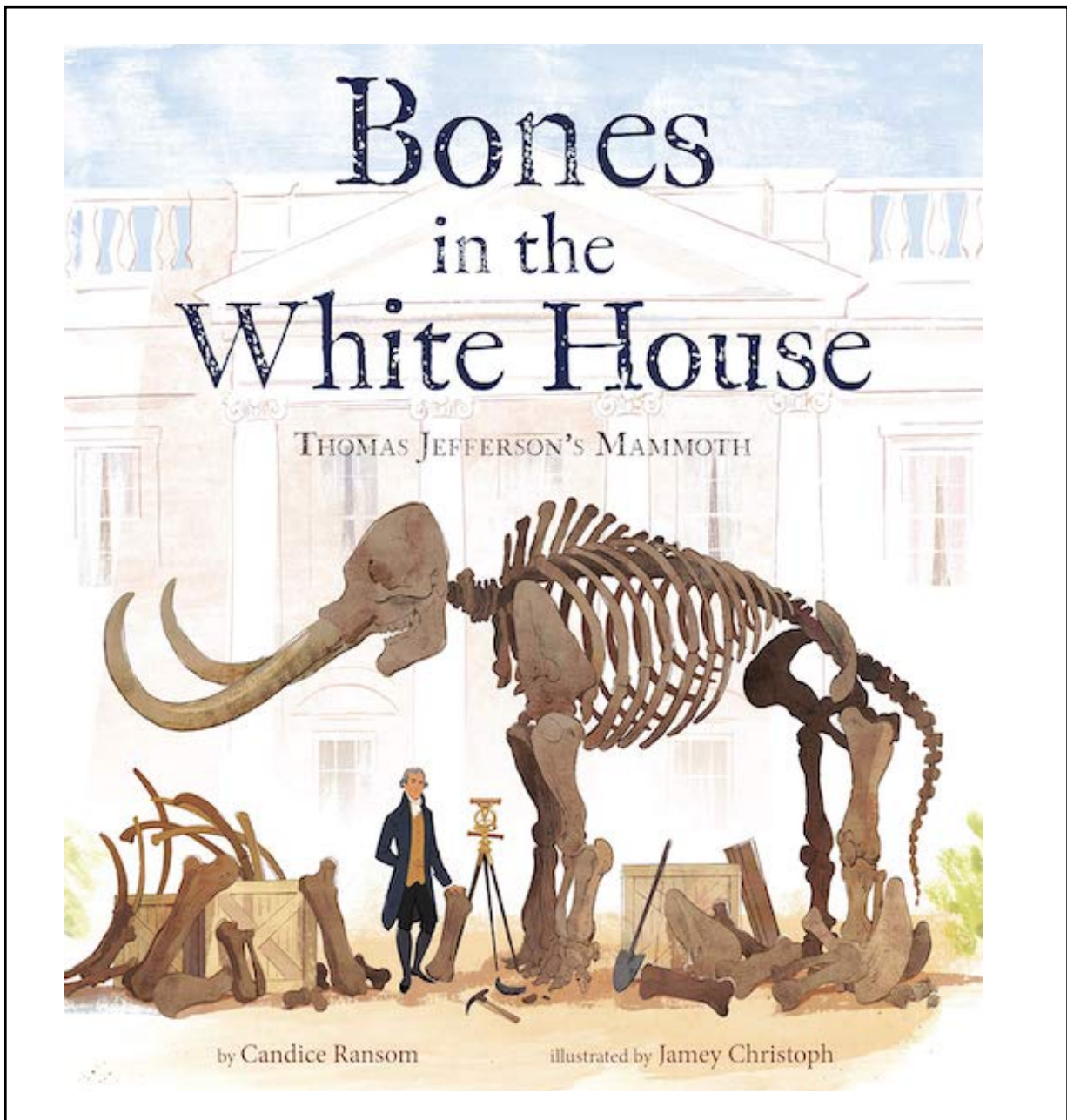


# Bones in the White House: Thomas Jefferson's Mammoth

Words by Candice Ransom Illustrations by Jamey Christoph

## Curriculum Guide



## Book Details:

**Grade Level:** PreK to 3

**Hardcover:** 40 pages

**Publisher:** Doubleday Books  
for Young Readers

**ISBN:** 978-052564675

## Readability:

**ATOS:** 5.1

**Accelerated Reader**

**Points:** 0.5

**Guided Reading:** S

## Common Core Standards Correlations:

### Key Ideas and Details:

CCSS.ELA.LITERACY.RL.2.1

CCSS.ELA.LITERACY.RL.2.3

### Craft and Structure:

CCSS.ELA.LITERACY.RL.2.5

### Integration of Knowledge and Ideas:

CCSS.ELA.LITERACY.RL.2.7

## Next Generation Science Standards:

### Earth's Place in the Universe:

2-ESS1-1

### Biological Evolution:

3-LS4-1

## Synopsis:

Thomas Jefferson: Third president of the United States. Author of the Declaration of Independence. *Obsessive prehistoric mammal hunter?* In this little-known slice of American history, see Thomas Jefferson as never before!

In the late 1700s, America was a new nation, with a vast west that held age-old secrets: bones! Massive tusks and enormous animal skeletons were being discovered, and Thomas Jefferson - politician AND scientist - was captivated. What were these giant beasts? Did they still roam on American soil? Jefferson needed to find out. Funding explorers, including Lewis and Clark, Jefferson sought to find a complete prehistoric mastodon skeleton - one which would advance the young science of paleontology, but would also put this young country on the world stage. Follow along on the incredible journey—full of triumphs and disappointments, discoveries and shipwrecks, ridicule and victory.

Author Candice Ransom researched this amazing story for years before telling this tale, closely collaborating with Jefferson scholars and natural history experts. Jamey Christoph's moody, luminous illustrations paint the scene: a young country, a president with a thirst for knowledge, and an obsessive, years-long quest to find the prehistoric bones that would prove the importance of a growing nation.

## About the Author:

Candice Ransom has published more than 150 books for children, including the classic *The Big Green Pocketbook*, *Iva Honeysuckle Discovers the World*, *Rebel McKenzie*, *Amanda Panda Quits Kindergarten*, *Terrier Trouble*, and *Tooth Fairy's Night*. She lives in Virginia with her husband and two cats. [www.candiceransom.com](http://www.candiceransom.com)

## About the Illustrator:

Jamey Christoph illustrated *Stonewall: A Building. An Uprising. A Revolution*; *Up in the Leaves: The True Story of the Central Park Tree-houses*; *Clackety-Track: Poems About Trains*; *Gordon Parks: How the Photographer Captured Black and White America*, and many other children's books. He lives in Ohio with his two dogs.

## Before Reading:

- Introduce *Bones in the White House: Thomas Jefferson's Mammoth* by reading the title, subtitle, and the names of the author and illustrator. Review the roles of authors and illustrators.
- Take your students on a “picture walk” of the front and back covers. Ask students if they think this book is fiction or nonfiction. What clues in the title and illustrations help them decide?
- Do they know where the White House is? Has anyone been to Washington, D.C.?
- What do they know about American presidents? Who was the first president?
- Can they guess what animal is on the cover? What other animal does it remind them of?

## After Reading:

- Have students examine the front endpapers of the book. There are animals and plants and buildings. Why did the illustrator choose those items? Have students study the spot illustration on the title page. Again, why did the illustrator group these items together?
- Discuss how a collection of items can describe a person's interests or leave clues as to the subject of the book. Ask students to choose one item on either the front endpapers or the title page illustration and write about the connection between the item and either the story or the main character.
- Let students list objects not shown in the illustrations and draw their own pictures.



## Vocabulary:

Students might be unfamiliar with some of the vocabulary in the book. Review some or all of the words below. Let students look up words in the dictionary. Discuss the meanings of the words. Ask students to write each word and use in a new sentence.

Mississippi River | surveyor | tusk | Kentucky |  
Blue Ridge Mountains | muck | mastodon |  
Atlantic | hippopotamus | trader | trapper |  
Virginia | bog | femur | specimens | mammoth |  
fever | molar | carnivore | skeleton | jawbone |  
fossil | essay | ancient | Philadelphia | sloth |  
natural | thigh | gawk | terrestrial | species |  
university | scholar | colossal | Philosophical

## Themes:

American History | Prehistoric Mammals |  
Paleontology | Biodiversity | Extinction |  
Perseverance | Teamwork | Responsibility





## Jefferson the Scientist

“Great-claw” bones given to Thomas Jefferson. He wrote a paper on that discovery. American Philosophical Society. Photo by Candice Ransom.

Jefferson has been called the “Father of American Paleontology” for his interest in American pre-historic animals. However, experts agree that Jefferson never went out into the field, never collected fossils himself, and didn’t use approved scientific methods.

[https://www.dmme.virginia.gov/commercedocs/PUB\\_61.pdf](https://www.dmme.virginia.gov/commercedocs/PUB_61.pdf)

It’s true Jefferson didn’t find the first fossils in America or dig up bones. Yet he devoted thirty years encouraging the search for fossils. He organized and funded collecting expeditions. He shared fossils and scientific information with scholars in other countries and was the first American to write a scientific paper on fossils. In 1822, his discovery of the “Great-claw” was officially named *Megalonyx jeffersonii*.

Science formed Jefferson’s daily life. “I Rise with the Sun,” he said, to begin record-keeping. He recorded the weather twice a day and asked friends to do the same so they could compare data. He was the first American to support the study of meteorology. He bought the latest scientific instruments. His library held books on astronomy, meteorology, botany, and zoology. After he retired from public office, he created the University of Virginia. Jefferson saw his school as a place where “all the branches of science...should be taught in their highest degree...”

<https://www.monticello.org/thomas-jefferson-a-day-in-the-life-of-jefferson/i-rise-with-the-sun/>

Jefferson was happiest outdoors. He carried a pocket notebook, pencil, small telescope, compass, thermometer, and a pocketknife to record his ideas and observations. He never stopped learning. When Jefferson sent Lewis and Clark on their journey West, he asked them to take detailed notes. They filled eighteen journals, more than a million words.

**Student Activity:** Keep a field journal for a week. Take notes on where you live. Look at the sky, check the temperature, describe the plants, birds, small animals, even the insects. What did you see that you have never noticed before? Be observant like Thomas Jefferson. Pay attention to the world around you, every day. Never stop learning.

# Scientists and Dinosaurs

Statue of “Hatcher,” the first triceratops skeleton ever assembled. Smithsonian National Natural History Museum. Photo by Candice Ransom.



The word *scientist* was not used in Jefferson’s Day. Instead, the term “natural philosopher” described someone who studied natural history: the facts about animals, plants, and minerals. In 1833, British professor William Whewell came up with the term *scientist*. In the late 18th and early 19th centuries, the study of natural history became divided into topics—geology, astronomy, biology, botany, zoology.

Jefferson considered himself a “natural philosopher,” interested in every aspect of nature. In 1743, Benjamin Franklin formed the American Philosophical Society in Philadelphia. Men gathered at regular meetings to share scientific knowledge. Members included George Washington, John Adams, and Alexander Hamilton, as well as lawyers, ministers, and doctors. Physicians were often drawn to fossil discoveries. Because doctors must study comparative anatomy as part of their training, they understand how skeletons are structured. Doctors contributed to the identification of unknown animals.

We know many prehistoric fossils were found during Jefferson’s time, but where are the *dinosaur* bones? At an American Philosophical Society meeting in 1787, Timothy Matlack told of an enormous thigh bone he found in New Jersey. The bone was much larger than the largest mastodon femur. Matlack’s find was most likely the first dinosaur fossil discovered by a European in America. In 1842, British scientist Richard Owen coined the word *dinosaur*, meaning “terrible lizards,” after strange bones had been unearthed in England. In 1858, William Foulke found a nearly complete dinosaur skeleton in Haddonfield, New Jersey. <https://www.foulke.org/history/essays/dinosaur.shtml>

**For Students to Consider:** According to the website below, the most dinosaur fossils have been found in Colorado, Idaho, Montana, Utah, Wyoming, Texas, Oklahoma, New Mexico and Arizona. Locate those states on a map. What do the western and southwestern states have in common? Are they wet and green like the south and east? Or are they dry and rocky? How would weather and terrain help preserve fossils for millions of years? <https://www.sciencing.com/in-which-states-are-dinosaur-fossils-found-12745564.html>

## Geography Connections:

Map of territory covered by the Lewis and Clark Expedition, 1804 - 1806. They followed the Missouri River to its source, then pushed on to the Pacific Ocean.



*Bones in the White House* is set in post-Revolutionary War America. Let students locate on a map the states of Virginia, Kentucky, Pennsylvania, New York, and the cities of Philadelphia and Washington, D.C. Where is Big Bone Lick in Kentucky? Where is the home of Jefferson, Monticello? On a different map, follow Lewis and Clark's journey through the United States. Where did the expedition begin? Where did it end?

- Big Bone Lick Historic Site  
<https://parks.ky.gov/parks/historicsites/big-bone-lick/>
- Thomas Jefferson's Monticello  
<https://www.monticello.org>
- Lewis and Clark National Historic Trail  
<https://www.nps.gov/lecl/index.htm>

How did explorers find their way through the wilderness? They didn't have GPS (Global Positioning Systems). They often didn't have maps. They charted the position of the sun and, at night, the stars. They used compasses to find north. They paid attention to their surroundings and remembered rivers, creeks, hills, and other landmarks. Lewis and Clark made their own maps as they traveled west.

<https://edgate.com/lewisandclark/>

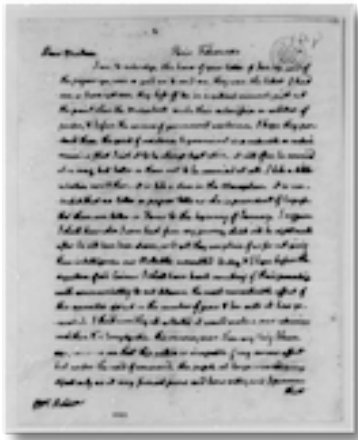
Bring in a compass. Explain to your students about Earth's magnetic north pole, which is why the needle points north. Identify the different parts of the compass. Let students take turns holding the compass flat in front of them. Help them understand how to set a bearing on a paper map. Mention that even without a compass, you can find north by the position of the sun (or stars) and the fact (though not always) moss and lichen often grow on the north side of trees.



**Student Activity:** Imagine you are lost in a forest and you need to be back home before dark. How will you find your way? Make a list of landmarks you noticed as you walked through the forest. Draw a map of the forest showing those landmarks. Then write about your adventure!

Replica of compass used by Lewis and Clark on the expedition.





## Writing Connections:

Letter from Thomas Jefferson to Abigail Adams, written in 17867.  
Source: Library of Congress

“Were it possible to get a tooth, it would particularly oblige me,” Thomas Jefferson wrote, asking George Rogers Clark to find fossils for him in Big Bone Lick, Kentucky. In Jefferson’s time, people communicated by writing letters. They had no cellphones. Or computers. They couldn’t send text messages or emails.

Jefferson wrote many letters every day. He made copies of his correspondence from 1785 onward. At first he used a letterpress. He pressed a thin, moist sheet of paper against his original. Those copies were often blurry. The letter above to Abigail Adams is a letterpress copy. Later he used a polygraph machine, in which the writer’s hand moves one pen while a second pen duplicates the movements, producing a copy. Jefferson’s letters tell us what he was thinking and how he lived his life. Without those copies (and original letters), we wouldn’t know as much about him. You can read some of Jefferson’s letters (more than 20,000!) on the Founders Online website.

<https://founders.archive.gov>

Discuss the importance of letter writing. Demonstrate the parts of a letter: Heading (address and date), Body of Letter, Closing (signature). Review the beginning of *Bones in the White House*. Traders and trappers and surveyors came back from the Kentucky territory with stories of gigantic bones and even carried fossils from Big Bone Lick. If they had never seen such things before, how would they react?

## Student Activity:

Imagine you have stumbled on the bone pit at Big Bone Lick. What would you think about all those huge rib bones, thigh bones, tusks, teeth, and backbones just lying on the ground? How would you describe that sight? Write a letter back home to a friend or a relative and tell your amazing story. Use lots of descriptive words to explain something no one has ever seen before.

# Science Connections:

Ice Age dig in late 1970s, Saltville, Virginia. Photo by Candice Ransom.



Big Bone Lick in Kentucky isn't the only place where prehistoric fossils have been found in the United States. In California, the La Brea Tar Pits, right in the middle of Los Angeles, are still being excavated. More than 3.5 *million* Ice Age fossils have been found there!

In Saltville, Virginia, mastodons, giant beavers, short-faced bears, musk ox, and other animals have been found in salt marshes common in the area. Additional Ice Age sites are in Colorado, South Dakota, Utah, Michigan, and Ohio. New sites are being discovered every day.

- California  
<https://tarpits.org>
- Colorado  
<https://www.earthmagazine.org/article/snowmastodon-project-mammoths-and-mastodons-lived-high-life-colorado>
- South Dakota  
<https://www.mammothsite.org>
- Utah  
<https://geology.utah.gov/popular/general-geology/ice-age/ice-age-animals-of-utah/>
- Michigan  
<https://lsa.umich.edu/ummnh/visitors/exhibits/on-the-trail-of-mastodons.html>
- Ohio  
[https://ohiohistorycentral.org/w/Mammal\\_Fossils](https://ohiohistorycentral.org/w/Mammal_Fossils)
- Virginia  
<http://moma.smythchamber.org/ice-age-history/>

Show pictures of woolly mammoths and mastodons. Ask students how the animals are different. How do they compare to today's modern elephants?

Have students research the Ice Age. Why were there so many huge mammals, called *megafauna*? What could have caused them to grow so big? What kind of plant life existed then? Were humans around? Let each student choose a different prehistoric animal and write about it. Let them share their reports with the class.





## Interdisciplinary Connections:

Mastodon skeleton with model of the animal.  
American Museum of Natural History, New York.  
Photo by Candice Ransom.

What would a mastodon footprint look like? How big would it be? Has anyone ever seen the footprints of this extinct animal? Yes! Near Saline, Michigan, a farmer was digging a new pond in his pasture when he came upon mastodon bones. A paleontologist checked the site and found a trail of mastodon footprints. Not fossils of footprints, but the *actual* footprints!

- Read about the discovery here:  
<https://blogs.lib.msu.edu/red-tape/2017/aug/august-25-1992-new-york-times-reports-discovery-saline-michigan-mastodon-trail>
- See photo of the footprints here:  
<https://michio1.blogspot.com/2013/09/salines-record-breaking-mastodon-trail.html>

Have students refer to the above websites. Using the footprint measurements from the first website and the photo in the second website showing the mastodon trail, let students draw mastodon footprints on construction paper and cut them out. Tape the mastodon footprint “trail” to a wall.

# Deeper Connections:

## Jefferson's Timeline

**April 13, 1743:** Born at Shadwell, Virginia  
**1758 - 1759:** Attends James Maury's school  
**1760 - 1762:** Attends College of William and Mary  
**1768:** Delegate to House of Burgesses  
**1775:** Delegate to Continental Congress; Revolutionary War begins  
**1776:** Drafts Declaration of Independence  
**1779 - 1781:** Governor of Virginia; Revolutionary War ends  
**1780:** Begins work on *Notes on the State of Virginia*  
**1783:** Delegate to Congress  
**1784 - 1789:** Minister and Commissioner, sent to France  
**1790 - 1793:** Secretary of State under President George Washington  
**1796:** Writes "Memoir of the Megalonyx"  
**1797:** Vice President of the United States  
**1801:** Third president of the United States  
**1803:** Obtained land known as the Louisiana Purchase  
**1804 - 1806:** Lewis and Clark Expedition  
**1805:** Second term as president of the United States  
**1809:** Does not seek third presidential term, retires from public life  
**1825:** University of Virginia opens  
**July 4, 1826:** Dies at Monticello, Virginia

Give students a copy of Jefferson's Timeline and let them study it (note that the timeline does not contain his personal life). As they review the Timeline, ask student what they notice about his life. Was he a busy man?

Remind them that Jefferson never found a prehistoric fossil himself, or went to Big Bone Lick in Kentucky, or Masten's farm in New York to dig fossils. When Charles Willson Peale's mastodon skeleton was displayed in the American Philosophical Building, Jefferson was invited to Philadelphia to a special opening event. He couldn't attend because of his presidential duties in Washington, D.C.

Discuss how Jefferson devoted most of his life to helping to establish and serve the new United States of America. Transition the discussion toward the students' personal disappointments. Is there some place they wanted to go or something they wanted to do but couldn't? Ask them why and how they handled the situation. What would they do differently?



## Interview with the Author: Candice Ransom

The author in her library with her cat Winchester.

**Q: How did you come to write BONES IN THE WHITE HOUSE?**

**Candice Ransom:** Years ago, I read an adult book called *Big Bone Lick: The Cradle of American Paleontology*, about an amazing fossil site in Kentucky where the earliest European settlers came upon giant bones of mysterious animals. We know them as mammals from the Ice Age.

**Q: Did you learn anything surprising while you were researching the book?**

**Candice Ransom:** I was surprised when I walked into the Jefferson Library in Charlottesville, Virginia. I thought I could read Jefferson's original letters and journals. But I quickly learned that Jefferson's massive collection of letters and documents are in 900 different libraries and research collections around the world.

Fortunately, people have been translating Jefferson's handwritten papers into books and online. This project began in 1943 and isn't finished yet. Founders Online, a National Archives website, allows public access to the letters of George Washington, Benjamin Franklin, John Adams, Alexander Hamilton, James Madison, and Thomas Jefferson. I photocopied 150 of those letters, all regarding the mastodon or fossils, for my research.

**Q: Did you do a lot of Internet research for this book?**

**Candice Ransom:** The Internet is a good place to start, but I mostly rely on books and primary sources. Then Internet helped me figure out where I'd find them. I visited university libraries and the Jefferson Library (several times).

## Interview with author Candice Ransom, continued:

The author's first grade school picture. She wanted to learn to read on the first day of school, but did not learn to read until second grade.



I went to Philadelphia to the American Philosophical Society to view a special exhibit of Jefferson artifacts and to interview a Jefferson expert. I also traveled to Saltville, Virginia, to see Ice Age dig sites and mastodon bones in the Museum of Middle Appalachia. I went to New York City to study mastodon and mammoth skeletons at the American Museum of Natural History. I also went to Monticello, Jefferson's home, several times.

**Q: Did you read a lot of nonfiction when you were in elementary school?**

**Candice Ransom:** I loved nonfiction (and still do)! I read books about stars and birds, rocks and dinosaurs. I must have checked out *All About Dinosaurs* from my school library a dozen times!

**Q: Do you have any advice for young writers?**

**Candice Ransom:** I started writing for fun when I was seven. To me, reading books and writing stories naturally went together. I loved to do both. Also, my family likes to tell stories about the “olden days.” So I’ve always been surrounded by stories. How do you begin? Grab an idea and write it down. Then words will lead to more words, then sentences, and then paragraphs. Keep reading! I am never without a book. I keep books in my truck, in every room of the house (even the bathroom), and I even read in movie theaters before the movie starts.

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