

Niobrara

National Scenic River
214 W. Hwy 20
Valentine, NE 69201
www.nps.gov/niob



Junior Ranger Activity Booklet

Explore • Learn • Protect

Be a Junior Ranger

As a Junior Ranger, you become part of an American tradition. Your effort shows that you've made a commitment to explore, learn about, and protect the things that make Niobrara a national treasure.

This book is designed for kids ages 5-12, but all ages are welcome.

Badge Requirements:

- 8 years and younger complete 5 activity pages
- 9 years and older complete ALL activity pages

Look for a ranger along the river or bring your book to our Visitor Center in Valentine, NE. We will check your work and award your badge.

You may also mail the booklet to be checked and returned with your badge:

Niobrara National Scenic River
Attn: Jr. Ranger
214 West Highway 20
Valentine, NE 69201

You can check your answers online at: www.nps.gov/niob/forkids



Safety first: Always take an adult with you and complete the activities together. Remember your sunscreen, water bottle, and first aid kit. Don't forget to wear your lifejacket when on the river. Cell phone service is limited. Most landings have emergency phones. In emergencies, call 911.

Sense-ability

Niobrara National Scenic River Park Rangers record their observations through writing and drawing. Junior Rangers can do this too! Find a quiet spot to sit.

In the space below, write or draw what you see, hear, feel, smell, and touch.



Poison ivy can make your skin itchy and painful. Remember: leaves of three, let it be.



How is the river valley the same/different from your home?



Rattlesnakes: Leave them alone and they'll leave you alone. They are scared of you, too.



Experience Your America

Niobrara National Scenic River is one of over 400 National Parks which protect special places all over our country. National Parks preserve scenery, wildlife, nature, and human history.



1. Write a "H" to show where you live.
2. Put a "X" by the closest National Park Service site to your home. What is it called?
3. Niobrara National Scenic River is marked with an *. Draw the route you took to get here.
4. Put an "O" by any other National Park Service areas that you have visited or will be visiting. If you can, name these other areas on the map.

Why Protect This River?

Find the underlined words.

Niobrara became a National Scenic River in 1991, after years of effort from landowners and others who cared about the river. They wanted to protect this special place from development.

The National Park Service works in partnership with local landowners, state and federal agencies, and other organizations to protect the unique treasure here while helping people enjoy their visit. The land remains largely in private ownership.

Niobrara is a National Scenic River because it has excellent water quality and flows freely. It has unique geology, fish and wildlife, recreation, scenery and fossils unlike any other place in the nation.

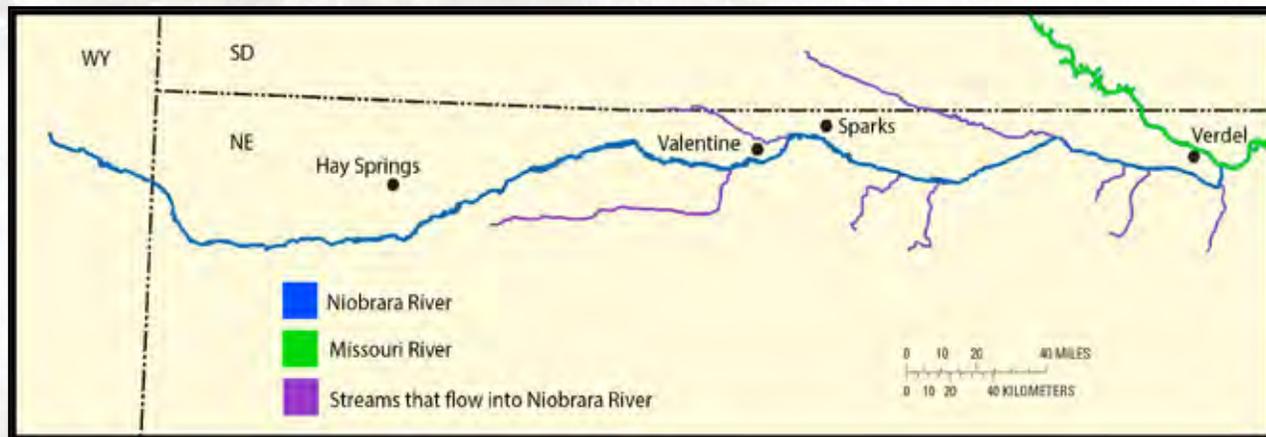
A U A J U Y S V F D W I E R M D B
F E J S K L G B V I I Z H J L P R
P J G T I M O O L P D U X X I U E
A T T S R G P D L A Q E U P Z N C
E S S I W E L L B R D H C K B R R
F O F W E I C B Y T E X P J N C E
F W Y G F Y Q R H N N G R J V Y A
O S Y E O B A S E E B I K K W R T
T N K O G R W K L R I C E R S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



The Piping Plover, a threatened bird, nests along the Niobrara.

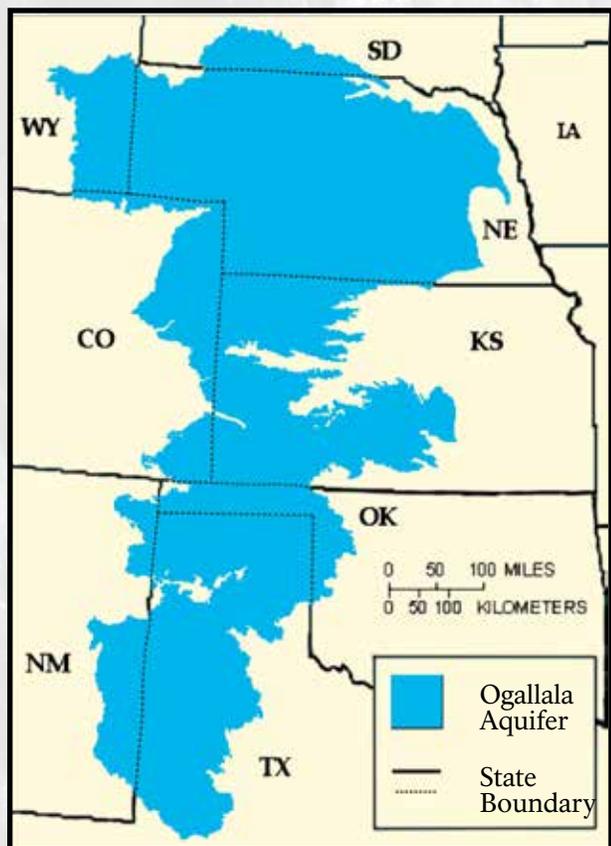
Where Does the Water Come From?

Use the map and word bank below to fill in the blanks.



The Niobrara River begins in _____ and ends when it joins the Missouri River. It is _____ miles long. More than _____% of the river's water is from groundwater in the _____ Aquifer. The rest is from _____ runoff. An aquifer holds _____ like an underground

sponge made of rock, and is filled, or "recharged" when it rains. The Ogallala is one of the world's _____ aquifers.

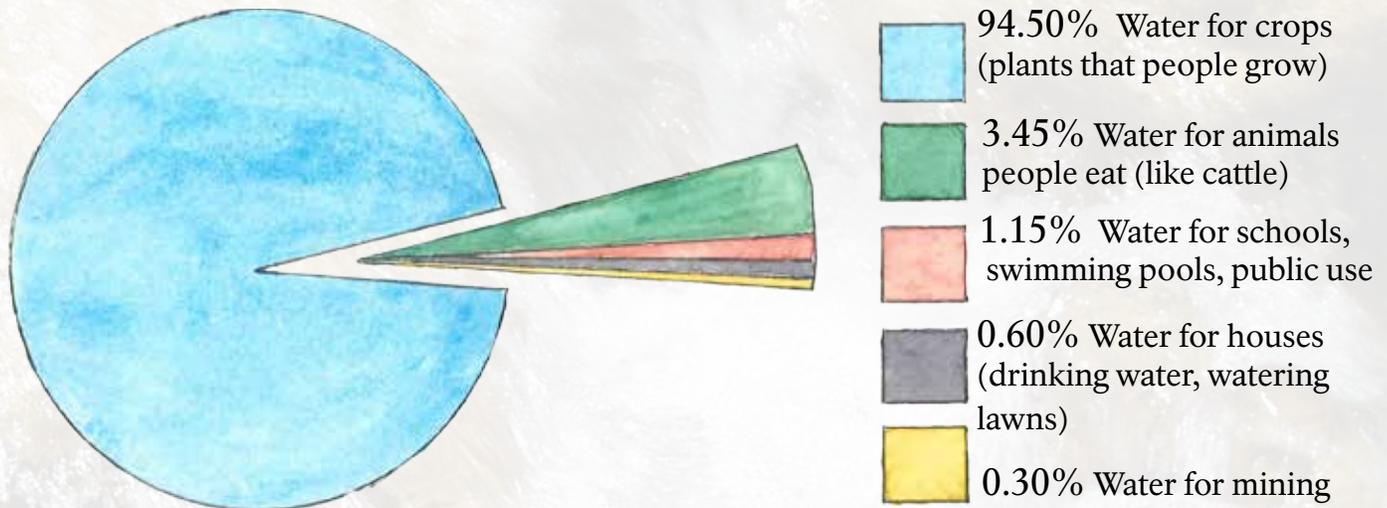


Word Bank:

largest	Ogallala
70	
Wyoming	water
surface	535

Where Does the Water Go?

On average over 172 million gallons of ground and surface water are used by people in the Niobrara River Valley per day as shown below.



How do you think the Niobrara River's water should be used? Number the uses below from your most important (1) to least important (6) use. Remember that the wild life, the plants and animals who call this river home, need water too.

___ Plants people grow

___ Animals people eat

___ Public use

___ Houses

___ Mining

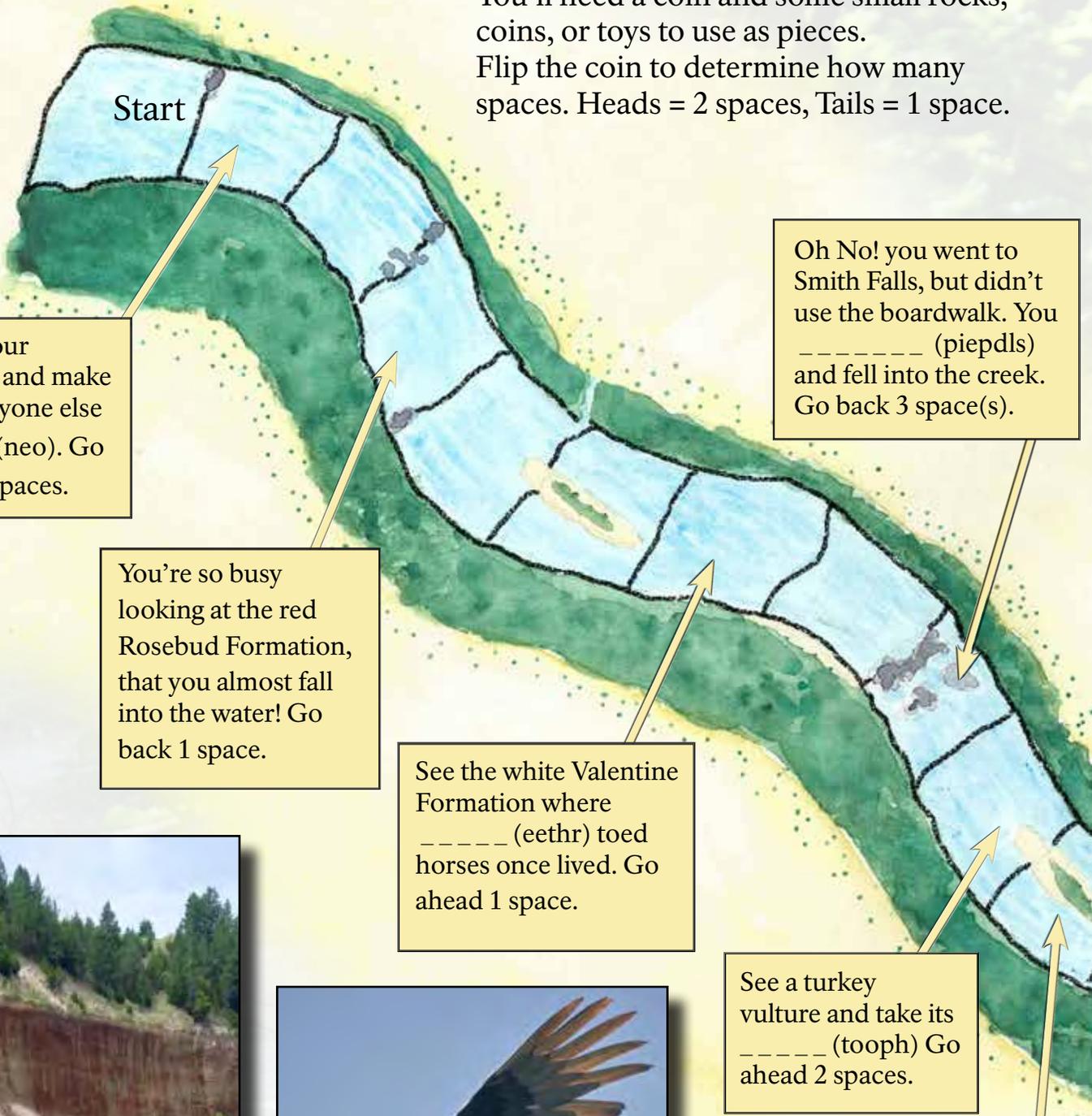
___ Wild plants and animals

Explain your choices here.

As more people make more demands on our water, tough decisions will need to be made about water use. Water is something that we all need, so we should all be able to help decide how it is used.

Take a Trip...

Unscramble the words to play the game. You'll need a coin and some small rocks, coins, or toys to use as pieces. Flip the coin to determine how many spaces. Heads = 2 spaces, Tails = 1 space.



Put on your lifejacket and make sure everyone else has ____ (neo). Go ahead 3 spaces.

You're so busy looking at the red Rosebud Formation, that you almost fall into the water! Go back 1 space.

See the white Valentine Formation where _____ (eethr) toed horses once lived. Go ahead 1 space.

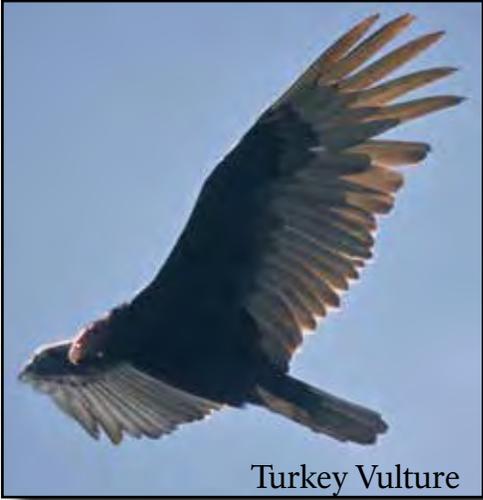
Oh No! you went to Smith Falls, but didn't use the boardwalk. You _____ (piepdl) and fell into the creek. Go back 3 space(s).

See a turkey vulture and take its _____ (tooph) Go ahead 2 spaces.

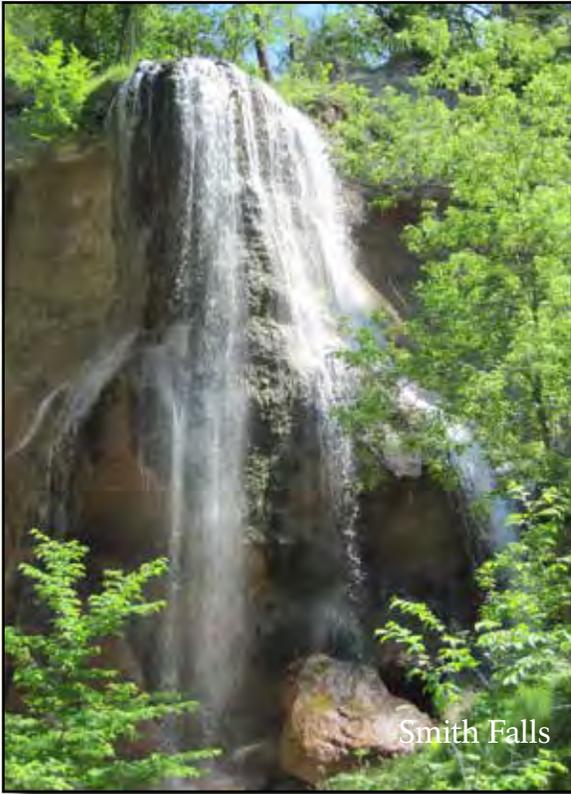
Take a drink of water to stay hydrated. Go ahead 1 space.



Seeps form along the top of the Rosebud Layer.



Turkey Vulture



What makes Niobrara special to you? Write your answer in the space below.

While looking at _____ (apple) birch trees, you reapply sunscreen. Go ahead 1 space.

Congratulations, you've made it this far safely, without tipping into the water! Go ahead 1 space.

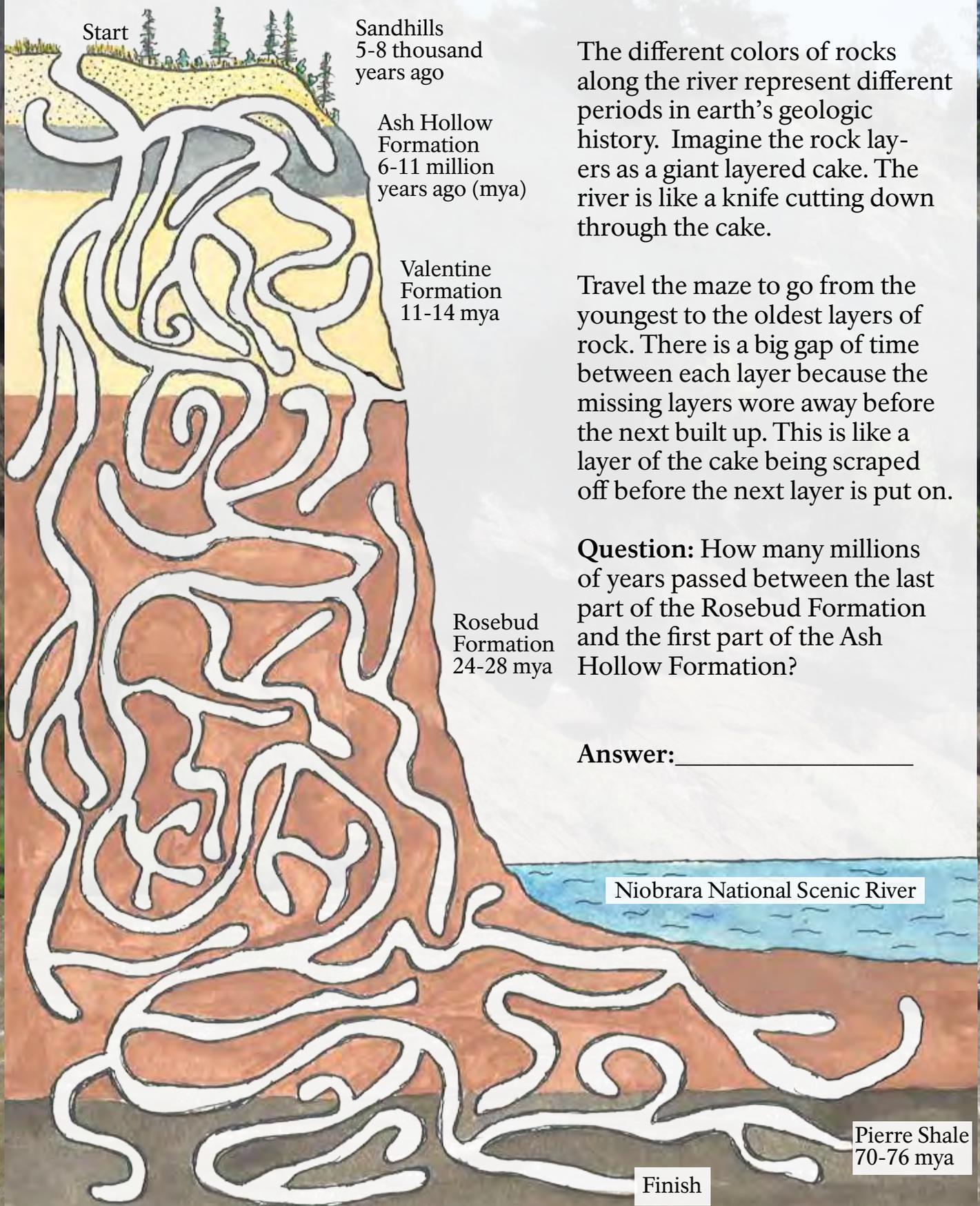
You've left _____ (hsrat) behind. Go back 2 spaces.

Finish



Plants grow thick along the river banks.

Amazing Geology



The different colors of rocks along the river represent different periods in earth's geologic history. Imagine the rock layers as a giant layered cake. The river is like a knife cutting down through the cake.

Travel the maze to go from the youngest to the oldest layers of rock. There is a big gap of time between each layer because the missing layers wore away before the next built up. This is like a layer of the cake being scraped off before the next layer is put on.

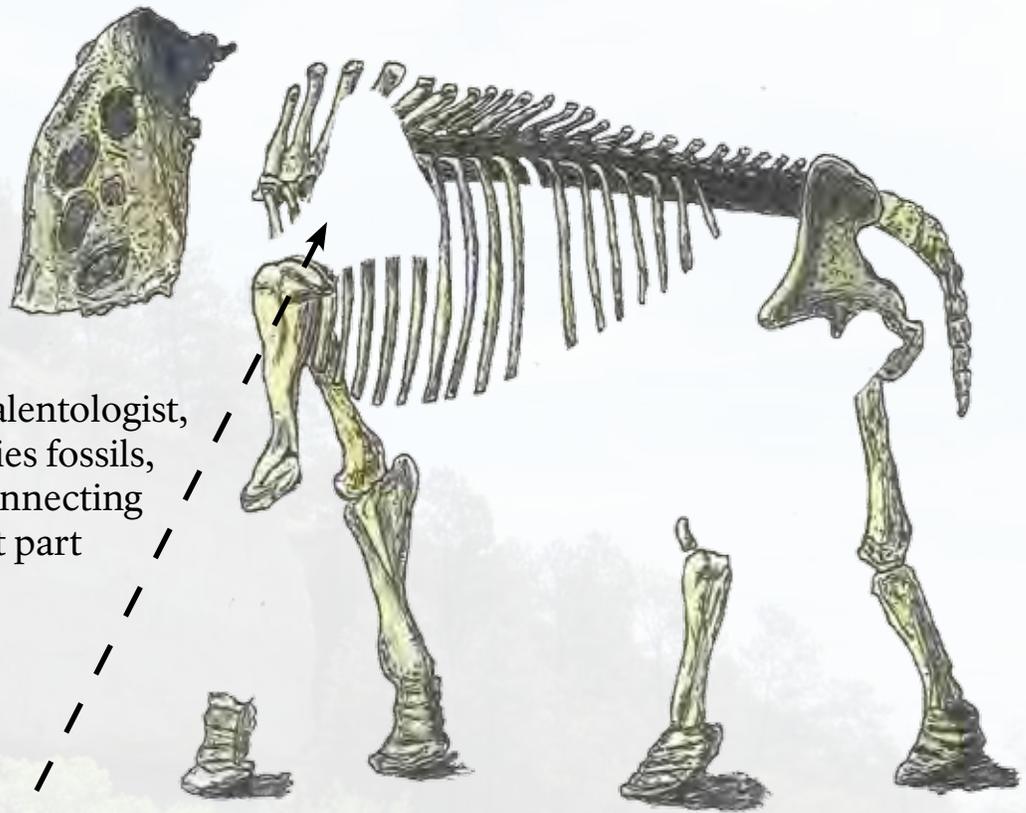
Question: How many millions of years passed between the last part of the Rosebud Formation and the first part of the Ash Hollow Formation?

Answer: _____

Connect the Bones

Niobrara is famous for its incredible variety of mammal fossils that are 10 thousand to 75 million years old. Mammoths lived here tens of thousands of years ago.

Pretend you are a palentologist, a scientist who studies fossils, by drawing a line connecting the bone to the right part of the skeleton.



Scapula
(Shoulder Blade)



Femur
(Upper Back Leg)



Knee-cap



Rib



Neck Vertebra
(Neck Bones)



Humerus
(Lower Front Leg)



Tusks
(clue: elephants have them too.)

Why are there no Mammoths here today? One reason is that the climate got too warm for them after the last Ice Age. What other changes do you think a warming climate might cause?

Track Them Down

Many animals that live here can be seen by the river. Match the animal's photo to its footprints. Measure footprints that you find with the ruler. How long is your footprint?

White Tailed Deer



front paw length: 2.25 in. (5.7cm)
hind paw length: 3.1 in. (7.8 cm)

Canada Goose



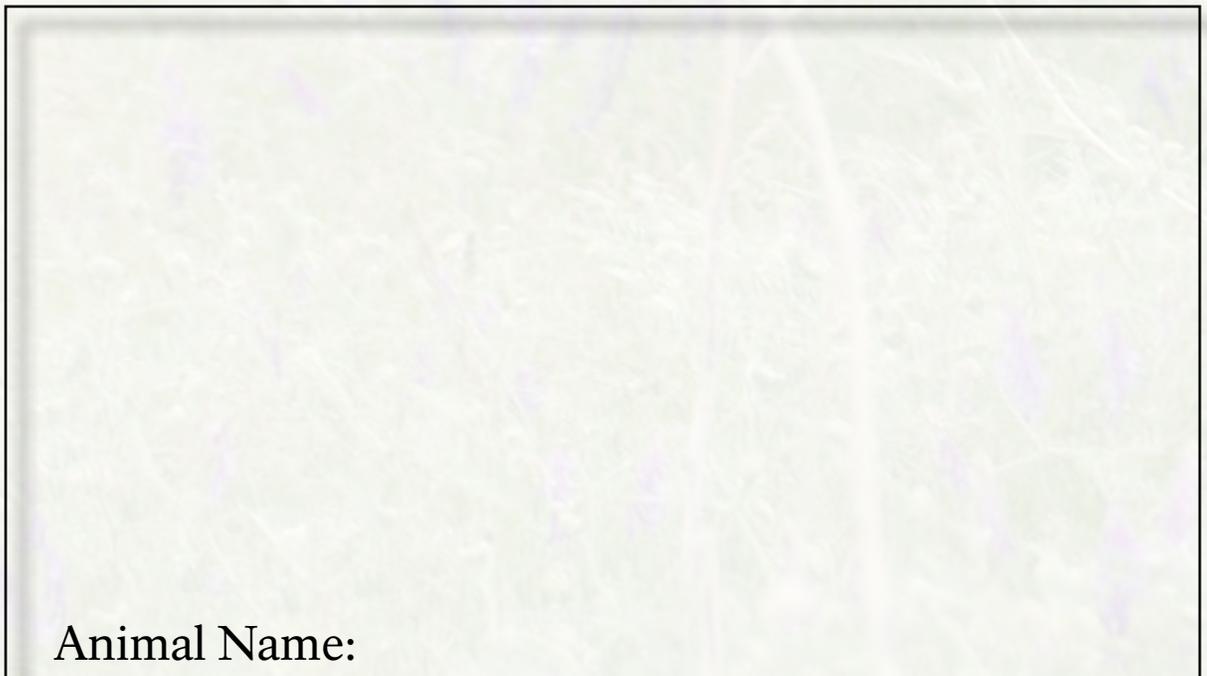
length: 2.25 - 3 in (5.7-7.6 cm)

Raccoon



length: 4 in (10.2 cm)

In the box below, draw a real or imaginary animal and its footprints.



Animal Name:

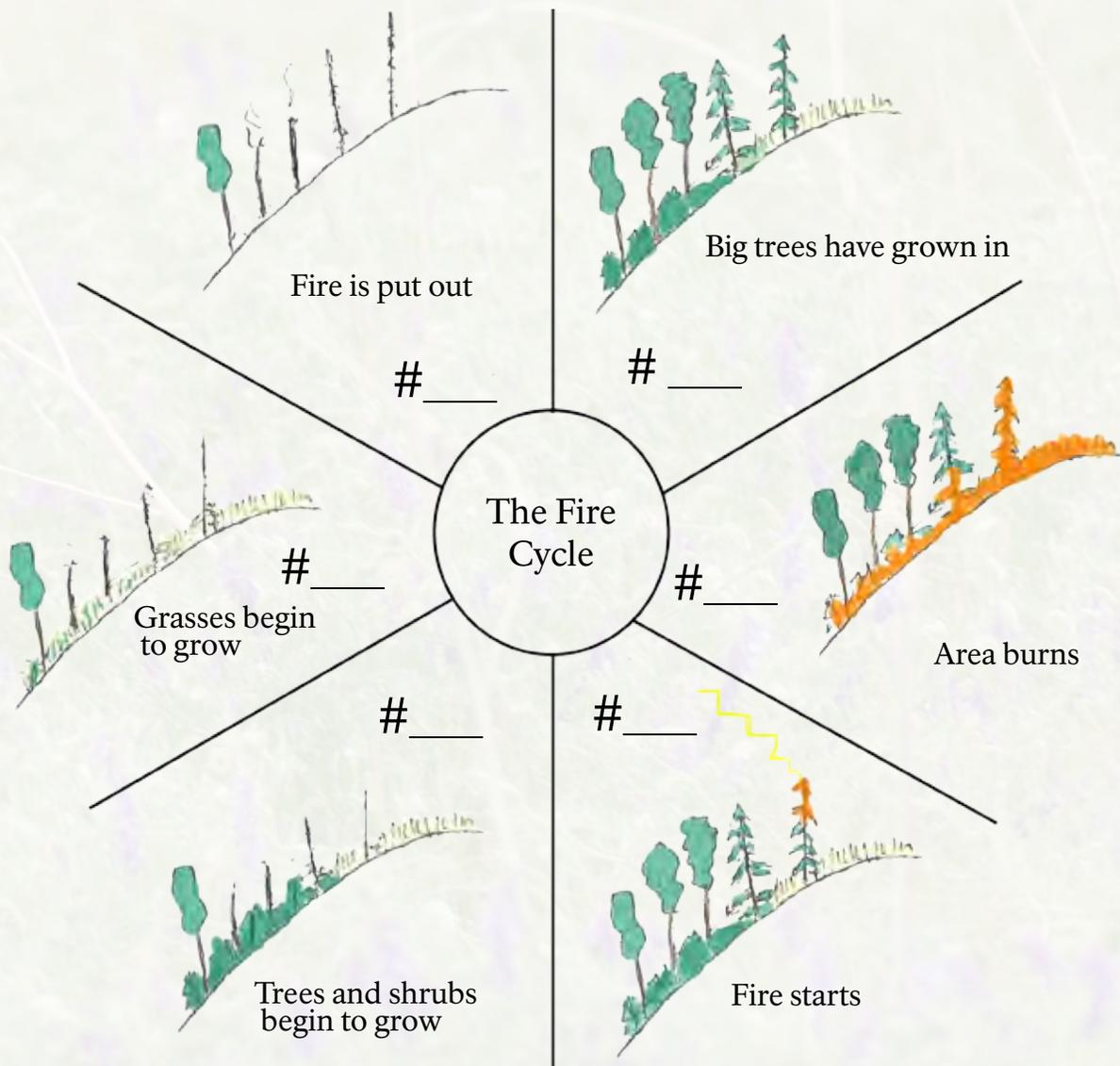


Fire-Wise

Natural fires are a regular part of the history of the Great Plains. Fire clears out old, dead plants allowing new and more diverse plants to grow. This provides more food for insects, birds, and mammals. This process of burning and regeneration is called the fire cycle.

Most fires start from lightning, but can also be caused by careless people. If you start a campfire, remember to make sure it is completely out when you are done. Never leave fires unattended.

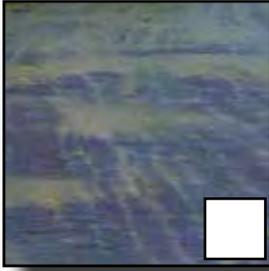
Destructive big fires can be prevented by thinning forests and doing “prescribed burns”. Then fires will not burn as intensively or as much because there is less dead material for them to burn.



Use the spaces provided to number the fire cycle in the correct order, from 1-6.

Making Connections

Water



Kayaking



Paper Birch



Bald Eagle



Bridges



Rangers



Tubing



Waterfalls



Rosebud Layer



Bur Oak



Mule Deer



Camping



Turtles



Canoeing



Wildflowers



Valentine Layer



1. Check off what you have seen while on and near the Niobrara National Scenic River.

2. Choose two or more of the images above and think about how they are related to one another. *Example: Deer need clean water to drink and plants to eat so that they are healthy.*

3. Draw lines to connect the related images.



THIS IS TO CERTIFY THAT

has completed the requirements of a

JUNIOR RANGER

of

NIOBRARA NATIONAL SCENIC RIVER

As a Junior Ranger, I promise to
Explore National Park Sites; **Learn** and teach
others about what makes them special; and do
my part to help **Protect** them for future
generations to enjoy.

Awarded on the ____ day of _____, 20__

Ranger



A misty fall morning reveals the breathtaking beauty of Niobrara National Scenic River. Beautiful scenery is only one reason this special place has been set aside for all Americans. Discover all the reasons why the Niobrara is more than Nebraska's premier recreational river -it's a national treasure. Become a Junior Ranger today!

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