

Museums and Thinking Skills

A Guide for Parents and Teachers from the Texas Memorial Museum

What is a Museum?

Museums have artifacts and scientific specimens that are the “real thing.” They share and interpret objects in their collections by putting them on exhibit. Natural history museums teach us about the history of our world through natural objects, like fossils and animals. They also challenge us to consider what implications these specimens and evidence teach us about our future.

The Texas Memorial Museum maintains collections of over 5 million objects, from fishes to fossils. Chartered by the Texas State Legislature in 1935, the Museum serves the public by preserving, studying, and interpreting the natural heritage of Texas. Hours are Mon.-Fri. 9-5, Sat. 10-5, and Sun. 1-5, with *free admission* every day. The Museum is located at 2400 Trinity Street, on the UT-Austin campus. For more information call (512) 471-1604, or visit us online at www.texasmemorialmuseum.org.



How to Visit the Museum

In a museum careful observation of the objects can stimulate critical thinking skills such as comparing and contrasting, identifying and classifying, describing, predicting, and summarizing. It helps to remember that children learn more at museums when they know what to expect before they visit. Tell them where they are going and what they will see, as well as specific information like whether they will visit the gift shop and when they will eat.

Most museums have gallery guides to help guide you through the museum. Some may have activity guides that contain activities for before and after your museum visit. Before you visit talk about the museum and complete one of the suggested activities at home. You can get free curriculum guides and lessons with those kinds of questions and activities from the Texas Memorial Museum website: www.texasmemorialmuseum.org/education.

Provide your children with a task during the visit, and they'll be more focused on learning. As your children explore the exhibit, encourage them to think about how the objects remind them of things from their own lives. Follow your visit with discussions of what you saw and another activity. With some good planning, your children will enjoy themselves, and use some good thinking skills – good practice for tests like the TAKS!

Questions to Ask (Hidden in TAKS and TEKS objectives!)

Assist your children by listening carefully to their questions about museum objects and discussing it with them in the gallery. Lead the discussions with questions that will allow them to think critically about the specimens. Below are some suggested questions you could discuss.

Analyzing by sequencing and categorizing

- How did environmental change influence where different cultures lived?
- What is it made of?
- What is the condition of the specimen?
- How was it used and does it show wear?
- How many birds do you see?
- Which is older, the Pterosaur or *Edaphosaurus*?

Making generalizations and predictions

- How did climate changes affect life on Earth?
- Describe what Central Texas looked like during the Cretaceous period.
- What words would you use to describe this specimen?
- What will happen...?

Identifying cause-and-effect relationships

- How did sharp teeth help *T. rex*?
- How is the Barton Springs salamander affected by humans?
- What happened to the dinosaurs?
- What would happen if...?

Finding a main idea

- What is a fossil?
- Is it real?
- A good name for this is ...
- The purpose of this exhibit is...
- What is it made of?

Comparing and contrasting

- How is mammal fur like your winter coat?
- How are these fossils similar?
- What are some differences between the animals?
- How are these two specimens the same?
- How are those specimens different?

Math skills

- Make timelines of different time periods or living things from Earth's history.
- Create a map of the different natural regions of Texas.
- Draw a map and compute the miles traveled to the museum.
- Construct a table and compare three kinds of fossils from the museum.

Summarizing

- What do you learn from this exhibit?
- What is the story of this room?
- Write a brief summary of your favorite specimen in the museum.

Drawing inferences and conclusions

- How is the Mosasaur adapted for an ocean environment?
- Where does that animal live?
- How is mammal fur like your winter coat?
- What other things serve the same purpose?
- Imagine how the dinosaurs lived.
- How do fossil shells teach us about modern day animals?
- How was life different when oceans covered parts of North America?
- How are the Mosasaur and Plesiosaur similar?
- How does it work?
- What does this remind you of?
- What do you think will happen if ...?
- What if ...?

Writing for a specific purpose, including persuasion

- Write stories about the animals and environments they learned about.
- Write about personal memories from the day.
- Write a brief summary of their most memorable experience in the museum.
- Write about why museums collect.
- What words would you use to describe this specimen?
- Imagine that ...
- How does it make you feel?
- Write about why others should visit the museum.

Online Museum Resources

Education activities and resources

<http://www.texasmemorialmuseum.org/education>

Helpful Links

Museums and Learning – A Guide for Family Visits

US Department of Education, and the Smithsonian Office of Education

<http://www.ed.gov/pubs/Museum>

Helping Your Child Learn Science – US Department of Education

<http://www.ed.gov/pubs/parents/Science>

