Explorer Signature



Putting it All Together

Below is a crossword puzzle that puts together everything you have learned about in this booklet. Compete it to show off your Junior Explorer knowledge!



Across

1. Can be found at the Black Shale Pit.
4. The Big Dipper or Ursa ____.
5. Bureau of Land _____.
8. Nevada's state fossil.
11. A seed that was a large part of the Great Basin Native American diet.
12. This allows you to get close to birds unseen.
13. A great way to enjoy your public lands at night.
14. The number of million acres the BLM manages.

Down

2. Almost like a bracelet, an ____ is put on birds to help researchers.
3. The Junior Explorer Adventure _____.
6. The Ruby Lake marsh is leftover from Ancient Lake _____.
7. An _____ is someone who studies the human culture using clues left behind.
9. The WSA that is closest to Elko.
10. Birds of prey.

For more information about Elko District's campgrounds, visit www.blm.gov/rv5c or call (775) 753-0200.

Wilson Reservoir

Camping, fishing, boating, picnicking, and hunting.

Campsites have shade shelters, fire rings, and vault toilets.

Picnicking area near boat ramp.



7 x 3 = ____ Campsites

50 / 5 = ____ Campsites

Zunino/Jiggs

Camping, picnicking, wildlife observation, and fishing.

Campsites have tables, fire rings, grills, and vault toilets.

Water may dry up in drought years.



Campground Crossword

This crossword is full of words that all relate to the BLM campgrounds. Try to find them all!

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

Biking	Fire Ring	Picnic	View Wildlife
Boating	Fishing	Potable Water	Wildhorse Reservoir
Camping	Grill	Restrooms	Wilson Reservoir
Exploring	Hiking	Stargazing	Zunino Jiggs
Fee Box	Hunting	Tabor Creek	

Archaeologist



NAME: Julie Rodman

JOB DESCRIPTION: Archaeologists work to record and protect evidence of human activity of the past. They look for things people left behind and use these things to learn about how the

people lived, hunted, cooked, developed tools, and their customs.

From Julie to you: What I love most about being an archaeologist is that I get to work outside. I spend my days looking for shiny things and rusty things that I use to tell the stories of how people lived in the past. Native Americans used stone tools and these stones usually shine. Rusty things are made of metal and were left behind by trappers, travelers, farmers, ranchers, and miners. By looking at the things people left behind, we can learn about who lived here before us.

Planning and Environmental Coordinator



NAME: Victoria Anne

JOB DESCRIPTION: Planning Coordinators are committed to the wise use and protection of our natural resources.

Victoria has combined her experiences in digital imagery, photography, psychology, geology, and agronomy, to create interpretative literature and offer information about land health for the BLM and the U.S. Forest Service. Some of her projects include using finely sieved soils and egg yolks to create tempera paints for soil paintings, observing plant and soil relationships, and designing puzzles and word searches for kids like you.



Wildlife Biologist

NAME: Cameron Collins

JOB DESCRIPTION: Wildlife Biologists work to manage wildlife habitat on public lands. They make changes and improvements to the

habitat to benefit wildlife such as fences and nesting structures and they get to work with some amazing animals.

From Cameron to You: One of the best things about being a Wildlife Biologist for the BLM is being able to advocate for wildlife and wildlife habitats across a huge area. Opportunities to make a positive difference for wildlife on such a large scale are rare. I enjoy getting out to count sage-grouse on their strutting grounds in the spring, surveying for eagles during winter, and monitoring critical habitats for mule deer, antelope, pygmy rabbits, and migratory birds in riparian habitats along streams. It is exciting to experience these animals firsthand.

Research Associate



NAME: Ayla Anderson

JOB DESCRIPTION: Research Associates assist different departments in the BLM by doing a variety of different jobs; from spraying noxious weeds to collecting route data.

From Ayla to you: What I love most about my job is I am able to do so many different things. I go out in the sunshine recording roads in a GPS, hike all over Wilderness Study Areas to collect route data, and repair and maintain campgrounds. I am also able to be creative when I plan events like stargazing, organize educational outdoor activities for kids, and even making this handbook!

Campground Scavenger Hunt

Now that you know a little more about the campgrounds the BLM maintains, go explore each one. For this scavenger hunt, grab a camera and take pictures of every item on the lists and check them off. *Make sure you are in the picture!* If you complete the entire list, take the pictures to the Elko District BLM office and turn them in to have them put on the official BLM webpage! At 3900 E. Idaho St., Elko, NV or email them to zpratt@blm.gov.

☐ **Wilson Reservoir**

- Boat ramp
- Amphitheater
- Overflow bridge

☐ **Wildhorse Reservoir**

- Shade ramada
- Wildhorse Campground sign
- Spring within the campground

☐ **Zunino Jiggs**

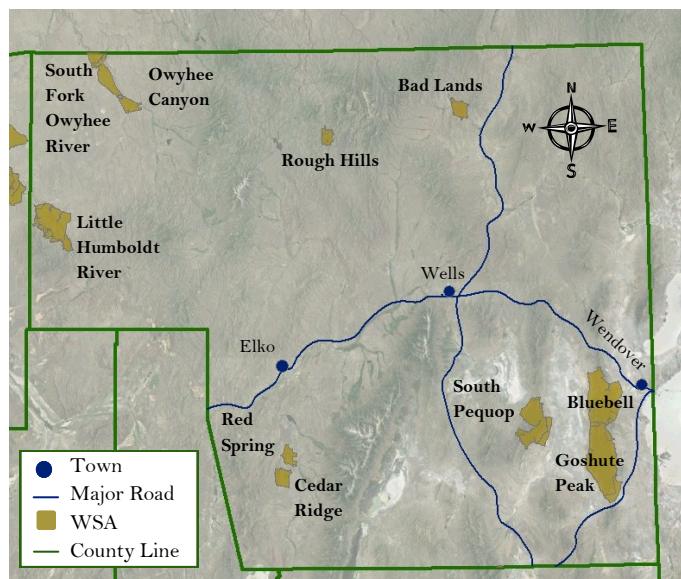
- Cattle guard
- Metal nesting roost
- Fenced-in young tree

☐ **Tabor Creek**

- Beaver dam
- Creek crossing
- Big bird nest

Wilderness Study Areas

In order to preserve, protect, and restore nationally significant landscapes, large areas of public land called Wilderness Study Areas (WSAs) have been set aside to be specially managed. In these areas, the imprint of man is mostly unnoticeable, it is the Wilderness! The BLM's goal is to keep these areas untrammelled by man so present and future generations always have a natural and wild piece of land to visit and find an outstanding opportunity for solitude and/or recreation.



List the 10 WSAs

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____
- 6) _____
- 7) _____
- 8) _____
- 9) _____
- 10) _____

In the Wilderness Study Areas, all motorized or mechanical travel is limited to designated roads and trails. Many of the ten WSAs have no roads at all! Recreation activities such as hiking, hunting, cross-country skiing, river rafting, fishing, primitive camping, and wildlife viewing are all allowed. These WSAs offer a great opportunity to get away from the hustle and bustle of civilization and enjoy the beauty of nature!

Rough Hills WSA



Career Profiles

How would you like to work for the Bureau of Land Management? The BLM is a great place to work and it has many different kinds of jobs. Here are some profiles of people who work in the Elko BLM office.

Outdoor Recreation Planner



NAME: Zachary Pratt

JOB DESCRIPTION: Outdoor Recreation Planners work with public land and its visitors. They manage special recreation areas, such as campgrounds or wild caves or WSAs, and plan outdoor recreation events like snowshoeing or stargazing or group hikes.

From Zack to You: Being and playing outdoors is a life-long activity of mine. Growing up on a dairy farm kept me busy outdoors working in the fields, chasing cows, observing insects, birds, grasses, trees, deer, mice, ducks, squirrels, snakes, fish, salamanders, etc. Being rained and snowed on, getting sun burnt, and all dirty or muddy playing outside was all good for me. Observing natural things occurring outdoors is what I love to do because it is fun. I encourage each of you to explore your backyards, lawns, and as you see the web of life around you, move out further in exploring the outdoors. Take this Jr. Explorer handbook with you and a partner and explore Elko County's natural environment, wildlife, and beauty. I hope you never stop exploring and experiencing new things.

Fossils in the Rocks

Millions of years ago, Elko District used to be covered in ocean. Throughout time, many of the organisms that lived in the ocean became fossils and can be found today, if you know where to look. Just 4 miles north of Elko there is a Black Shale Pit that houses many fossils from 300 million years ago that can be collected just by picking them off the ground! No special tools are needed and this pit is open year round to any explorer who wants to make a fossil discovery. You can go to the Elko District BLM office and get a map to find your way.



Photos by R. Weller
Chochis College

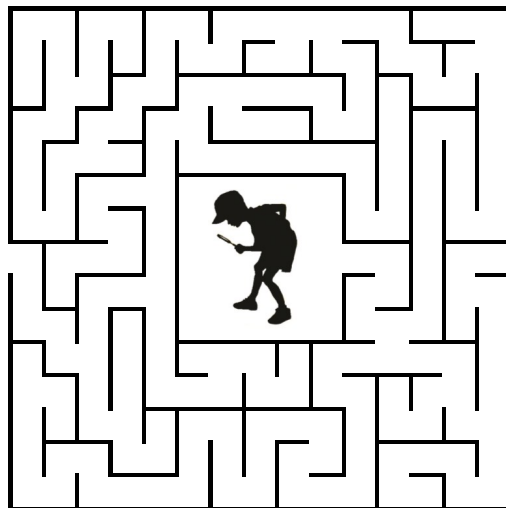
These are the fossils of a Bryozoan, Ammonite, Crinoid, and a Branchiopod, respectively. They are just like the ones that can be found in the Black Shale Pit.

Help this Junior Explorer find his way through the maze to Nevada's State Fossil, the Ichthyosaur fossil.



Photo by Ballista

The name Ichthyosaurs means "fish lizards". They are so named because they were marine reptiles.

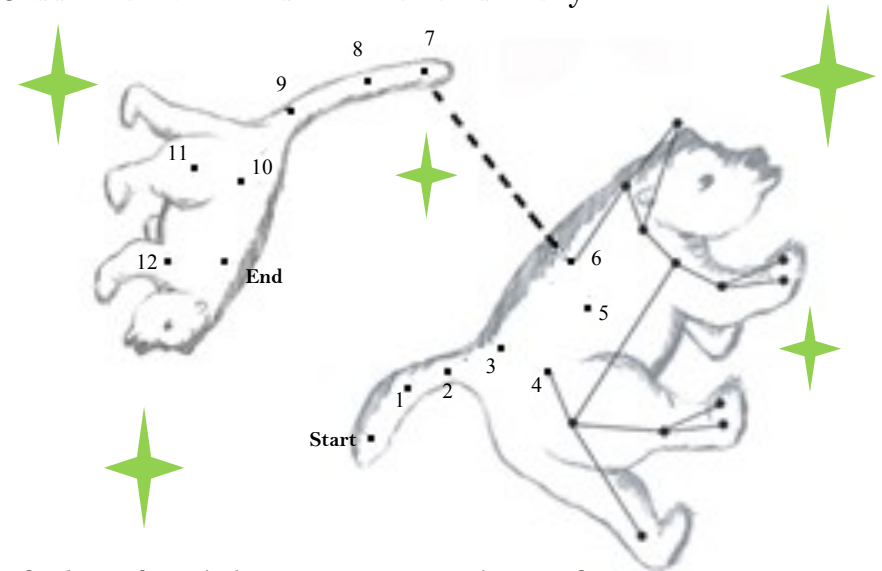


Created by Puzzlemaker at DiscoveryEducation.com

Stargazing

A great way to enjoy your public lands at night is to go stargazing. Seeing the stars is difficult in cities and populated areas because of light pollution. It is best to go where there are no lights, like a BLM campground or WSA! Whether you have brought a telescope, binoculars, or just your eyes, there are so many things you can see. What are some things you could spot in the night sky?

Circumpolar constellations are always visible at night, no matter what time or season. The most famous of these is shown below. Connect the dots to uncover which ones they are.



The large bear is known as Ursa Major, or the _____.
The little bear is known as Ursa Minor, or the _____.

For a free printable evening sky map visit: www.skymaps.com

Ruby Lake National Wildlife Refuge

Also known as the Ruby Marshes, the Ruby Lake National Wildlife Refuge is a very important marsh that provides nesting areas and food opportunities for many birds. This 17,000 acre marsh is what is left of a larger lake known as Ancient Lake Franklin.

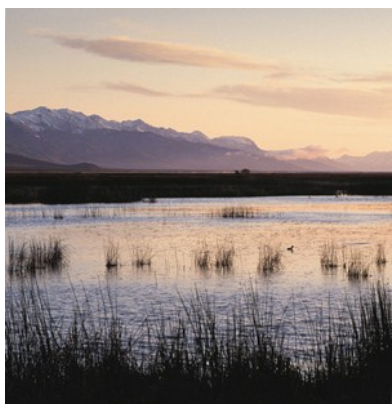
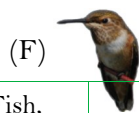
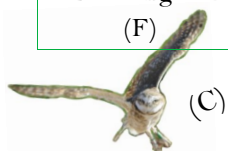


Photo by Stephen Ingram/USFWS



	Fruits & Berries	Carrion	Small Mammals	Seeds, Grass, & Grain	Fish, Frogs, Snakes, & Lizards	Insects
American White Pelican (A)					X	
Bald Eagle (B)						
Burrowing Owl (C)						
Mallard Drake (D)						
Northern Mockingbird (E)						
Rufous Hummingbird (F)						



In the table above, the columns are possible food items for birds. In the rows to the left are bird species. Mark an X in the column for each species of bird that would naturally eat that food item.

Pine Nuts

Pine nuts are the seeds of Pine trees and were an important food to the Great Basin Native Americans. They ate them in many different ways, from making them into a paste to roasting them on the fire. You too can enjoy the delicious taste of pine nuts by gathering them yourself on BLM Public Land! Just bring a bag to put the seeds in and some gloves. You can either pluck them off the ground or dig them out of the pinecones. The best time to gather is September and October and there is no permit required for personal use. Here is a recipe of one of the many ways to cook pine nuts. Give it a try!



Pine Nut Recipe

Ingredients: Pine nuts and salt (optional)

Rinse the pine nuts. Preheat the oven to 350 F. Spread the pine nuts out on a cookie sheet so they aren't on top of each other. Put in the oven and stir occasionally. Bake until golden brown, which usually takes about 5 to 10 minutes.

Optional: Before putting in the oven, sprinkle salt on pine nuts

A good tip to remove sap from your hands is encoded in the cryptogram below. Use the table to fill in the missing letters by matching the number below to its letter.

A	B	C	D	E	F	G	H	I	J	K	L	M	N
2	8	22	15	20	6	4	16	24	12	5	11	18	9

O	P	Q	R	S	T	U	V	W	X	Y	Z
17	10	7	25	13	21	26	23	14	3	19	1

25 26 8 19 17 26 25 16 2 9 15 13

14 24 21 16 8 26 21 21 20 25

17 25 17 24 11

For recommended Pine Nut gathering areas, contact your local BLM office.

California Trail Interpretive Center



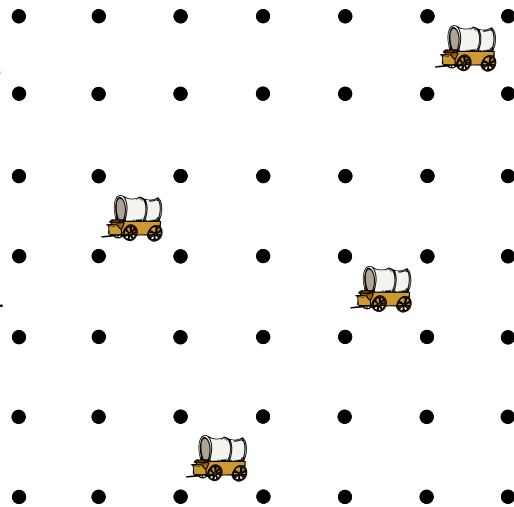
Photo from the California Trail Center

Just outside Elko on I-80, the California Trail Interpretive Center takes you back in time to when thousands of men, women, and children formed wagon trains journeying West toward the promise of a better life. At the Trail Center, you can learn all about what life was like on the trail and much more. The exhibits are all free and there are informational talks and activities scheduled throughout the year. There are also some short and easy hikes leading off from the Center to stretch your legs and see a great view of the Ruby Mountains, South Fork Canyon, and the Humboldt River. Call 775.738.1849 or visit www.californiatrailinfo.org for more information

Pioneer Dot Game

This game is played by two or more people so grab a friend! Players take turns connecting two dots with a horizontal line or vertical line. The player to make the final line to complete a box wins that box and writes their initials inside. After winning a box, that player gets another turn. If a player does not win a box, it is the next players turn. The game is over when all boxes have been completed. Each box is worth one point and whoever has the most points wins!

Boxes made around the wagons are worth double! So two points instead of just one.



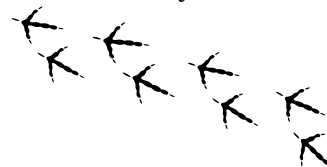
Ruby Lake National Wildlife Refuge

Want to see all the birds on the previous page in person? Take the auto-tour around the North side of the marsh! All those birds and many more have been sighted at the marsh and the auto-tour is open year round. There is an observation deck with autofocusing binoculars along the route and near the Ruby Lake National Wildlife Refuge Headquarters, there are two photography blinds. A photography blind allows you to get up close to the birds unseen so you can get great pictures. Check the riparian areas (river & lake banks) for frogs, minnows, plants, and insects the birds eat.





Photo by Guy Wagner/USFWS

If you and your family want to get out and stretch your legs, there is a very short trail (pictured above) called Cave Creek Trail that leads to a cave with a waterfall. The water that comes from this waterfall is used at the Headquarters so the water you drink out of the fountains is all natural! At the end of the trail, the water control infrastructure can be seen. Also along the auto-tour, there are also many dikes that you can walk along to get closer to the wildlife.



Bird Bingo!

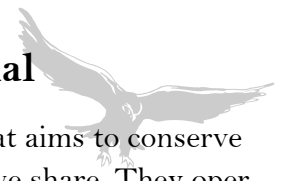
When you are out and exploring a riparian area, like the Ruby Marshes, play some Bird Bingo! When you find something that matches a box below, cross out that box. Play until you have five in a row crossed out, whether up and down, left to right, or diagonal.

A fly- ing bug 	A l-o-o-ng beak	Flapping its wings very FAST	S m a l l head	So far away it looks like ● a dot
A bug <u>without</u> wings	More than 3 colors	Taking a D I V E	Fatter than what its sitting on	On the TOP of a tree
Berries 	 Stripes on any part of its body		LARGE wingspan ↔	Standing on the dirt
A small RODENT	THICK legs	H o p p i n g on the ground	Could fit in your palm	Resting on a nest 
Seeds of a plant or tree	BLACK wings	~Gliding~ through he sky	Long tail feathers	Chattering with another bird

Food **Appearance** **Travel** **Size** **Location**

What species of bird did you see the most? Write down its characteristics here and when you get home look up its name in a Bird Dictionary or online. _____

Hawkwatch International



Hawkwatch International is an organization that aims to conserve raptors, or birds of prey, and the environment we share. They operate all over the country, but in Elko District they have a research site in the Goshute Wilderness Study Area. From August to November, researchers work to collect data on birds by catching them in nets and recording data like age, sex, weight, wingspan, and plumage. Then the raptors are banded, which means they get an identification band put on their leg, almost like a bracelet. If that bird is caught again, researchers can use



Photos by Mike Shaw



the band to get that birds previously collected data. Then the bird is released unharmed.

Want to volunteer? Anyone can do it and you don't need any previous experience! If you are interested, have your parents call 801-484-6808 or visit hawkwatch.org to get involved.

Be a Wildlife Biologist!

Use this space to do some of your own raptor research. Draw a raptor that has been banded and label it using the list below.

Beak I.D. Band
Talons Wings
Tail Feathers Eyes