Become a **Monument Junior Explorer** at The Upper Missouri River Breaks National Monument Interpretive Center!

A Children's Activity Book

BUREAU OF LAND MANAGEMENT
JUNIOR EXPLORER

BLM

Central Montana District

The Bureau of Land Management is responsible for the stewardship of our public lands. It is committed to manage, protect, and improve these lands in a manner to serve the needs of the American people for all times. Management is based on the principles of multiple use and sustained yield of our nation's resources within a framework of environmental responsibility and scientific technology. These resources include recreation; rangelands; timber; minerals; watershed; fish and wildlife; wilderness; air; and scenic, scientific, and cultural values.

BLM/MT/GI-11/006

Acknowledgements:
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Welcome to the Upper Missouri River Breaks Junior Explorer Activity Book!

The Upper Missouri River Breaks National Monument is a 375,000-acre landscape filled with history. Native American tribes such as the Blackfeet and Crow used this area to hunt bison and other animals; Lewis and Clark explored this area in 1805 while traveling the Missouri River; the Nez Perce people passed through this area in 1877 as they fled the Army, trying to make their way to Canada; homesteaders settled here in the early 1900s to try to build a life of ranching and farming.

Plants and animals survive here despite the harsh climate. Cottonwoods, chokecherry and other trees and shrubs provide food and nesting areas for songbirds; many species of wildflowers welcome bees and butterflies; cliffs provide perches for eagles; and bighorn sheep, elk, deer, pronghorn, coyotes and many other animals drink from Missouri River and wander through the region's different habitats.

In 1976, Congress designated 149 miles of the Upper Missouri River as a National Wild and Scenic River. This portion of the river is protected from damming, but is still available for other activities such as grazing and recreation, including canoeing and fishing.

In 2001, the Upper Missouri River Breaks became a national monument because of its important natural and cultural history. Today, people continue to explore by canoe and foot, just as Lewis and Clark and the Native Americans did in the 1800s. The Bureau of Land Management (BLM) manages the Monument for the public.

The Upper Missouri River Breaks Interpretive Center opened its doors in 2006, welcoming visitors to come and learn more about this special area. The BLM manages the Center in partnership with the River and Plains Society of Fort Benton, Montana. We invite you to be a Junior Explorer and learn more about this special place called the Upper Missouri River Breaks National Monument! A variety of activities await you on the following pages – come and explore, come and learn!

Become a Monument Junior Explorer with the Upper Missouri River Breaks Interpretive Center!

Complete at least five (5) activities for your age group in this booklet. Completing the activities successfully entitles you to receive a special Junior Explorer certificate. Please ask an Interpretive Center staff member to sign your certificate or you can mail it back to the Center at 701 Front Street, Fort Benton, MT 59442. Look for the following symbols on the pages for your grade level (don't be afraid to ask for help as you go through the booklet):

Grades 2 and Under

Porcupines enjoy their strolls through the woods and can be fearless because they have their sharp spines to protect them. Be fearless as you do these activities and have fun!

Grades 3 to 5

Frogs and toads survive the winter by burrowing under-ground and living in a state of suspended animation, until spring rains awaken them from their long sleep. "Hop to" the activities to be a Junior Explorer!

Grades 6 and Up

Pronghorns are the fastest animals in North America. They sometimes will run as if racing each other just for fun. They also have incredible eyesight. Race to find the answers but also be observant to get the correct answer!

Find the Word Scavenger Hunt Inside and Outside the Missouri River Breaks Interpretive Center

You're going on a treasure hunt! A treasure hunt for the correct word, that is! Within the exhibits at the Upper Missouri River Breaks Interpretive Center, you will find the answers to the following statements. Can you locate the words of treasure? If so, fill in the blank with the correct word.

1. These types of wagons were used to haul supplies from Fort Benton to Fort Walla Walla and to the goldfields of southwestern Montana. _____

2. This species of fish that lives in the Missouri River is rare and dates back to the days of the dinosaurs. _____

3. The Native American chief who, after a three-month journey in 1877 from Oregon through Montana, in an attempt to reach Canada with his tribe, surrendered to the Army near the Bear Paw Mountains of northern Montana, just 40 miles short of the Canadian border. _____ _____

4. The explorers who, in 1805, traveled the Missouri River through Montana in an attempt to reach the Pacific Ocean, opening the door for future settlement of the West. Captains _____ and _____

5. A method of river transportation that was important to Fort Benton's commerce and history. _____

6. A large mammal found in the Missouri Breaks – both males and females have horns; the males are called rams and the females are called ewes. _____

7. A clever, dog-like animal that feeds mostly on mice, berries, or even dead animals. _____

8. A shrub-like plant that can grow 30 feet tall, has berries in the fall which feed many bird species (and can feed people as well!), and was once used by Native Americans to create their bows. _____

9. A secretive animal with large paws and cat-like claws that feeds on hares and mice. _____ (Hint: smaller than a mountain lion.)

10. The Swiss artist who traveled with Prince Maximillian in the mid-1830s, and who sketched the Missouri River and its animal and Native American residents. _____

11. Bonus Question 1: What is the name of the part of the steamboat from where the captain navigates? _____

12. Bonus Question 2: What does the term 'The Breaks' mean regarding the Upper Missouri River Breaks? _____

What was your favorite part of your visit to the Interpretive Center today?

What's a Bug to Do?!
The Importance of Insects

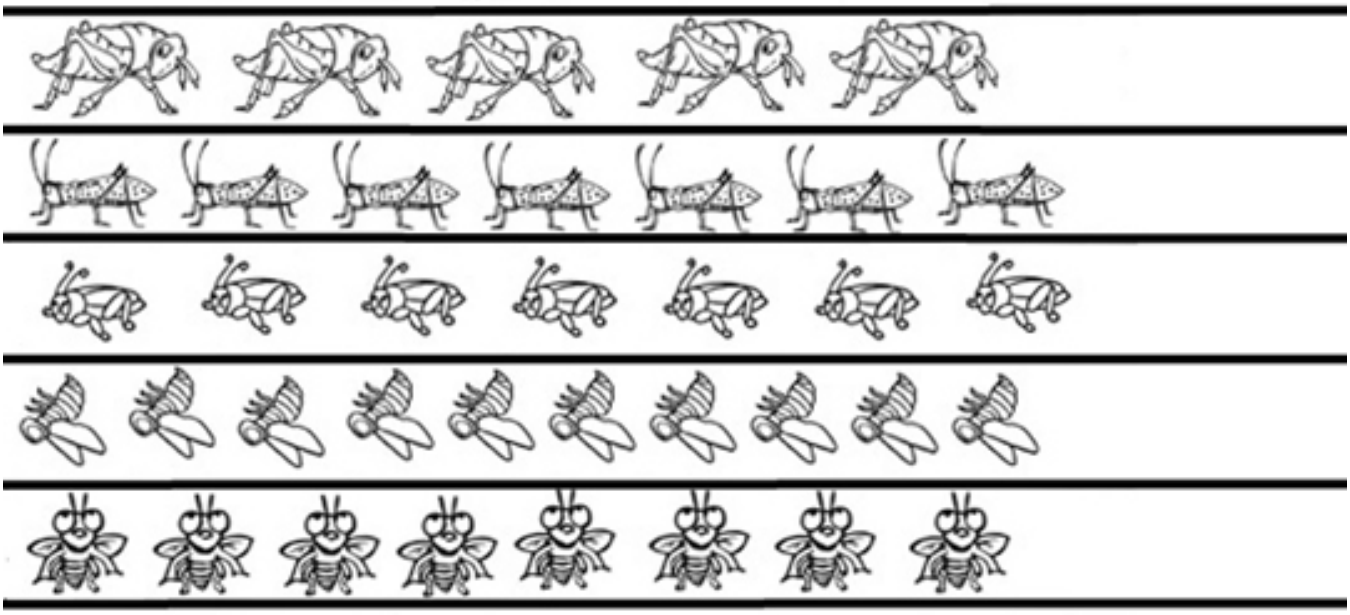
There are many types of insects, from beetles to butterflies. All insects have antennae (feelers) at the top of their heads. They have six legs, and three body parts (the head, the thorax, and the abdomen). Some insects crawl, some fly, some hop.

Insects have an important role in nature. They help break down things, like old, dead logs; they help flowers and gardens grow; and they provide food for other animals, such as frogs, fish, even bears! So, as you can see, bugs have important jobs to do!

You can find many different types of insects in the Missouri River Breaks area. Some live in or near the river while others live in the desert areas and still others use the different types of plants. When you visit the Missouri Breaks, look for the many types of insects that call this area home. Or, look around your own backyard or garden for bugs -- what are the insects doing and how do you think they help the place where you live?

Counting Bugs!

Below are different types of insects. Count the number of insects on each line and write that number to the right of each group of bugs. You may want to color them as well. Did you know that insects can be very colorful? For example, some beetles are red and black; butterflies can be blue or orange and black; and bees can be yellow and black. Have fun counting the bugs, little creatures that help our environment!



Beetle – A Poem

The beetle crawls on leaf and twig,
Not caring that it isn't big.
It eats its fill, and then, well fed,
The beetle, its elytra spread,
Does fly to other bush or tree,
Where more morsels it hopes to see.

By Sue Chehrenegar

Crossword Clues

CLUES FOR PUZZLE ON PAGE 5:

Across

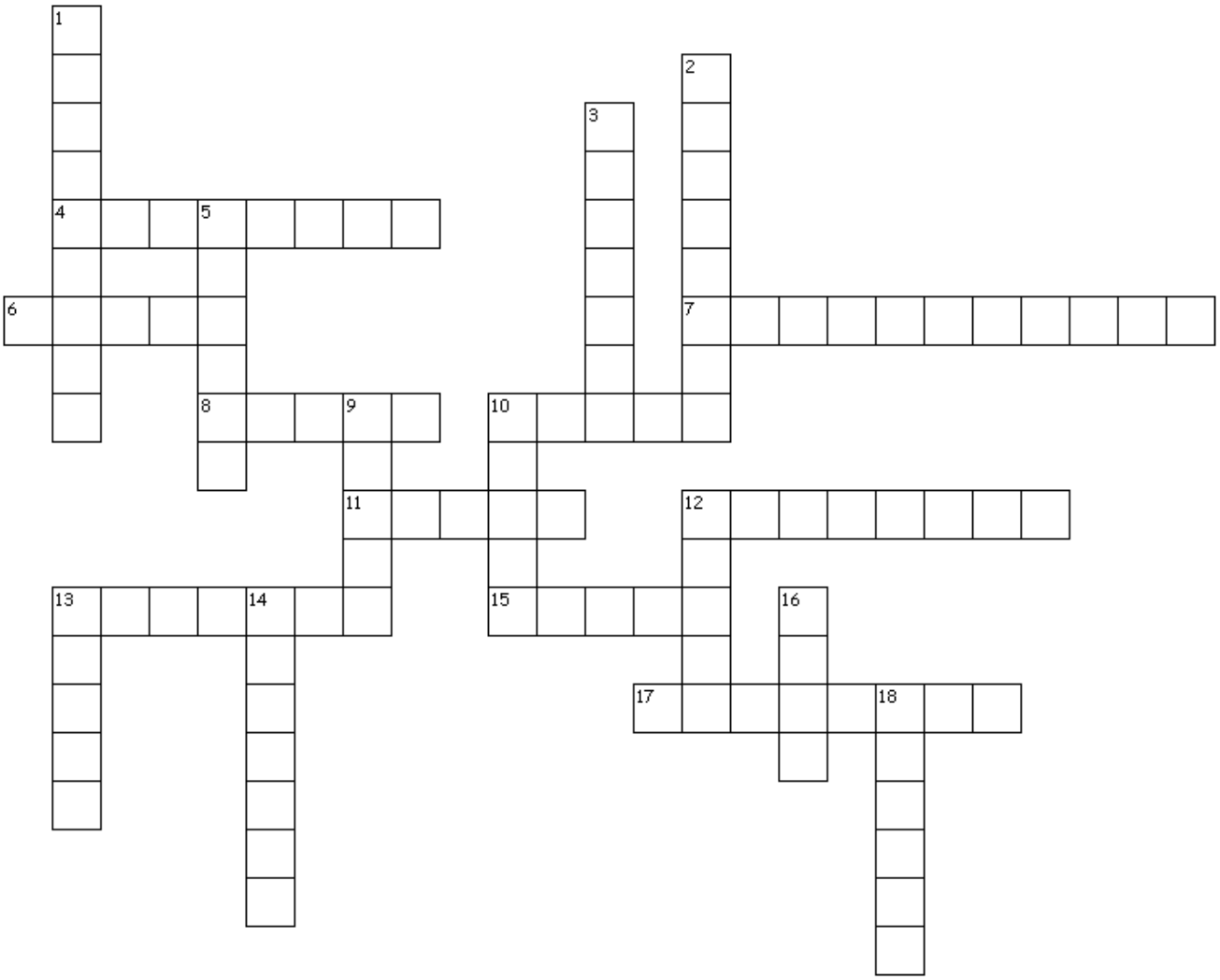
4. This outlaw had a hideout in the Missouri River Breaks area and often robbed banks and trains with Butch Cassidy and the Sundance Kid!
6. One way to cross the Missouri River in the Fort Benton area, whether on foot or by car - this type of river crossing is also found in other areas of the United States, including near New York City!
7. When this reptile shakes its tail, it is saying “Please don’t step on me,”which is a good idea, so step away or go around.
8. When hiking and camping along the Missouri River, please leave the area as natural as you found it - in other words, Leave No _____.
10. A type of boat many people still use today to travel the Missouri River.
11. These large mammals once roamed the Plains in the millions; by 1900, they were almost extinct.
12. There are two types of this fish found in the Missouri River; one is considered an endangered species.
13. The president who signed the proclamation establishing the Missouri Breaks National Monument in January 2001.
15. There are two species of this bird found in the Breaks area - one often eats fish and is found perched in trees along the river, the other can be found in the cliffs along the river and soars above the prairie looking for rodents; the bald and golden _____.
17. The fur company that was successful in establishing forts in the Missouri River Breaks area and in trading with the Blackfeet tribe.

Down

1. A tribe of Native Americans that called the Missouri Breaks area their territory; Captain Lewis encountered a group of them when he returned to the Missouri River area in 1806.
2. Chief Joseph was one of the chiefs of this tribe led that traveled through Yellowstone Park, into the Missouri Breaks, and toward Canada, fleeing from the Army during the 1870s.
3. A wild sheep found in many parts of the western United States, including the Missouri Breaks.
5. This grayish-brown dog-like animal eats mice and is often seen in the Monument.
9. A log _____ was the type of house many homesteaders lived in when they came to the Breaks to set up their farms.
10. The _____cherry tree provides food for birds and once was used by Native Americans to create their bows.
12. A type of boat used to transport furs and other goods up and down the Missouri River during the 1800s.
13. The explorers who traveled the Missouri River together in 1804, opening the West, were Lewis and _____
14. This type of person hunted beaver and sold their pelts during the early 1800s.
16. A military outpost.
18. You need to watch out for this prickly plant so that you don’t get spines in your feet!

People, Plants and Animals of the Missouri River Breaks

Using the clues on the previous page, see how many answers you can find about the people, plants, and animals of the Missouri River Breaks to answer the crossword puzzle below. For help, visit the Interpretive Center's website at **http://www.blm.gov/mt/st/en/fo/lewistown_field_office/umrbnm/interpcenter.html** or the BLM's Missouri River Breaks National Monument website at **http://www.blm.gov/mt/st/en/fo/**



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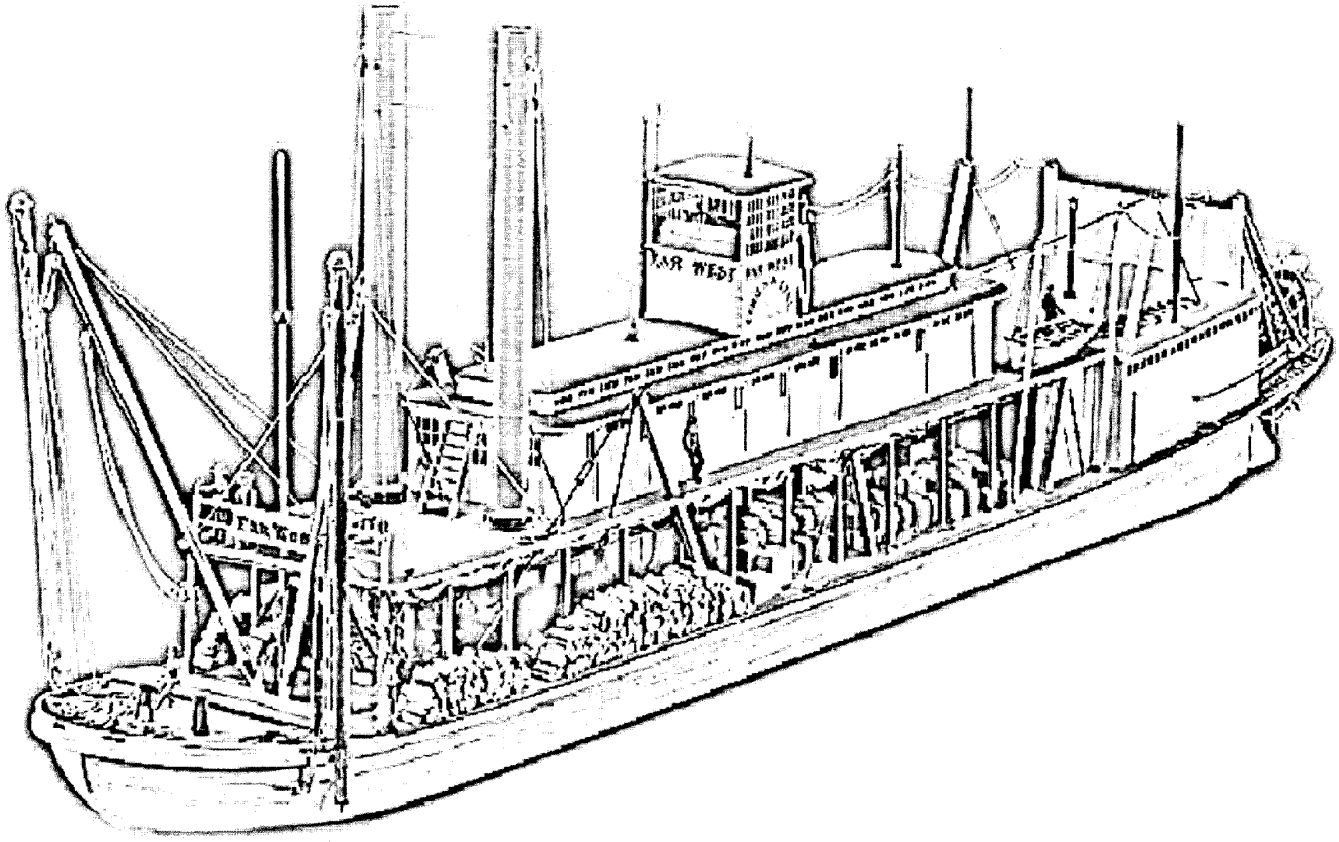
You are on your way to becoming a Junior Explorer of the Upper Missouri River Breaks National Monument!

Steamboat Coloring Page

Steamboats were an important part of the Upper Missouri River Breaks' history. Color the steamboat below. You may want to draw a river scene and put the steamboat on the Missouri River!



Did You Know?

The Chippewa was the first steamboat to try to travel the Upper Missouri River; that attempt took place in 1859. Sailing from St. Louis, Missouri, the Chippewa came within 14 miles of Fort Benton. The next year, on July 2, 1860, the Chippewa again returned to the area, this time reaching Fort Benton. Another steamboat called the Key West also made the journey. From 1859 to 1888, the primary route into the Montana territory was by steamboat, from St. Louis, Missouri to Fort Benton, Montana. An average of 20 steamboats per year came into the town's river port during that time, and Fort Benton grew in both population and importance. After 1888, the railroad became the primary source of transportation, but railroad companies didn't make Fort Benton an important stop, changing the town's business, and eventually its population.

For the Birds!
Create a Milk Jug Bird Feeder

You can attract birds to your yard and help them survive (especially during the harsh winter months!) by setting out a bird feeder. And you can create your own inexpensive feeder (and help the environment!) by recycling milk jugs and creating a bird feeder from the jug!

Materials You Will Need:
1 Gallon or ½ Gallon Plastic Milk Jug
Small Wooden Dowels/Doweling Rods
String (for hanging your feeder)

Instructions:
Cut two or three openings in the middle of the jug, as shown in the picture. The openings should be between two and four inches wide depending on the type of birds you want to attract. Then punch smaller holes all the way through the jug below the feeding holes for the doweling rod. Take each rod and insert it into the smaller hole for a perch. Fill the feeder with seed and hang it in a nearby tree. Watch the birds enjoy the feast you're providing them!

You may want to learn more about the bird species attracted to your feeder. Ask an adult to help you identify the birds that visit your feeder using a bird identification book, or seek out a local Audubon Society member (maybe take a birding class with your parents!), or log onto All About Birds.org, a website of the Cornell Lab of Ornithology: http://www.allaboutbirds.org/NetCommunity/Page.aspx?pid=1189

Have fun! And thanks for helping the birds!

Did You Know?

The National Aububon Society hosts an annual Christmas Bird Count in which you and your family can participate, from mid-December until the first week of January. The organization's mission is to conserve and restore natural ecosystems, focusing on birds, other wildlife, and their habitats for the benefit of both people and animal species. The Audubon Society is named after John James Audubon; the organization's founder was George Bird Grinnell, who knew Audubon and started the organization in the late 1886. To learn more, visit www.audubon.org.

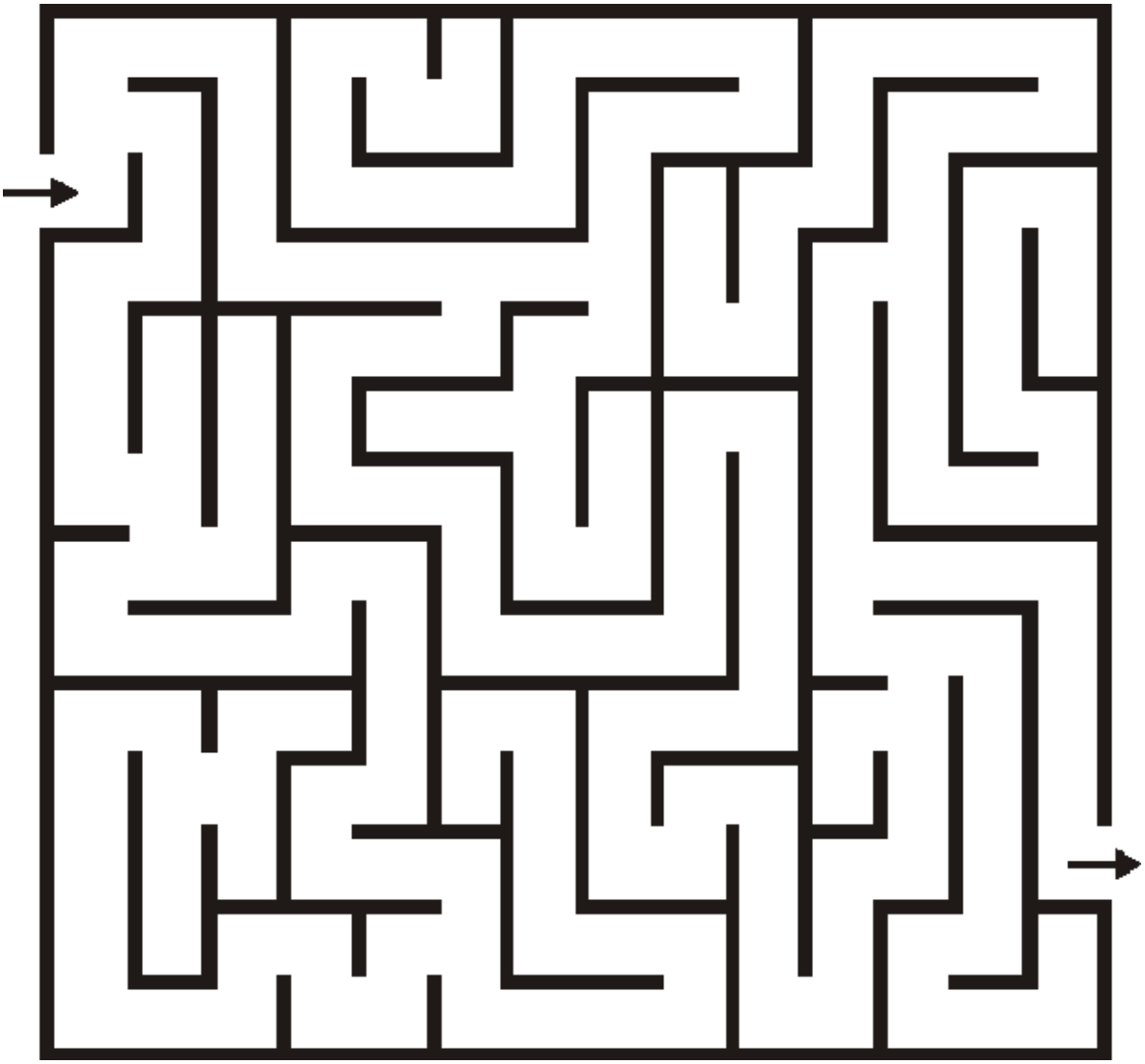
Fun Fact:

Many types of birds call the Missouri River area home. Songbirds, such as nuthatches, chickadees, hummingbirds and robins; raptors, including bald eagles and red-tailed hawks; and water birds, such as ducks and geese, can be seen during different seasons of the year on or near the river. Take a walk along the trail near the river and look to see how many and what types of birds you discover just outside the Center's doors. And don't forget to listen, too! Sometimes our best discoveries come before we even see something!

Activity Sources: Wisconsin Department of Natural Resources and National Wildlife Federation.

Help These Children Find Their Way Back to the Homestead!

Help these children find their way through the field maze so they can get home in time for supper!



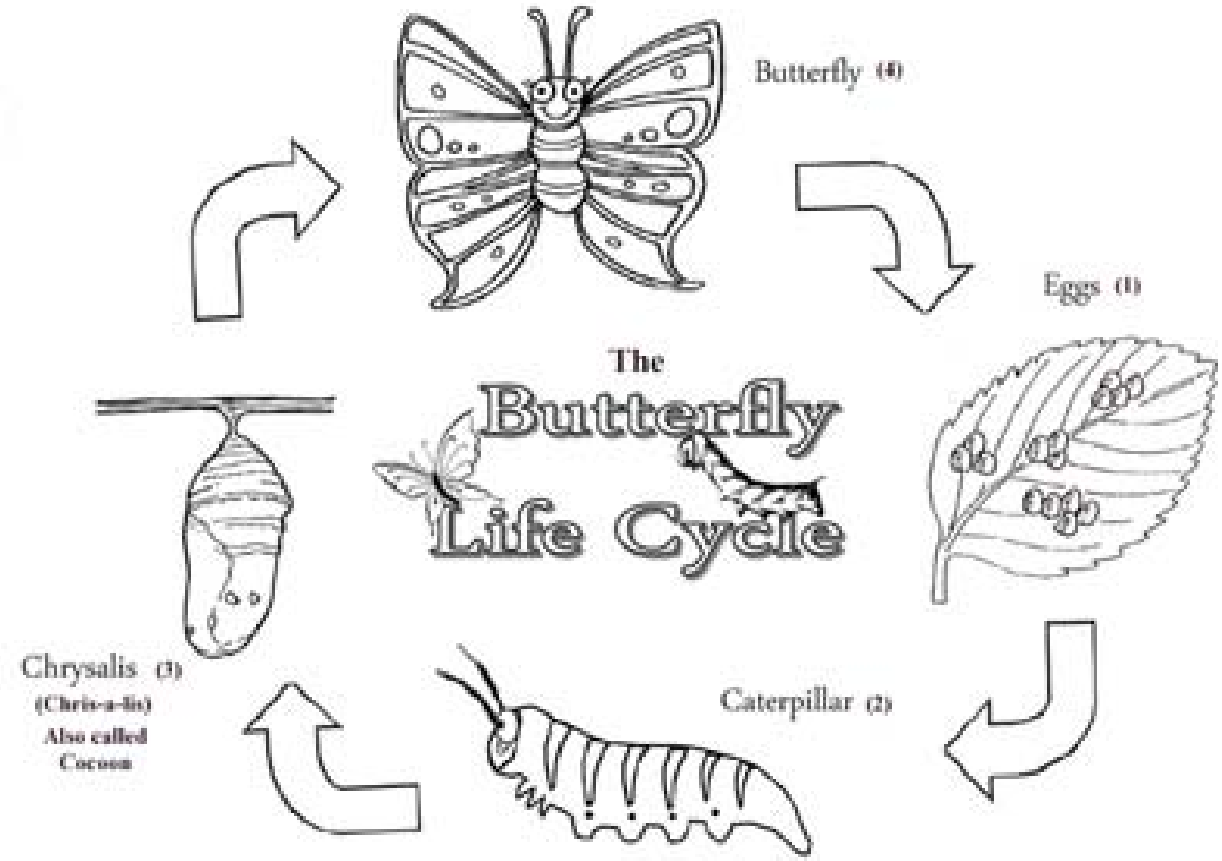
Did You Know? America's Homestead Act was created in 1862 when President Lincoln signed the bill. This allowed Americans to settle on lands once occupied by Native American tribes. The Upper Missouri River Breaks area of Montana was not farmed until settlers came to this remote region nearly 40 years later. Inability to get drinking water and the inability to easily get to this area were factors in the late settlement of the Breaks. A major drought occurred in about 1918, once again affecting the area's land and population. Large ranches are now found in the area, sharing the land with many different wild animals.

A Caterpillar Grows Up...
Into a Beautiful Butterfly!

Butterflies are beautiful, and they have an important job in nature – taking care of flowering plants. Butterflies pollinate (pol-in-ate) the lovely flowers. Without butterflies, many flowers could not make seeds; seeds make new pretty flowers. That's one reason why butterflies are important!

However, before a butterfly can do its job in nature, it needs to grow, just like other animals and people do. But, a butterfly grows differently – it starts out its life as something else: a caterpillar.

Look at the drawing below: The Butterfly Life Cycle. Color the pictures as you learn how a caterpillar becomes a butterfly. You and your family can learn more about butterflies, including how to bring more of these special creatures into your garden. Providing flowers for butterflies gives them the food they need to live – and will bring you and your family great enjoyment watching butterflies do their work in nature!



Create a Butterfly Garden!

More than 700 different types of butterflies can be found in America. Adult butterflies feed on the nectar found in many types of flowers. They especially like red, yellow, orange, pink or purple blossoms and flowers that have short, tubular-shaped flowers, making it easier for the butterflies to reach into the flower and get "a drink." You and your family can plant different kinds of flowers that will bring butterflies to your garden, including black-eyed Susans, purple coneflowers, and beebalm. The important thing is to plant flowers that can live well in your area (called "native plants"). To learn more about creating a garden that will be enjoyed by butterflies, visit this website:

http://www.nwf.org/Kids/Ranger-Rick/Activities/Outdoors/Wildlife-Habitat-Gardens/Make-a-Butterfly-Garden.aspx

Where in the World Am I?! A GPS Activity

You can do this activity using the Nature Journal pages you'll find toward the end of this booklet.

Materials Needed:

GPS Receiver	Natural Area for Observation
Pens/Pencils	Journal Pages (see back of this booklet) or Notebook
Thermometer	Digital Camera (optional)

Other Weather Equipment for measuring air pressure and humidity (optional)

Overview:

You will use a GPS unit and GPS data (or coordinates) to mark a spot to observe. You can return to your GPS coordinate (spot) at different times of the day, different days of the week, and different seasons of the year to see how your observation area changes.

Instructions:

1. Pick out an outdoor observation spot (community park, wildlife refuge, grandma's farm, even your own backyard!).
2. Use your GPS receiver to determine the latitude and longitude of your spot and record that in a notebook or a journal page in the back of this booklet.
3. Record observations about the area and write down things you think are important. If you have a digital camera, you can take pictures of the area and things you observe.
4. After awhile, move to another place and record the longitude and latitude of this spot; record observations about this area as well. Do you find similarities? What are some differences?
5. You may want to return to the areas at a different season of the year and record in your notebook or journal changes you notice to the area – for example, do you see tracks in the snow of winter that you didn't see in the dirt during the summer?

Activity Source: based on "Mapping the Refuge"
http://sciencespot.net/Media/GPSMappingRefuge.pdf

Traveling Tidbit

If you are ever lost in the woods, you can use your map, compass or GPS unit to help you find your way back to your camp or your vehicle. If you are lost without a map, compass or GPS unit, here are some things you should do to help others find you. Practice S-T-O-P as recommended by the Boy Scouts of America:

Stay calm.
Think. How did you get where you are?
Observe. Look for your footprints and landmarks.
Plan. If you're pretty sure of which direction you came from, slowly begin walking that way. Leave markers along the way, such as stones and broken branches. That way you can return to the spot where you started.

If you're not sure how to return to your camp or vehicle, make yourself as warm and comfortable as possible and do your best to stay calm. If you need help staying calm, hug a tree or yourself. People will come looking for you and sometimes it's best to just stay put! You can also help searchers find you. Distress calls always come in threes: three shouts, three whistles. Call out for help with your voice or a whistle.

Tipi Coloring Page

Many Native American tribes hunted or traveled through the Missouri River Breaks. The Blackfeet Nation claimed the area downstream from Fort Benton, however, other tribes hunted in the area as well.

The Nez Perce, who lived in the area of Oregon and Idaho, passed through the Missouri River Breaks in 1877 during their flight from the Army; the Nez Perce were trying to get to Canada. They stopped at Cow Island, in the Upper Missouri River in September 1877, to try to get more supplies for themselves. However, the men gathering those supplies refused to help them, so the tribe took what they wanted and left the area.

Color the tipi below and add some drawings of your own. You can learn more about Native Americans in Montana by visiting www.montanatribes.org.

TIPI TIDBITS...

Some people might spell this word “teepee” or “tepee.” All mean the same thing. Different tribes used different types of tipis. They used bison hides for the outside of their tipis.

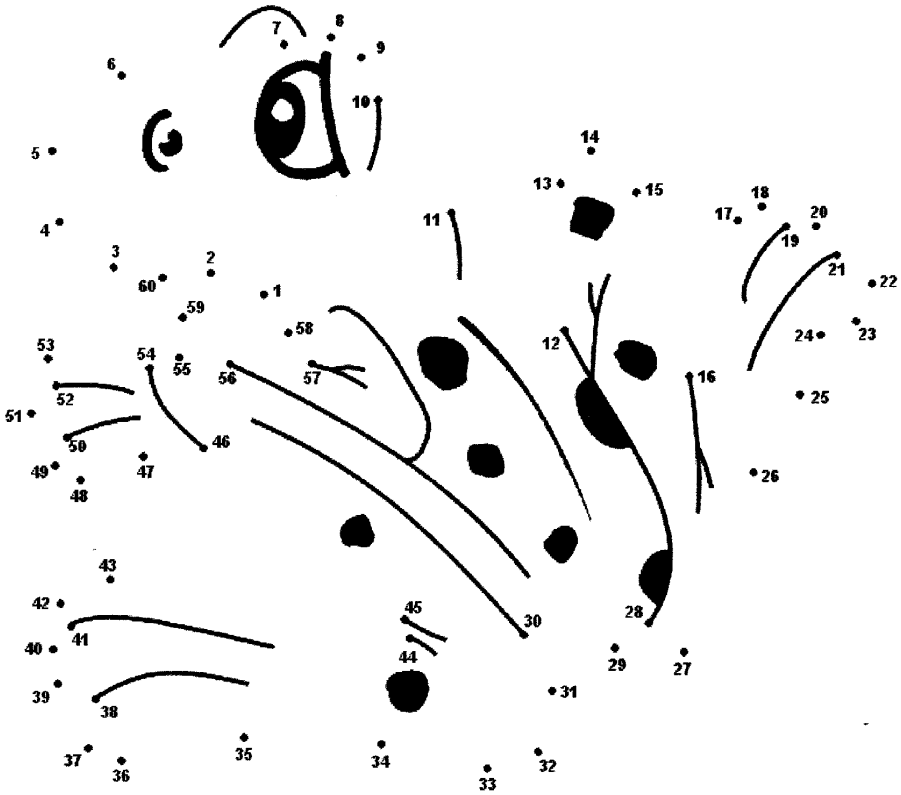
Native Americans across the continent developed different types of houses depending upon their location. Tipis worked for the Plains tribes because they were nomadic -- they followed the great buffalo herds -- therefore, tipis could more easily be taken down then erected at a different site. Adobe houses, or pueblos, were made of mud and used by many tribes of the southwestern United States; these tribes were farmers and did not often move. Think about the houses Native Americans used: adobe houses, tipis, log lodges... How are those homes similar to yours? How are they different from your home?

Connect-the-Dots

Can you figure out what these two creatures are? Draw lines from number to number, in numerical order. When you do, you will discover what two creatures seen in the Missouri River Breaks that are important to the landscape but often go unnoticed.

What Am I?

_____



What Am I?

_____

Can you identify the creature I'm trying to eat for lunch? What is it?

_____

Fill in the Blank: Animals of the Missouri River Breaks

Many wonderful wildlife species live on the Missouri River Breaks landscape. From river bottoms to grasslands, from canyons to streams, you can find many different special creatures. Discover some of the great animals that call this area home by filling in the blanks in the statements below. Choose from the list of words at the bottom of this page. HINT: You won't use all the words at the bottom of the page.

1. Grasslands are important places for burrowing ___ ___ ___ ___ which often make their nests in prairie dog burrows.

2. There were once about 50 million ___ ___ ___ ___ ___ roaming the Great Plains of America; they were an important food source for Native Americans.

3. An animal of great speed, the ___ ___ ___ ___ ___ ___ ___ ___ ___ can reach speeds of 60 mph, making it the fastest land mammal in North America.

4. The black-footed ___ ___ ___ ___ ___ ___ feeds primarily on prairie ___ ___ ___ ___. Conservation partners are working together to help these animals survive.

5. The ___ ___ ___ ___ ___ ___ snake can often be found soaking up the sun's rays on rocks – be mindful while walking: listen and look and they will sometimes tell you that you are too close!

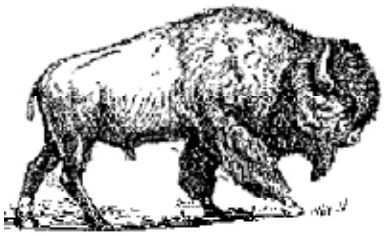
6. Winging their way from flower to flower, ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ have an important job on the prairie - - pollinating blooms while splashing the landscape with color!

7. The secretive ___ ___ ___ ___ ___ ___ ___ sheep can sometimes be seen along the Missouri River in the Breaks area.

8. White ___ ___ ___ ___ ___ ___ ___ ___ use their large pouch on their bill to scoop up fish from the river; they can often be seen either soaring above or swimming in the Missouri River.

9. Both mule and white-tail ___ ___ ___ ___ call the Missouri Breaks area their home.

10. Male sage ___ ___ ___ ___ ___ ___ fan their tails and thrust out their chests as they strut near females during mating season.



Possible answers:
coyote, owls, garter, mouse, moose, bison, eagle, butterflies, chicken, rattle, pelicans, eagles, bighorn, deer, dragonfly, trout, grouse, ferret, elk, beaver, pronghorn, hawks, dogs.

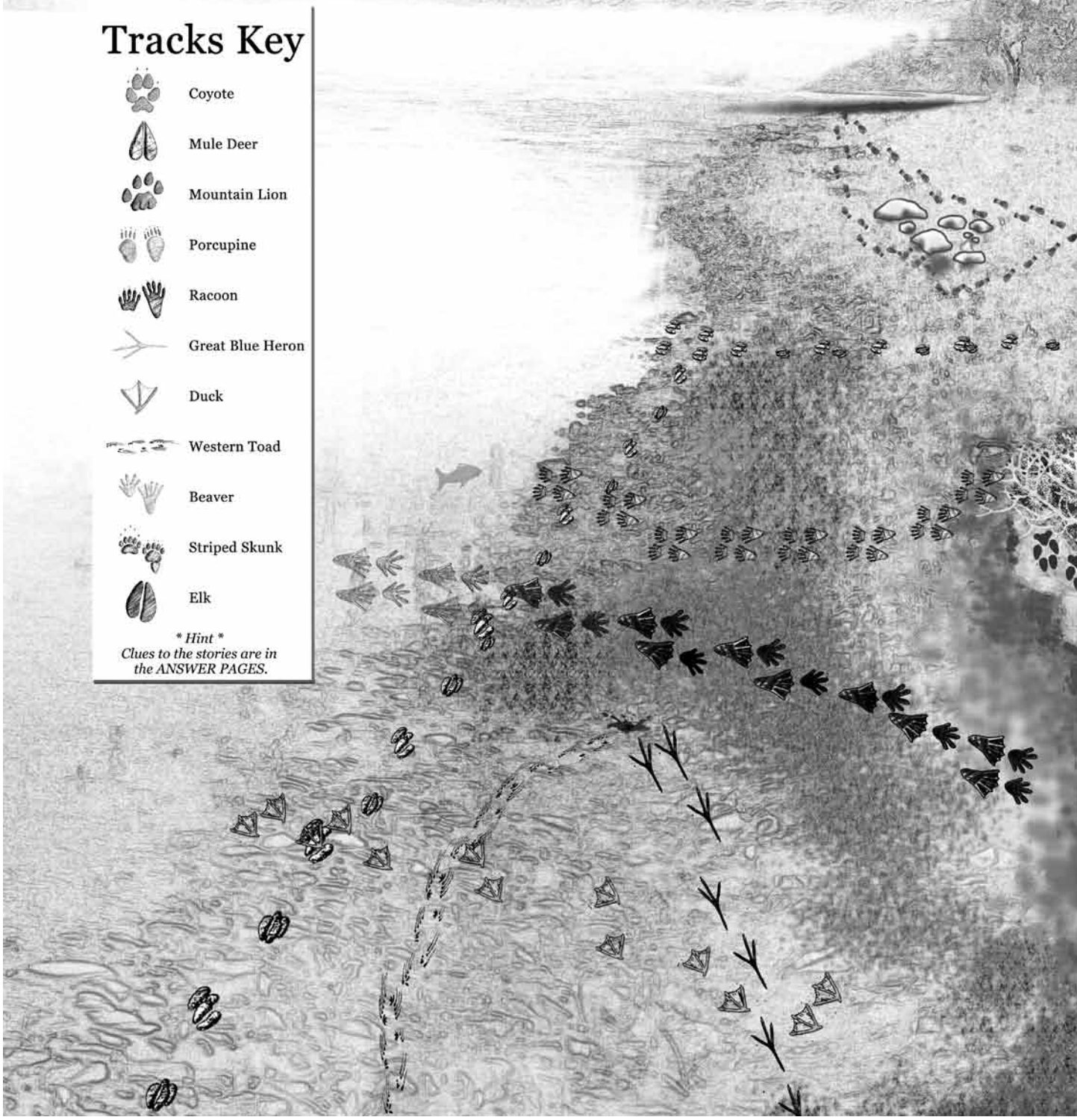
Who Goes There?

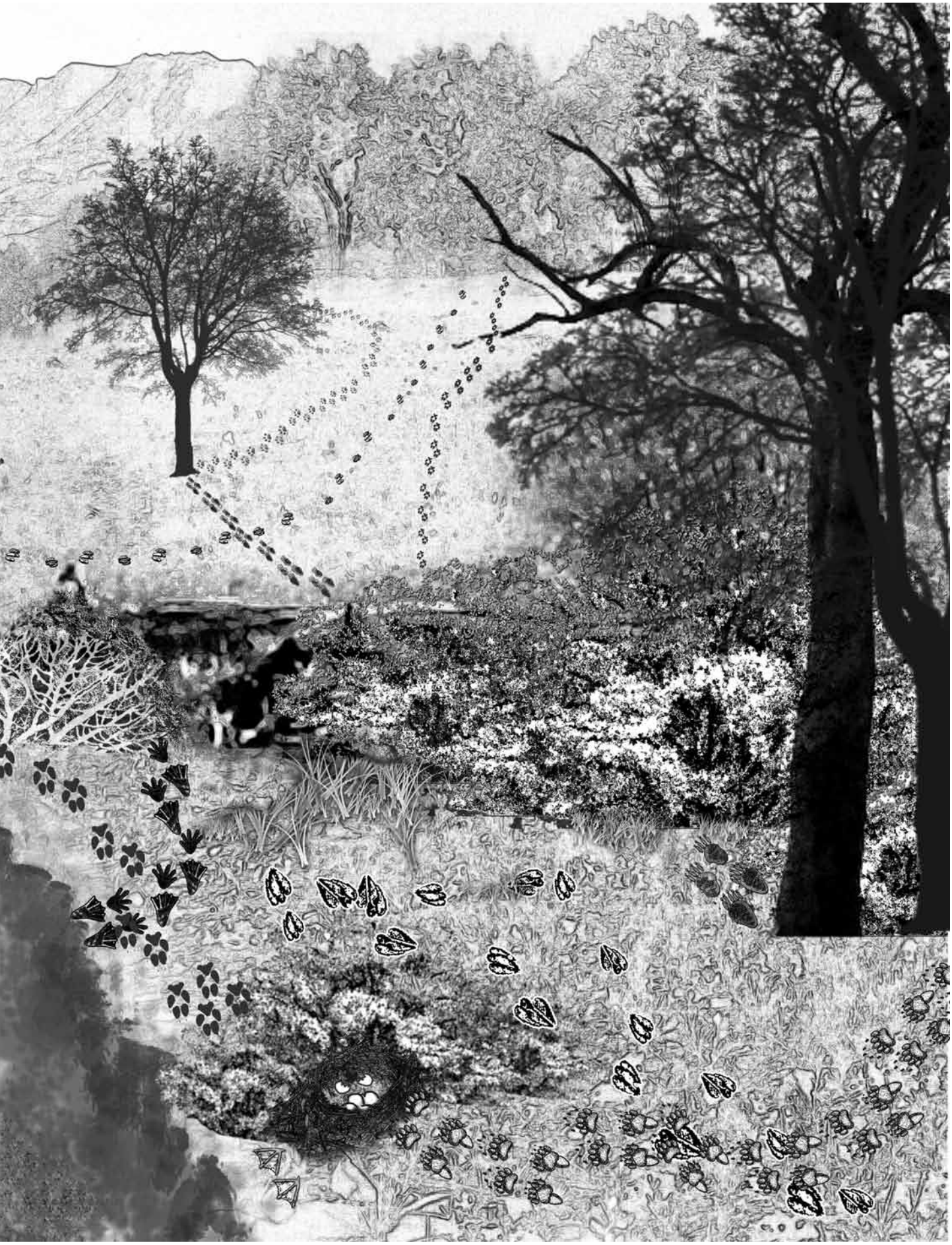
Can You Read the Stories the Animal Tracks Reveal?

Tracks Key

- Coyote
- Mule Deer
- Mountain Lion
- Porcupine
- Racoon
- Great Blue Heron
- Duck
- Western Toad
- Beaver
- Striped Skunk
- Elk

** Hint **
Clues to the stories are in the ANSWER PAGES.





Monument Math

1. A typical log house built by homesteaders measured 16 feet by 20 feet. What was the area (or square foot) of the house (Hint: Area/Square Feet = Length x Width)? _____

2. In the year 1800, 50 million bison roamed the plains. By 1850, only 20 million remained because hunters killed so many. How many buffalo died in those 50 years? _____

3. Frontier teachers were paid very low wages, from $10.00 to $35.00 per month. Some schools were in session only four months out of the year. How much would a teacher earn in those four months if s/he made $10.00 per month? _____ If s/he made $35.00 per month? _____ If school was in session for eight months, as it is today, how much would the teacher earn at $10.00 per month? _____ At $35.00 per month? _____

4. About 700 miles of Missouri River flows through the state of Montana. In 1976 Congress designated 149 miles of the Upper Missouri River as a National Wild and Scenic River. What percentage of the river in Montana is considered wild and scenic? (Hint: Percent = x/y) _____

5. Unlike many places in the United States, rainfall doesn't happen a lot in the Missouri Breaks area. Portland, Oregon receives about 37 inches of rain each year; Fort Benton, Montana on the edge of the Missouri River Breaks, receives 14 inches of rain each year. How much more rain does Portland get than Fort Benton? _____ inches

6. During the mid-1800s, traveling by steamboat from Missouri to Montana allowed people and goods to get to the territory more quickly. Adult passengers could be charged $300 per person to travel by steamboat to Montana. If four adults traveled together, how much would it cost them in total for their fare? _____

7. A male bison weighs an average of 1,800 pounds; a female is much smaller, usually about 900 pounds. How many pounds larger is the male than the female? _____
What percentage is the female's weight compared to the male's? _____

BONUS QUESTION:

8. The Missouri River's flow at Fort Benton can vary greatly; in winter, it can be about 5,000 cubic feet per second (cfs), and in spring it can be 30,000 cfs or more! If one cubic foot of water contains 7.5 gallons and a gallon of water weighs eight pounds, how much does a cubic foot of water weigh? _____ Imagine how powerful that water flow truly is, especially during the spring!

HINT: For a cube image, think of an ice cube that is 12 inches (one foot) on each side; once melted, this is now a one-foot cube of water or a "cubic foot"!

Activity based on the Frontier and Bison Math Activities created by the Oregon Trail Interpretive Center, Bureau of Land Management, Baker City, Oregon.

Outdoor Art - Learning to Focus

Take a walk outside and find a comfortable place to sit – maybe under a tree or in your own yard or garden. While you sit quietly look around you – what do you see? Perhaps a dog is walking with its owner or a bird is getting a drink or taking a bath in a puddle. In the space below quickly sketch a scene that you see. Make this just a rough sketch, don't worry about detail yet. If you do not have enough room in the space below use a blank piece of paper. Or, use your Nature Journal page on Page 25.

Next, with one hand put your last four fingers onto your thumb in a circular shape, creating a hole with your fingers. Now hold this up to one of your eyes to look through – like using ½ a pair of binoculars (called a "monocular"). Use your monocular to focus on one thing within the scene you sketched above. Study this one thing for a few moments very carefully. Use the space below to draw what you've focused on and use as much detail as you can in your drawing.

What happened when your focus went from a rough sketch to a more detailed drawing? Did your concentration change? When you were making your rough sketch did your mind take in more details like sounds, smells, or other activity around you? What about when you were focusing on one object in more detail – were you aware of the same sounds and distractions or did your focus strengthen your powers of concentration?

For Younger Children: Use pencils and crayons to draw and color what things you are seeing and hearing in nature. What colors do you see? What sounds do you hear? If you hear a bee buzzing, draw a bee. What can you smell? If you smell cookies baking, then draw some cookies.

Water is a Water Bird's Best Friend!

Many species of water birds can often be seen along the Upper Missouri River. Take a walk near the river on the trail outside the Interpretive Center (or along the levee in Fort Benton) and look for various species of birds. You may see pelicans, bald eagles, Canada geese, mallard ducks, or great blue herons. Why is water important for these birds? What type of activities might they be doing? You may also notice songbirds, such as robins and chickadees. Use the space below to write some of your bird sightings along the Missouri River. You may also want to use the Nature Journal pages at the back of this book to record your observations. See the example below.

Water is important for all species, including humans. In the space below, list some reasons people need and use water.

Drought is an event that occurs naturally; drought lowers the supply of water in rivers, lakes, and in the ground. Think of some ways people can conserve (save) water during times of drought so that there's enough water for people, birds, and other wildlife species.

My Bird Observations:

Type	Where Seen?	Doing What?
Robin	My backyard	Drinking from puddle
Bald Eagle	Tree along the Missouri River	Sitting on branch

Upper Missouri River Breaks Word Search

The words below describe many things that are part of the Upper Missouri River Breaks area, both in history and today. Can you find all the words that are listed at the bottom of this page in the puzzle? The words may be found backwards, forwards, and diagonally.

Missouri River Breaks

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

BIGHORN	BISON	BLACKFOOT
CANOE	COTTONWOOD	DEER
EAGLE	ELK	FORT
FUR	LEWIS	MISSOURI
MONUMENT	NEZPERCE	PADDLEFISH
RATTLESNAKE	RIVER	STEAMBOAT
TRAIL	WHITECLIFFS	WILD

Hiking and Camping Word Scramble

You and your family plan to canoe, camp and hike the Missouri River Breaks area. But, before you can leave for your journey, you need to unscramble the words below in order to pack the items needed for your trip! HINT: Words found at the bottom of this page will help you with this word scramble!

nett _____ oecan _____

nusseern _____ ckckbaap _____

tawer _____ kngicoo tpo _____ _____

cinbursla _____ lseepnig gab _____ _____

doof _____ chamtes _____

tah _____ oolcer _____

Leave No Trace of Your Outdoor Adventure so that Others Can Enjoy Their Adventures, Too!

Being outdoors camping, hiking, boating, wildlife watching, or enjoying other outdoor adventures is a great deal of fun! However, there are some guidelines you should follow so that you leave little or no clue of your outdoor visit. Leaving no trace helps the plants, animals and people who visit the area after you've been there.

LEAVE NO TRACE PRINCIPLES

1. Plan ahead and prepare.
2. Travel and camp on hard surfaces.
3. Dispose of waste properly.
4. Leave what you find.
5. Be careful with fire.
6. Respect wildlife.
7. Be considerate of others.

To learn more about leaving no trace when you are hiking, camping, boating or doing other outdoor recreational pursuits, visit the Leave No Trace website: http://www.lnt.org/

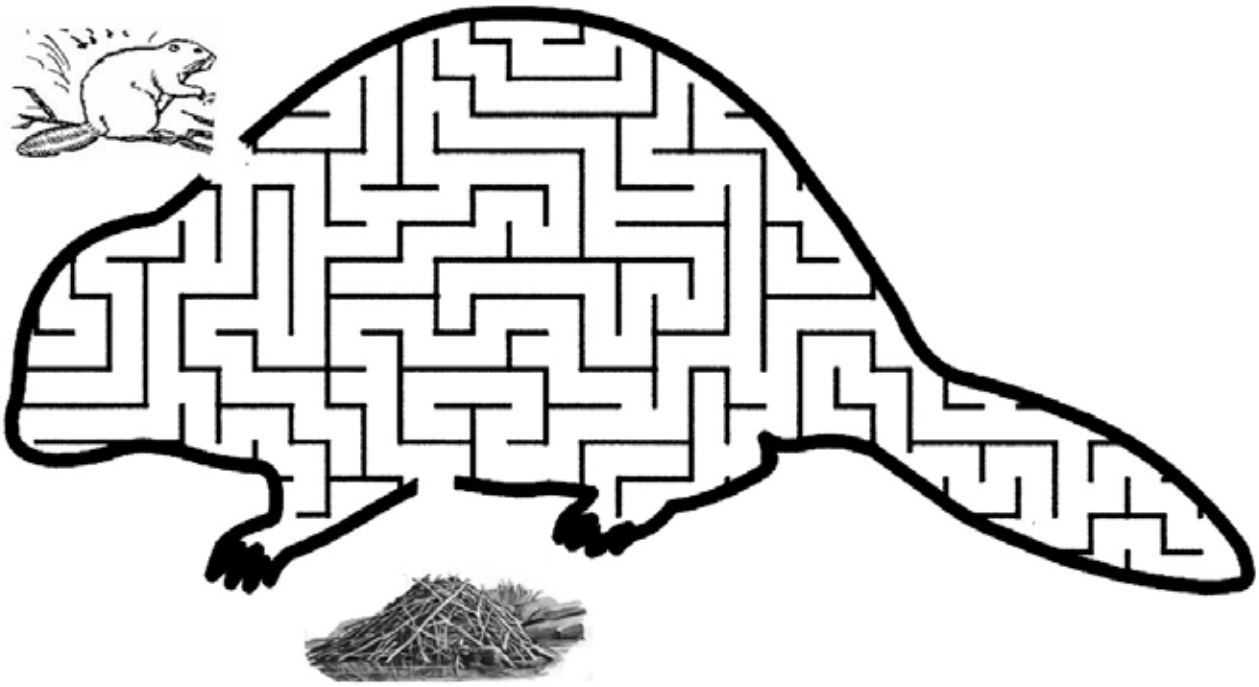
WORD SCRAMBLE WORD CHOICES:

backpack; cooking pot; sunscreen; cooler; hat; binoculars; sleeping bag; canoe; food; water; tent; matches.

Help Beaver Find His Way Home!

Beavers spend lots of time in the water, creating lodges (homes) and dams. They also spend lots of time in the woods, cutting down trees and gathering food. Beavers rely on both water and land in order to survive.

This beaver has traveled so far from home that he's not sure how to get back. Help him find his way back home through the maze!



BEAVER FACTS:

- The dark brown beaver has a tail like a paddle that is used when the beaver swims. The tail is also used to warn other beavers of danger – the beaver slaps its tail hard on the water.
- A beaver can weigh up to 60 pounds!
- A beaver builds its home (called a lodge) using mud and sticks. Mud is plastered on the outside to keep warmth in and enemies out.
- Beavers may also build dens or burrows along riverbanks; they use these when building their lodges and also to hide from enemies.
- Wolves, coyotes, bears, lynx and wolverines have been known to eat beavers; beaver young (called 'kits') fall prey to other larger animals also.
- Beavers eat the bark and leaves of trees – their favorite is the aspen. They also eat grasses, berries, and water plants, such as water lilies.
- Beavers use their large front teeth to chew through trees in order to get the wood they need for their lodges and dams.
- When beavers build a dam, the dam creates a wetland – wetland habitat is very important for many types of animals, including ducks, frogs, insects, and larger animals.
- Watch for beavers along the Missouri as well as other rivers, lakes and streams. Watch for other wildlife in these areas as well, including geese, ducks, great blue herons, pelicans, otters, deer, and songbirds -- all these animals benefit when beavers live nearby!

Nature Journal

Being outdoors and watching wildlife and other things in nature can be enjoyable. Many people, past and present, have spent time in nature and found this time to be relaxing and inspirational. Writers such as Henry David Thoreau and Aldo Leopold observed the plants, animals, and seasons of the year to learn more about the natural wonders around us each day.

Aldo Leopold is considered by many to be one of the greatest conservationists of all time. What do you think a conservationist does? _____ _____

Mr. Leopold was born in Iowa in 1887. He was interested in the natural world as a child, and he spent many hours observing, journaling, and sketching the area where he lived. He was one of the first employees of the U.S. Forest Service, which began in 1905. After many years of living in other states, Mr. Leopold moved back to the Midwestern United States and bought an old farm in Wisconsin. As a conservationist, he took care of the land, restoring the prairie and planting thousands of pine trees on the farm. He is best known for a book titled A Sand County Almanac, one of the most respected books about the environment that's ever been written. Mr. Leopold died in 1948, but his work is still remembered and his importance to conservation is still carried on through the Aldo Leopold Foundation (see http://www.aldoleopold.org).

Another early American conservationist was **Henry David Thoreau**. He was born in 1817 and lived through the early years of the Civil War when black people were slaves on large farms in the southern United States. Mr. Thoreau is best known for his book Walden (or "Walden's Pond"), a place where he enjoyed living close to nature and managing the land on which he lived. To learn more about Thoreau, visit http://plato.stanford.edu/entries/thoreau/

Like Leopold and Thoreau, you, too, may find nature to be a wonderful place and simply enjoy spending time observing areas around you. These next few pages can help guide you into learning more about the natural wonders in your area. Like Thoreau and Leopold, you, too, may find inspiration in the natural world!

Using all of your senses (hearing, sight, smell and touch) spend time in nature – at a park, in a forest, near a stream or river. Use the following pages to write down ("record") what you see, smell, hear and touch (these are your observations). Do these observations at different times of the day and different weather conditions. What animals do you see? What types of animals might have been at this location before you arrived? Do you see scat, feathers, tracks of any kind? Are birds singing or bees buzzing around? Can you smell flowers in bloom or the fragrance of freshly fallen rain? Use these questions to guide you as you record your nature observations using the Nature Journal on the next few pages (you can make more copies of these pages if you like). Perhaps you'll want to write a story or draw a picture about what is happening or might have happened. These are your pages – express yourself! And enjoy yourself!

Conservation is a state of harmony between men and land. Aldo Leopold

There can be no greater issue than that of conservation in this country. Teddy Roosevelt

The old Lakota was wise. He knew that man's heart away from nature becomes hard; he knew that lack of respect for growing, living things soon led to lack of respect for humans too. So he kept his children close to nature's softening influence. Chief Luther Standing Bear

My Nature Journal

I love to be alone. I never found the companion that was so companionable as solitude. Henry David Thoreau

Today's date is:_____ The time is _____

What's the weather like? _____

_____

Where are you? Describe the location. _____

_____

What do you see? _____

_____

What do you smell? _____

_____

What do you hear? _____

_____

What can you touch? How does it feel? _____

_____

What else is special about what and where you're observing? (for example, if there are people with you or near you, what are they doing? Describe other things you can see, smell, hear and touch). _____

_____

_____

_____

Draw some of the things you've observed (leaves, trees, animals, people).

Now, on page 25 or in your own notebook, take a few minutes to write a short story about your nature observations. Your story can be fiction or non-fiction.

My Nature Journal

In every walk with nature one receives far more than he seeks.
John Muir

Today's date is: _____The time is _____

What's the weather like? _____

_____

Where are you? Describe the location. _____

_____

What do you see? _____

_____

What do you smell? _____

_____

What do you hear? _____

_____

What can you touch? How does it feel? _____

_____

What else is special about what and where you're observing? (for example, if there are people with you or near you, what are they doing? Describe other things you can see, smell, hear and touch). _____
_____

_____

_____

Draw some of the things you've observed (leaves, trees, animals, people).

Now, on page 25 or in your own notebook, take a few minutes to write a short story about your nature observations. Your story can be fiction or non-fiction.

My Nature Journal Stories and Drawings

Adopt the pace of nature: her secret is patience. Ralph Waldo Emerson

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 of our public lands

* be aware of how my actions can affect other living things and evidence of our past

* keep learning about the importance of nature and our heritage

* share what I have learned with others

_____ _____

Date **Explorer signature**

_____

BLM Staff Member

Have an Interpretive Center staff member sign your certificate. Congratulations! You are an Upper Missouri River Breaks National Monument Junior Explorer!

Answer Page

Page 2 - Scavenger Hunt: Murphy wagon; pallid sturgeon; Joseph; Lewis and Clark; steamboat; bighorn sheep; coyote; chokecherry; bobcat; Karl Bodmer; pilot house; “The Breaks” is a local geographic term describing the rugged valleys, badlands, bluffs, and coulees within the upper Missouri River areas. It is often said that it appears that the land breaks away to the river.

Page 3 - Importance of Insects: 4; 6; 6; 7

Page 5 - Crossword Puzzle:

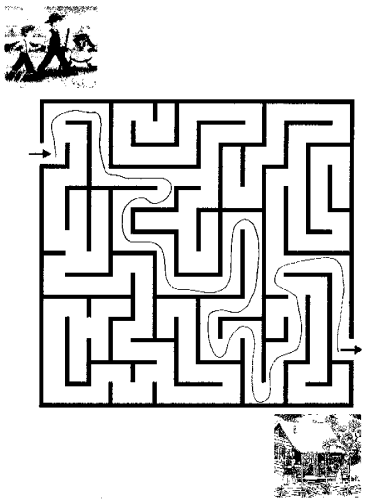
Across

4. Kid Curry	6. Ferry	7. Rattlesnake	8. Trace	10.Canoe
11. Bison	12. Sturgeon	13. Clinton	15. Eagle	17. American

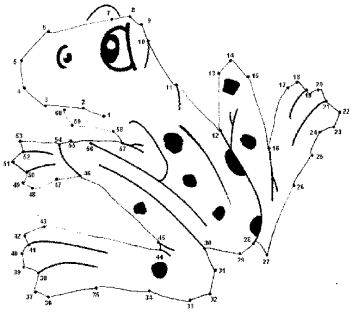
Down

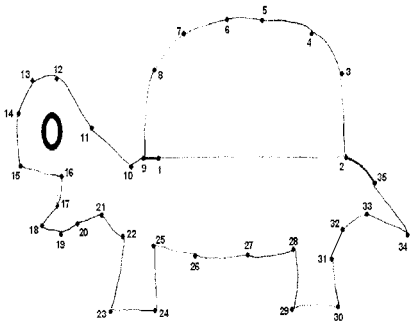
1. Blackfeet	2. Nez Perce	3. Bighorn	5. Coyote	9. Cabin
10. Choke	12. Steam	13. Clark	14. Trapper	16. Fort
18. Cactus				

Page 8 - Homestead Maze:



Page 12 - Dot to Dot: Frog, Turtle; a Dragonfly is the creature that the Turtle is trying to eat for lunch!





Pages 13 and 14 - Track Tale:

Beginning in the lower right of the image; A deer comes into a small clearing to browse (eat) some small shrubs. The deer passes right by a duck nest that is near the river. A skunk has come into the clearing and found the mama duck on her nest! Mama duck leaps from her nest and lands near the shore of the river and waddles into the river to safety. Look! A porcupine has come down from a big tree. It has eaten the inner bark from several of the branches of this tree but is still hungry. The porcupine wonders off in search of another tree to climb to eat some more. In the distance a coyote has come out of the trees. He too, is in search of food. The coyote has found the duck nest too! Will there be any eggs left to hatch in the spring? An elk has come from the trees to the river for a drink and to look around for some grass to eat. A mountain lion is looking for a meal too. And it finds one – in the tree the porcupine is in now! Far in the distance a mark in the bank of the river looks like a canoe has landed. A human has come out of the boat and found a small rock to sit on before leaving again. At the shore of the river a beaver has come from the water. It goes into the shrubs and trees also looking for a meal. Near the beaver’s tracks a raccoon has come to the water to wash its food. A small fish swims from deeper water to eat a bug at the water’s surface and the fish nearly gets eaten by the raccoon! A great blue heron walks along the shore, slow and steady. It stops with both feet and patiently waits to see what comes. The heron is hungry too – and here comes its dinner! A toad, just out for the evening, hops too close and WHACK! The heron is now full.

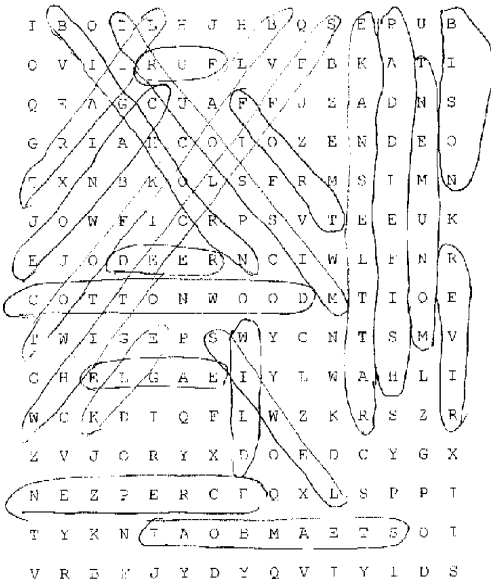
Answer Page, continued

Page 15 - Fill in the Blank: owls; bison; pronghorn; ferret, dogs; rattle; butterflies; bighorn; pelicans; deer; grouse.

Page 16 - Monument Math: 320 sq. feet; 40 million; $40, $140, $80, $280; 47%; 23 inches; $1,200; 900, 50%; 600 pounds.

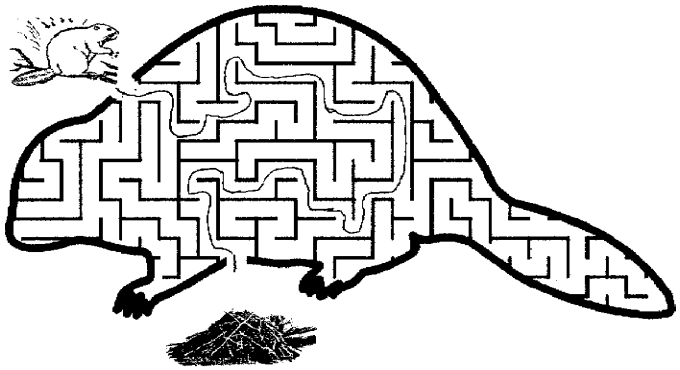
Page 19 - Word Search:

Missouri River Breaks



Page 20 - Word Scramble: tent, canoe, sunscreen, backpack, water, cooking pot, binoculars, sleeping bag, food, matches, hat, cooler.

Page 21 - Beaver Maze:



Page 22 - Nature Journal: A conservationist is someone who works on behalf of natural resources, such as land and rivers.

Congratulations on becoming a Missouri River Breaks Monument Junior Explorer!

To learn more about the Bureau of Land Management and our Junior Explorer program, visit **http://www.blm.gov/wo/st/en/res/Education_in_BLM/Learning_Landscapes/For_Kids.html**

Congratulations, Junior Explorer!

Come back soon to the Upper Missouri River Breaks National Monument Interpretive Center!