

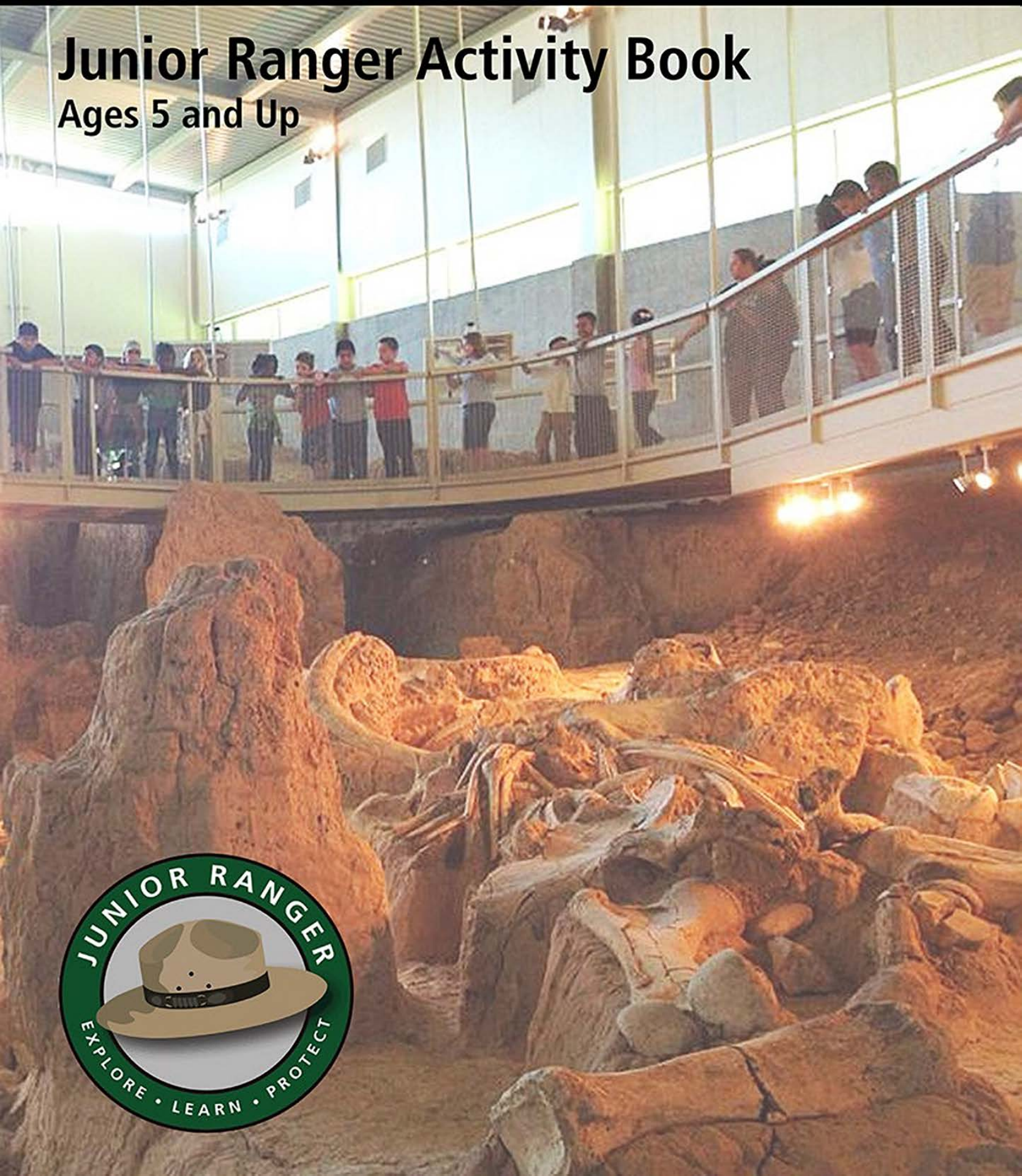
Waco Mammoth

National Park Service
U.S. Department of the Interior

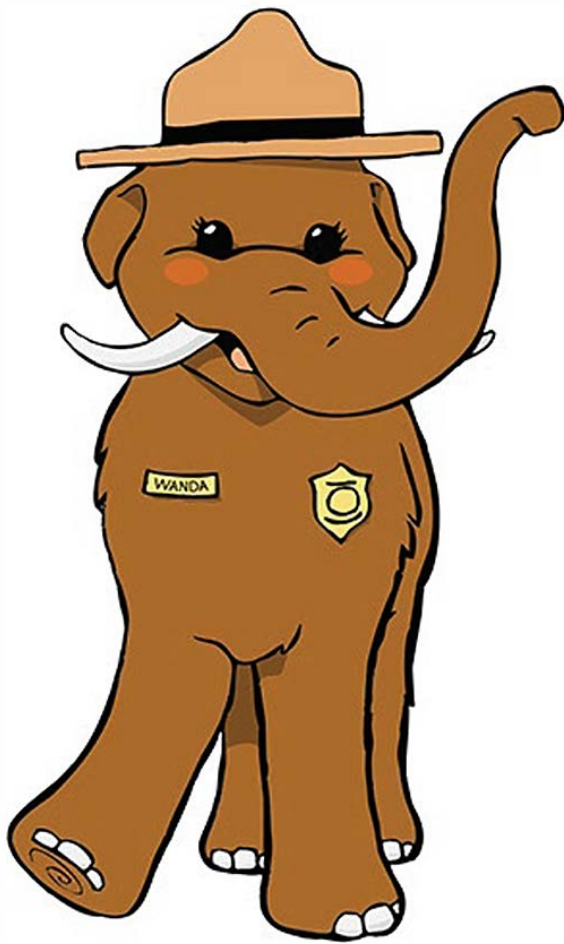


Junior Ranger Activity Book

Ages 5 and Up



BE A JUNIOR RANGER



Hi! I'm Wanda!

I'm also known as Mammoth W. I'm a Columbian mammoth who lives right here at Waco Mammoth National Monument. I am here to show you around this special place. Did you know Waco Mammoth has the only nursery herd of mammoths in the United States? That's pretty cool!

Along the way, I'll tell you all about Columbian mammoths, science, and how to earn your Junior Ranger badge.

EARNING YOUR BADGE

Complete the number of activities required for your age group. When you finish, go back to the Welcome Center and share this book with a ranger. You will receive a badge, a certificate, and you'll be sworn in as a Junior Ranger!

AGES 5-8: Complete at least 5 activities.

AGES 9-12: Complete at least 7 activities.

AGES 13 AND UP: Complete at least 10 activities.

Need help? Ask one of our rangers who isn't doing a tour or other program.

LEAVE NO TRACE

Let's start by talking about "leave no trace."
It's important to respect what is around us.
Follow these rules, and everyone will be
safe and have a good time.

WORD BANK

TRAIL	WALK	PLACE
SOFT	TRASH	ALONE



1. Stay on the _____.
2. Pick up your _____ before you leave.
3. Children and adults should _____ together.
4. Leave rocks, plants, and other things that belong here in their _____.
5. Respect wildlife by leaving animals _____.
6. Respect other visitors by speaking in a _____ voice.

SCAVENGER HUNT BINGO

Look for these things while you explore Waco Mammoth National Monument. When you find one, draw an X over the picture. Find four in a row - across, up and down, or diagonal - to score a BINGO!

Ask for help if you need it.

 <p>A piece of white plaster with some faint text on it, used for fossil preservation.</p>	 <p>A fossilized mammoth tusk and other skeletal remains embedded in a rock matrix.</p>	 <p>A photograph of a bright blue sky with scattered white clouds.</p>	 <p>A fossilized sabercat tooth, which is long, curved, and pointed.</p>
 <p>A cup-shaped nest made of twigs and sticks, built in a natural hollow.</p>	 <p>A pencil cholla cactus with its characteristic sharp spines and small red flowers.</p>	 <p>A wooden picnic table situated in a wooded area.</p>	 <p>A photograph of a white-tailed deer standing in a field.</p>
 <p>A striped lizard, possibly a spiny-tailed lizard, resting on a rocky surface.</p>	 <p>A series of paw prints in the sand, showing the direction of travel.</p>	 <p>Fossilized camel remains, including a tusk and other bones, in a rock matrix.</p>	 <p>A photograph of an armadillo walking on a paved surface.</p>
 <p>A dark butterfly with yellow and white markings on its wings, resting on a white surface.</p>	 <p>A cluster of colorful wildflowers, including bluebonnets and red flowers.</p>	 <p>A stone arrowhead with the National Park Service logo on it.</p>	 <p>A photograph of several birds on a paved area, including a red cardinal.</p>

MEET A RANGER

Want to learn about a park? Talk to a ranger!
Find a ranger who is not giving a tour or
other program. Ask them these questions.

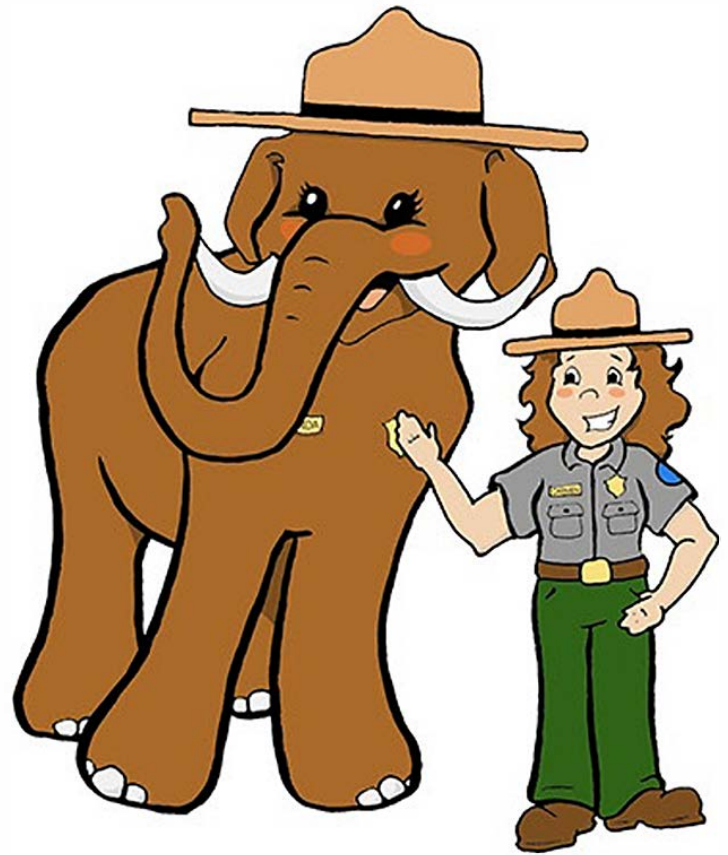
1. Ranger's Name:

2. How long have you been working at Waco
Mammoth National Monument?

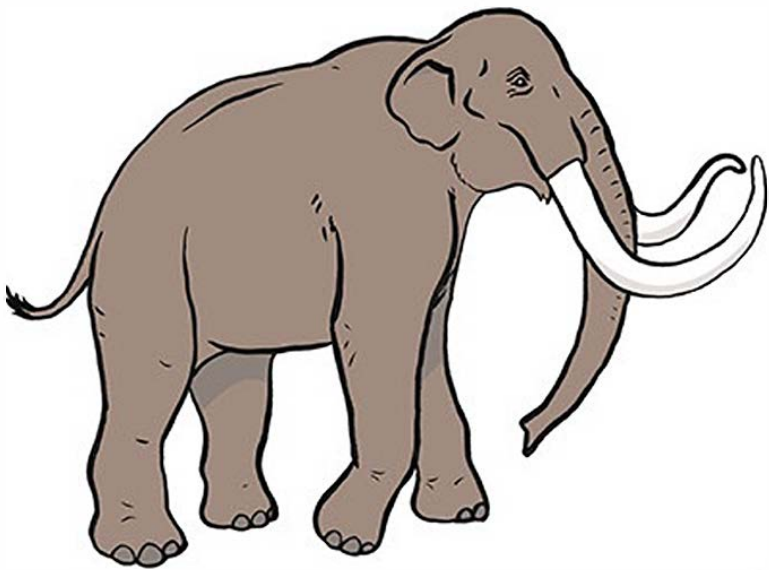
3. What do you do as a ranger?

4. What is your favorite part of working here?

5. Do you have a college degree? If so, what degree did you earn?



NOT SO WOOLLY!



Did you know not all mammoths were woolly mammoths? Waco Mammoth National Monument has a different species called Columbian mammoths! They only lived in North America.

Columbian mammoths lived during the Pleistocene Epoch (say "PLY-stuh-SEEN EP-uck"). This Ice Age started 2.5 million years ago and ended 10 thousand years ago. This was long after dinosaurs went extinct.

Even though people call it the Ice Age, not all of the world was covered in ice. The lands that became Canada and the northern United States were covered in thick sheets of ice called glaciers. The lands that became the southern U.S. and Mexico were warm.

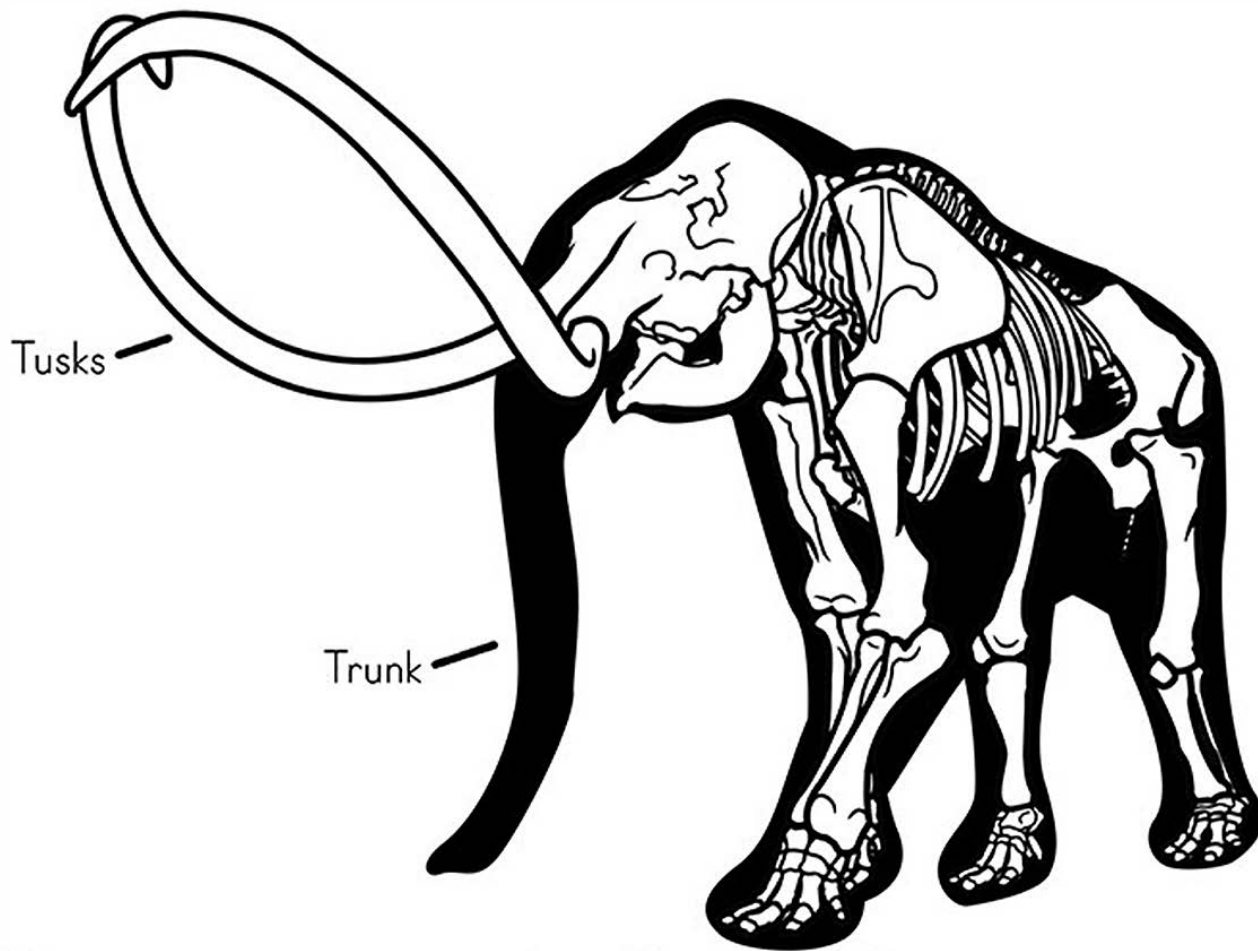
Columbian mammoths lived in warm grasslands, away from the glaciers. They were 14 feet tall, or 4.3 meters. They also weighed 10 tons, the same as a school bus! Woolly mammoths lived in steppes, which are colder plains with shrubs and very little grass. They were about 10 feet tall (3 meters) and weighed 6 tons.

1. Did dinosaurs live at the same time as mammoths?
2. Were Columbian mammoths bigger or smaller than woolly mammoths?
3. What are glaciers?

WHAT WAS THAT FOR?

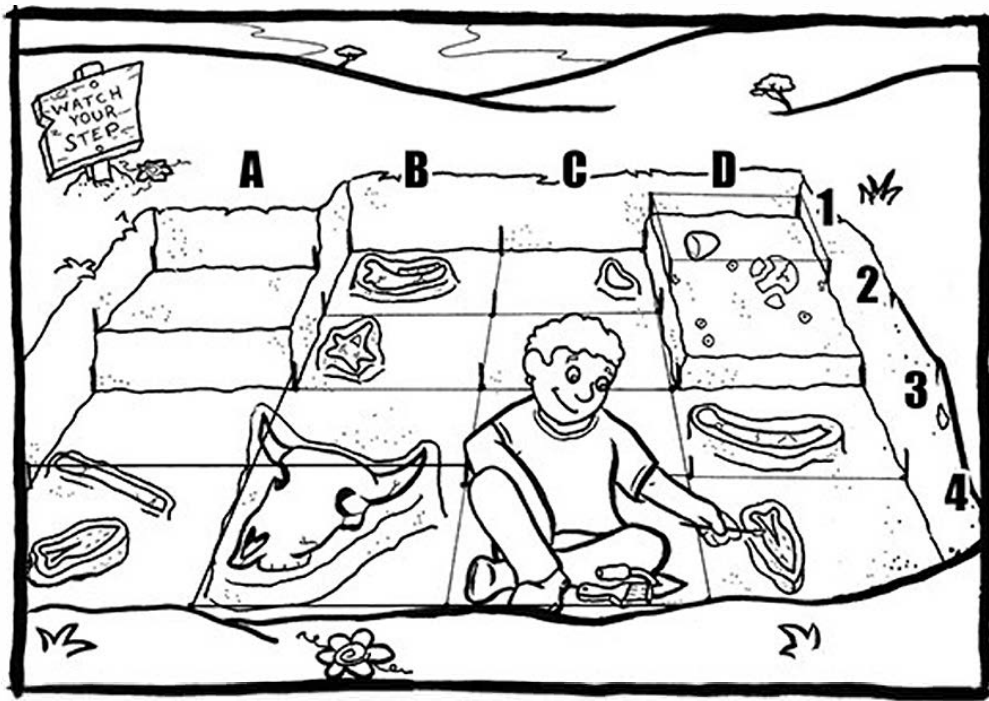
Waco Mammoth National Monument is a special place because scientists found a family of mammoths here.

For this activity, you will be a paleontologist, a scientist who studies fossils. Study this picture. Can you figure out what mammoths were like?



1. What are two ways a mammoth could use its tusks?
2. What are two ways a mammoth could use its trunk?
3. Did mammoths eat meat or plants? How do you know?

WHAT IS PALEONTOLOGY?



Two types of scientists study prehistoric times. Scientists who study fossils are called paleontologists. Fossils are remains of living things that are at least 10 thousand years old. Scientists who study artifacts are called archaeologists. Artifacts are objects that humans made. A dig site may have fossils or artifacts. Sometimes, a dig site can have both!

Greg is digging a site that has bison fossils and Clovis artifacts. He divided the site into a grid, so it will be easy to map. He uses trowels and brushes to uncover the specimens.

1. Greg found a spearhead in (D,4). Another spearhead is in (____,____).
2. Draw a clay pot in (A,3).
3. A fossil bison jaw is in (B,1). Color it.
4. Which square is Greg sitting in?
5. Waco Mammoth has mammoth fossils and no artifacts. Which type of scientist would work at Waco Mammoth?

THE FIRST AMERICANS

The first people to live in North America were the Paleo-Americans. They followed Ice Age animals that they hunted, such as mammoths, into North America. These hunters were the ancestors of today's Native Americans.

One of the Paleo-American groups were the Clovis people. Clovis people used spear points that were long and had a groove called a "flute" on each side. They threw these spears using a tool that helped them throw things farther.

If you solve this word puzzle, you will learn the name of this spear-throwing tool. Put these Ice Age animal names in ABC order in the boxes. The first one has been done for you! Read down the gray boxes to find the answer.



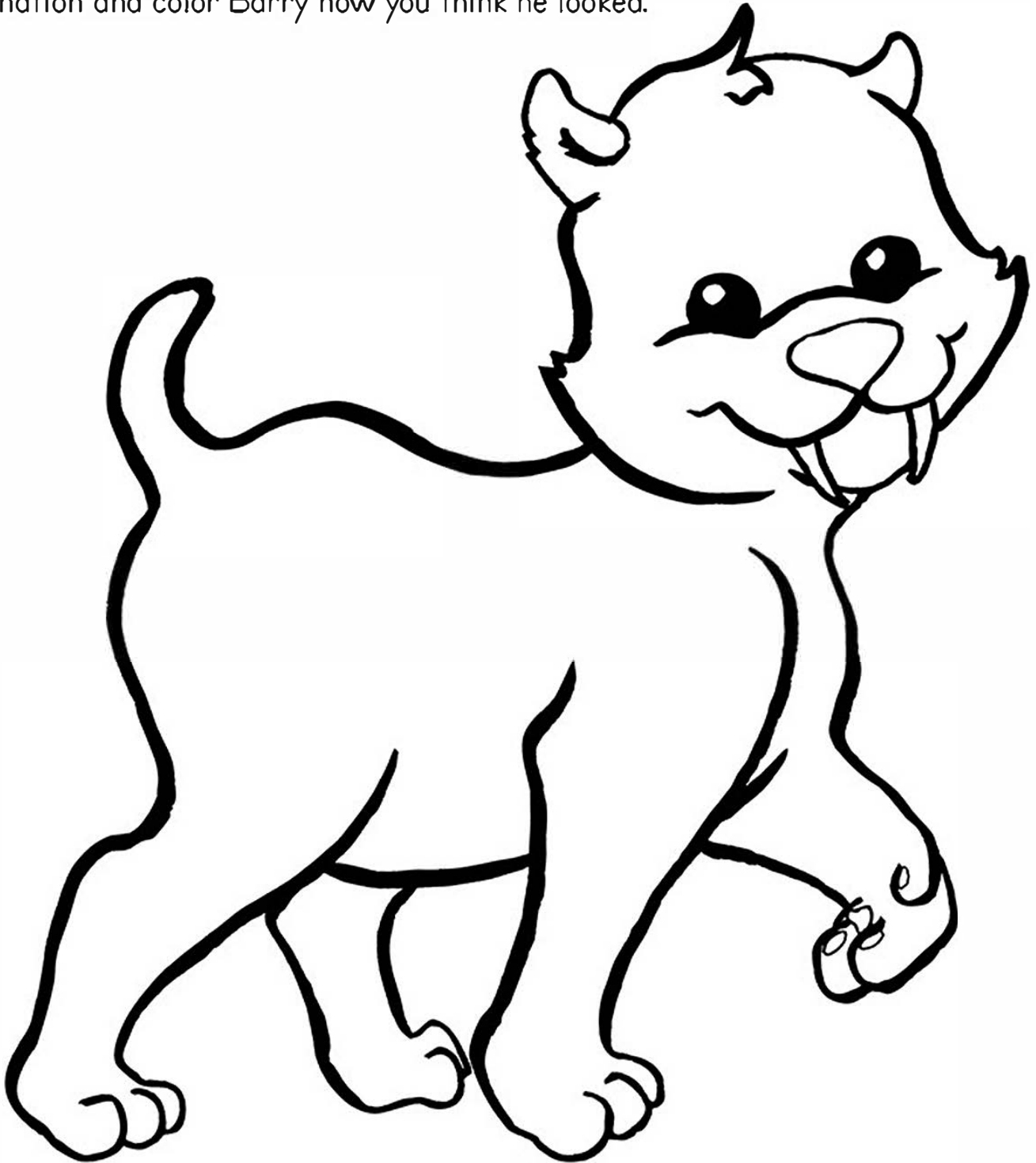
CAMELOPS
MAMMOTH
GLYPTODON
SMILODON
GROUND SLOTH
SHORT FACED BEAR

1. What is the name of the groove on a spear point?
2. What is the name of the tool used to throw a spear?

IMAGINE THAT, SABERCAT!

Waco Mammoth National Monument has more than just mammoths. Scientists also found a sabercat. This is Barry. Barry's not scary - he's a baby!

Scientists don't know if sabercats had spots, stripes, or no marks at all. Use your imagination and color Barry how you think he looked.



DIGGING UP WORDS



Paleontologists have to look carefully for fossils when they dig. Can you “dig up” all the fossil words on this page?

FOSSIL WORDS:

ARCTODUS
EPOCH
JACKET
PICK

CAMELOPS
FOSSIL
MAMMOTH
SHOVEL

COMPASS
GENUS
MASTODON
SMILODON

DATUM
GRAPH
MEGATHERIUM
SPECIES

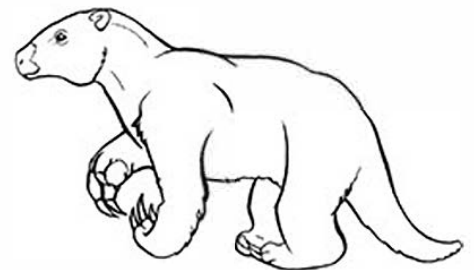
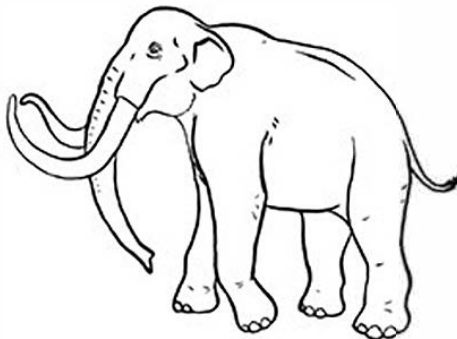
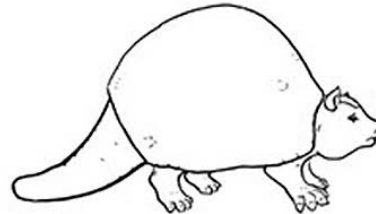
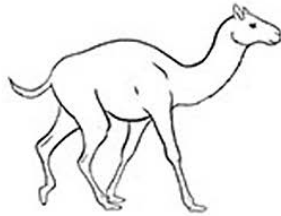
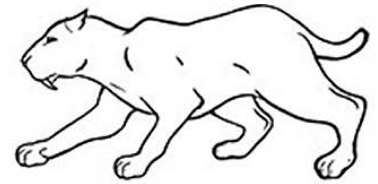
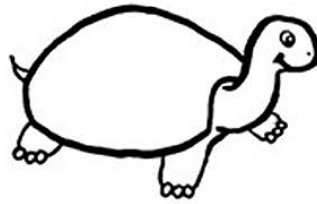
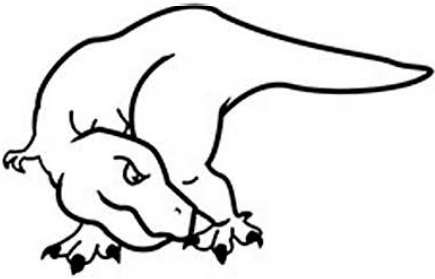
DIG
HERD
MOLAR
TUSK

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

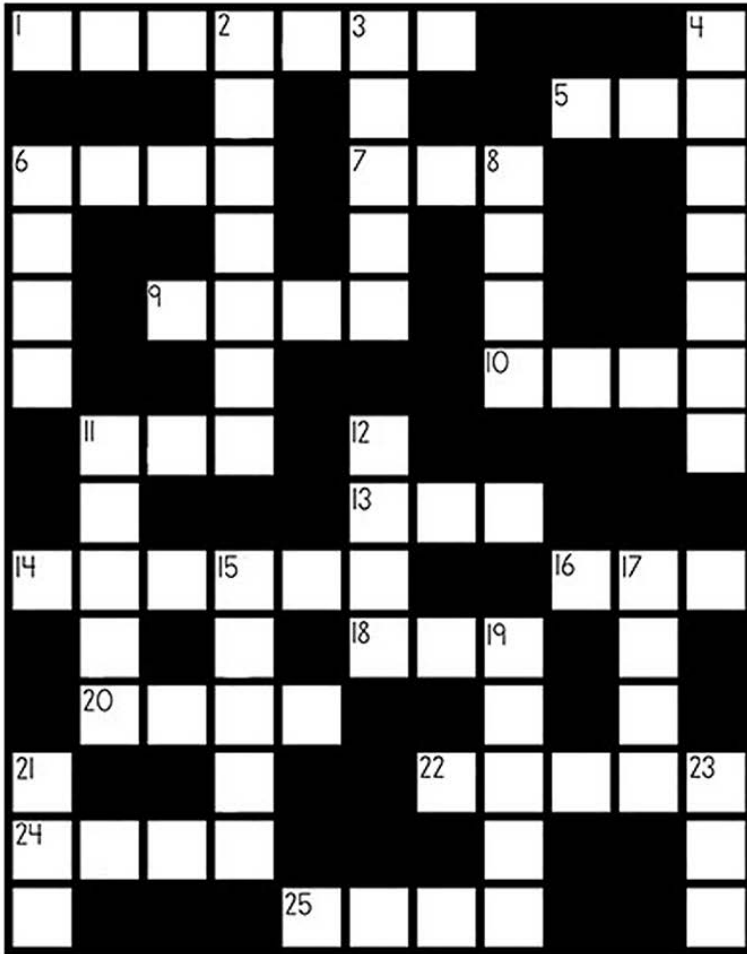
ICE AGE MIX-UP

The mammoths of Waco lived during the Ice Age, a time scientists call the Pleistocene Epoch (say "PLY-stuh-SEEN EP-uck"). This period started 2.5 million years ago, long after the dinosaurs died. The Ice Age ended just 10 thousand years ago. Most of the species that live today also lived during the Pleistocene Epoch.

Look at the pictures below. Can you see the five things that do not belong in the Ice Age? Draw an X on anything that does not belong.



A PALEO PUZZLE



WORD BANK

(Careful - there are extra words in this list!)

BONES	CATS	GRASS	MUSEUMS	SITE
BRUSH	DENS	HERD	NUMBER	SOIL
BUS	DIG	HUNT	OLD	TEETH
CALF	EAR	LAB	OSL	TONS
CAMEL	EAT	LENS	PUSH	TUSKS
CAST	FOSSILS	MAMMOTH	SHELTER	ZOO

ACROSS

1. A large, extinct elephant
5. A place to see living elephants
6. Saber-tooth _____ were not tigers
7. A ground sloth would _____ leaves
9. Mammoths could use their tusks to _____ down trees
10. Another word for dirt
11. A Columbian mammoth weighed the same as a school _____
13. Scientists think the Columbian mammoth had a smaller _____ than African elephants
14. Each fossil a scientist digs up gets its own _____

16. The initials for Optically Stimulated Luminescence
18. "Excavate" means to carefully _____
20. Predators _____ for other animals
22. This animal followed the mammoths
24. A tool used to see things up close
25. Predators sometimes hide their babies inside _____

DOWN

2. Places to see fossils

3. Scientists learn a mammoth's age by the size of its _____
4. Remains of ancient life
6. Scientists cover fossils with a jacket, or plaster _____
8. The Columbian mammoth weighed 9 or 10 _____
11. A tool used to sweep dirt
12. A large group of mammoths
15. The parts of animals most likely to become fossils
17. A place where many fossils are being excavated
19. Mammoths ate _____
21. Mammoth Q was about 40-years-_____
23. A place to study fossils

WHAT DO YOU SENSE?

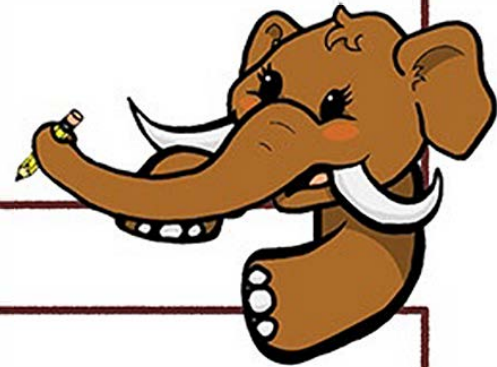
Go walk one of the trails! The best way to learn about the world around you is to get out and explore. Remember to leave no trace. Once you find a happy spot, sit still for five minutes. What do you notice?

TOUCH

Gently touch nearby plants. What do they feel like?

LISTEN

Close your eyes. What do you hear?



SMELL

You are surrounded by many scents. What do you smell?

LOOK

Look all around you. What do you see?



TELLING THE STORY

Paleontologists are detectives looking for clues in the fossils. When there are enough clues, they can put together a story about what happened long ago. Scientists at Waco Mammoth found a lot of clues about what happened at this place. An artist painted this mural to tell the story. Look at this picture like a scientist would.



1. Circle the camel.
2. Circle one of the baby mammoths.
3. Scientists are not sure what color Columbian mammoths were. Do you agree with the color the artist chose? Why or why not?
4. Describe what is happening in this picture.

SHARE WHAT YOU KNOW!

DRAW A MAMMOTH

What did you explore?

What did you learn?

What did you protect?



This is to certify that

is granted the title of

JUNIOR RANGER

on this, the ____ day of _____, _____.

PLEDGE:

I promise to learn about the national parks and monuments, to preserve and protect our history, to leave no trace, to share what I learned, and to leave it better than I found it.

Park Ranger Signature

Junior Ranger Signature

MAMMOTHS BY MAIL

Parents! Your child can be a junior ranger even if they cannot visit Waco Mammoth. Just follow these three easy steps:

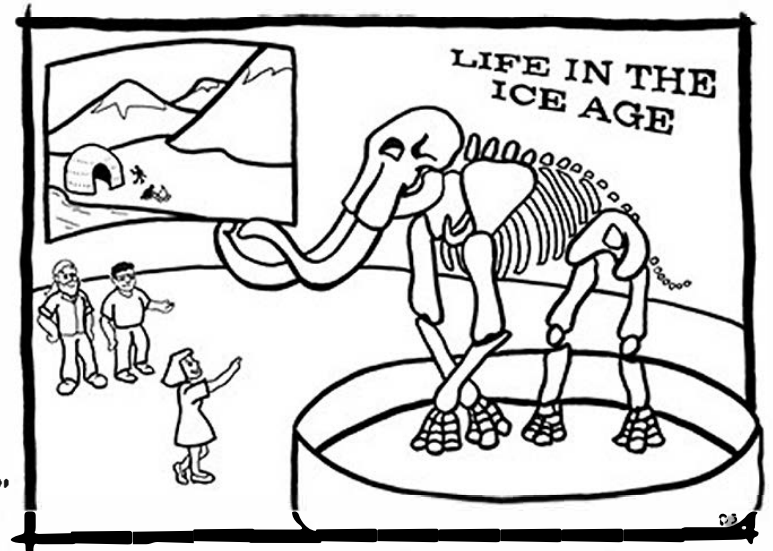
1. Check off the appropriate age group, and have your child do the correct number of activities. For on-site activities like "What Do You Sense?" or "Scavenger Hunt Bingo," go outside to a park, your own backyard, or watch a documentary about a park.

- My child is 5-8 (at least 5 activities)
- My child is 9-12 (at least 7 activities)
- My child is 13 and up (at least 10 activities)

2. Fill out the Junior Ranger certificate. Leave the ranger signature line blank.

3. Send this form, the certificate, and completed activity sheets to this address:

Waco Mammoth National Monument
Junior Ranger Program
6220 Steinbeck Bend
Waco, Texas 76708





Content

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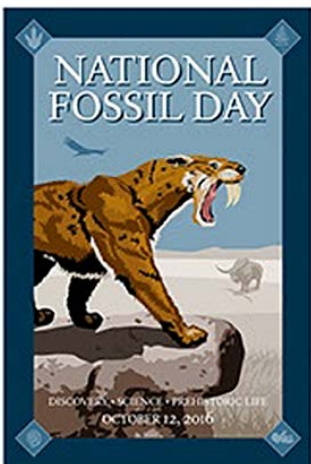
Photographs and Illustrations

Shawn Perry - deer photo, pg. 2
Raegan King - armadillo photo, pg. 2
Lee Jamison - mural artist, pg. 13
Mayborn Museum Complex - exhibit photo, back cover
Dava Butler - all other photos and illustrations

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Donald Esker	Jason Ockrassa
Lincoln Crowder	Jeremy Holt

This information has been adapted from Leave No Trace under special permission. For more information on Leave No Trace, visit www.LNT.org.



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City of Waco in partnership with National Park Service 2016.