

# Discovery Guide

## Bones in our backyard: Discovering the Bristle Mammoth

Grades K-2

### Welcome to the University of Michigan Museum of Natural History!

These guides are intended to focus student attention and start conversations about topics in natural history.

#### Pre-visit tips

Please make copies of this guide for your students before coming to the museum. This will ensure that the proper number of guides are available for your group.

Bring pencils and clip boards or notebooks to write on.

Please divide your students into groups of about 5 to 10 students.

Provide the chaperones with a copy of the answer guide(s).

#### While Visiting

**Encourage questions!** If you cannot find the answer, ask the student host.

**Encourage touch!** Children learn best when as many senses as possible are engaged in the learning process. Please look at, listen to, and even touch items that are not behind barriers.

**Encourage discovery!** Remind students that it is not a race but an adventure of discovery.



#### In the Classroom

The following questions and prompts are designed to promote in-classroom discussion and writing across the curriculum.

1. Have your students create a KWL chart. After a brief discussion introducing prehistoric life in Michigan, have students list what they know about prehistoric life, including what they know about mammoths and mastodons. Then have students list what they want to know. After your visit, have your students list what they learned.
2. Discuss adaptive differences between plant and meat eaters. Consider characteristics of teeth, body shape, eye placement, etc. Different animals need different things. This is a good way to start a discussion on categories of animals, and what animals use their different features for.

#### Questions?

Please visit our website at [www.ummnh.org](http://www.ummnh.org) or call us at **734.764.0480**.

# Answer Guide

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1. Mammoths were very large, one of the largest animals walking the Earth while they were alive. This mammoth is estimated to have been about **13 feet tall** and weighed around 12,000 pounds.
2. Answers may vary. A mammoth's landscape should include mostly grassy areas with some wildflowers and short plants. This type of landscape would have been formed right after the glaciers receded and before trees had a chance to grow. There would be few, if any, trees.
3. The Bristle Mammoth skeleton is missing all four of its legs (including its toes). Our researchers only found the spine, parts of the pelvis, the **skull**, and **tusks**. The lack of limbs suggest that ancient humans would have ate its meat. We found **55 complete and partial bones** in total.
4. The jaw is found in the center display case on the side closest to the head/tusk display. Bristle had large molars- one on each side of the jaw, that were flat with ridges, used to grind **plants like grass and wildflowers**. We can determine the age of a mammoth at death by determining how worn down its molars are.
5. We can tell by the size and the shape of its tusks and bones that this mammoth was a **male**. Mammoths are related to **mastodons** and present-day **elephants**. Even though they lived a long time ago and are now extinct, they are not dinosaurs. Dinosaurs lived 64 million years before mammoths.

6. Mammoths lived in a landscape with a lot of grass and wildflowers for them to eat. They would have lived near water so they could drink and during the post-glacial period there was a lot of water around. Other animals that lived at the same time as them include **sabertooth cats** and **mastodons**.
7. Some helpful tools students could draw include rocks to smash the bones, knives to cut the meat, etc.
8. **No, the teeth are not the same-** mammoths' teeth are flat with ridges, while mastodons' teeth have cusps. **Yes, they both ate plants**, but mammoths ate plants like grass and wildflowers and mastodons ate plants like branches and shrubs. **Yes, both animals had tusks**, but the mammoth's tusks have more of a curve to them. **The mammoth was the taller animal.**
9. Some differences between the drawings of mastodons and mammoths would be that mammoths were taller with skinnier legs and had a more curved tusk. Mastodons would have been shorter with thicker legs and a more straight tusk.