



HOUSTON MUSEUM
of NATURAL SCIENCE

Texas Essential Knowledge and Skills

*MORIAN HALL OF
PALEONTOLOGY*

UPDATED JUNE 2025

Thank you for choosing the Houston Museum of Natural Science for your class field trip. We are delighted to have the opportunity to enrich your students' learning experience. To simplify planning your trip, we have provided the Texas Essential Knowledge and Skills (TEKS) for the *Morian Hall of Paleontology* by grade level, updated to reflect the 2025 standards. This resource is designed to help you align your trip with your curriculum, ensuring your visit is educational and enjoyable.

We look forward to welcoming you and your students for an unforgettable journey through the wonders of discovery.

For help with high school TEKS, please email curriculum@hmns.org.

Kindergarten

Science

Structure and Function K.5.F

Describe the relationship between the structure and function of objects, organisms, and systems.

Students observe dinosaur skeletons and compare key features such as leg position and hip structure to understand how these adaptations helped dinosaurs survive in their environments.

Stability and Change K.5.G

Describe how factors or conditions can cause objects, organisms, and systems to either change or stay the same.

Students learn about the extinction event that ended the age of dinosaurs and discuss how dramatic changes in Earth's environment can affect living things.

Organisms and Environment K.13.B

Identify different structures that animals have that allow them to interact with their environment such as seeing, hearing, moving, and grasping objects.

Students examine bones, skulls, and teeth to discover how prehistoric animals sensed, moved, and interacted with their world.

1st Grade

Science

Structure and Function 1.5.F

Describe the relationship between structure and function of objects, organisms, and systems.

Students observe fossil skeletons and discuss how features like legs and hips helped dinosaurs move and thrive.

Stability and Change 1.5.G

Describe how factors or conditions can cause objects, organisms, and systems to either change or stay the same.

Students explore the causes and effects of the Cretaceous-Paleogene extinction event and how it changed life on Earth.

Organisms and Environment 1.12.A

Classify living and nonliving things based upon whether they have basic needs and produce young.

Students examine fossils and trace evidence to distinguish between living organisms and nonliving things in the prehistoric past.

Organisms and Environment 1.12.C

Identify and illustrate how living organisms depend on each other through food chains.

Students use fossil displays to trace ancient food chains, identifying producers, herbivores, and carnivores.

Organisms and Environment 1.13.A

Identify the external structures of different animals and compare how those structures help different animals live, move, and meet basic needs for survival.

Students compare bones, skulls, teeth, and claws to understand how prehistoric animals survived in their environments.

2nd Grade

Science

Structure and Function 2.5.F

Describe the relationship between structure and function of objects, organisms, and systems.

Students compare dinosaur skeletons to identify how physical features supported survival.

Stability and Change 2.5.G

Describe how factors or conditions can cause objects, organisms, and systems to either change or stay the same.

Students learn about the asteroid impact that caused the extinction of the dinosaurs and discuss how environmental changes affect life.

Organisms and Environment 2.12.B

Create and describe food chains identifying producers and consumers to demonstrate how animals depend on other living things.

Students identify fossilized plants, herbivores, and carnivores to construct prehistoric food chains.

Organisms and Environment 2.13.B

Record and compare how the structures and behaviors of animals help them find and take in food, water, and air.

Students examine teeth, jaws, limbs, and claws to infer how prehistoric animals found food and survived.

3rd Grade**Science****Structure and Function 3.5.F**

Explain the relationship between the structure and function of objects, organisms, and systems.

Students analyze dinosaur skeletons and other fossils to see how adaptations supported survival.

Stability and Change 3.5.G

Explain how factors or conditions impact stability and change in objects, organisms, and systems.

Students study the K-Pg extinction and discuss how catastrophic events can change life on Earth.

Earth and Space 3.12.D

Identify fossils as evidence of past living organisms and environments, including common Texas fossils.

Students observe fossils and the surrounding rocks to learn about ancient environments.

Organisms and Environment 3.13.A

Explore and explain how external structures and functions of animals enable them to survive in their environment.

Students compare fossil adaptations, such as long necks or specialized teeth, to those of modern animals.

4th Grade

Science

Structure and Function 4.5.F

Explain the relationship between the structure and function of objects, organisms, and systems.

Students study dinosaur and prehistoric animal fossils to understand how body structures supported different ways of life.

Stability and Change 4.5.G

Explain how factors or conditions impact stability and change in objects, organisms, and systems.

Students discuss the causes and effects of mass extinction events and how they change ecosystems.

Earth and Space 4.12.C

Identify and describe past environments based on fossil evidence, including common Texas fossils.

Students analyze sediment and rock types associated with fossils to reconstruct ancient habitats.

Organisms and Environment 4.13.B

Differentiate between inherited and acquired physical traits of organisms.

Students examine trilobite and dinosaur fossils to identify traits passed from one generation to the next.

5th Grade

Science

Structure and Function 5.5.F

Explain the relationship between the structure and function of objects, organisms, and systems.

Students compare features of dinosaur skeletons and other fossils to understand how adaptations supported survival.

Stability and Change 5.5.G

Explain how factors or conditions impact stability and change in objects, organisms, and systems.

Students study the K-Pg extinction and discuss how environmental changes can lead to extinction or survival.

Organisms and Environment 5.12.A

Observe and describe how a variety of organisms survive by interacting with biotic and abiotic factors in a healthy ecosystem.

Students explore fossils to identify ancient plants, animals, and trace fossils, and infer their roles in prehistoric ecosystems.

Organisms and Environment 5.13.A

Analyze the structures and functions of different species to identify how organisms survive in the same environment.

Students compare fossils of different species from the same time period to understand how each adapted to its environment.

6th Grade**Science****Structure and Function 6.5.F**

Analyze and explain the complementary relationship between the structure and function of objects, organisms, and systems.

Students observe and compare dinosaur and prehistoric animal fossils to understand how body structures supported survival and adaptation.

Stability and Change 6.5.G

Analyze and explain how factors or conditions impact stability and change in objects, organisms, and systems.

Students examine evidence of mass extinctions and discuss how environmental changes affected prehistoric life.

Organisms and Environment 6.12.B

Describe and give examples of predatory, competitive, and symbiotic relationships between organisms, including mutualism, parasitism, and commensalism.

Students identify fossils showing evidence of predation, competition, or symbiosis, and discuss how these relationships shaped ancient ecosystems.

7th Grade

Science

Scientific and Engineering Practices 7.4.C

Research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a STEM field to investigate STEM careers.

Students learn about careers in paleontology, geology, biology, and related fields by exploring the museum's exhibits and resources.

Structure and Function 7.5.F

Analyze and explain the complementary relationship between structure and function of objects, organisms, and systems.

Students compare dinosaur and prehistoric animal fossils to understand how body structures supported survival.

Stability and Change 7.5.G

Analyze and explain how factors or conditions impact stability and change in objects, organisms, and systems.

Students study the causes and effects of the K-Pg extinction and discuss how environmental changes can lead to extinction or adaptation.

Earth and Space 7.10.A

Describe the evidence that supports that Earth has changed over time, including fossil evidence, plate tectonics, and superposition.

Students examine fossil specimens and stratigraphic displays to understand how life and Earth's surface have changed over millions of years.

8th Grade

Science

Structure and Function 8.5.F

Analyze and explain the complementary relationship between structure and function of objects, organisms, and systems.

Students observe and compare fossil specimens to understand how adaptations supported survival in ancient environments.

Stability and Change 8.5.G

Analyze and explain how factors or conditions impact stability and change in objects, organisms, and systems.

Students learn about the K-Pg extinction and discuss how environmental changes can affect the survival of species.

Organisms and Environment 8.12.C

Describe how biodiversity contributes to the stability and sustainability of an ecosystem and the health of the organisms within the ecosystem.

Students examine fossil evidence to understand how diverse ancient ecosystems were more resilient to change.

Organisms and Environment 8.13.C

Describe how variations of traits within a population lead to structural, behavioral, and physiological adaptations that influence the likelihood of survival and reproductive success of a species over generations.

Students compare fossil traits across species and time periods to see how adaptations improved survival.

High School

Biology

Scientific and Engineering Practices BIO.1

Students focus on patterns, processes, and relationships of living organisms through biological structures, functions, genetics, evolution, and environmental systems.

Students use fossil evidence to identify patterns and processes in evolution and adaptation.

Scientific and Engineering Practices BIO.4.C

Research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a STEM field to investigate STEM careers.

Students explore paleontology and related STEM careers through museum exhibits and resources.

Biological Evolution BIO.9.A

Analyze and evaluate how evidence of common ancestry among groups is provided by the fossil record, biogeography, and homologies, including anatomical, molecular, and developmental.

Students compare fossils to identify evolutionary patterns and relationships.

Biological Evolution BIO.9.B

Examine scientific explanations for varying rates of change such as gradualism, abrupt appearance, and stasis in the fossil record.

Students analyze fossils from different time periods to identify patterns of evolutionary change.

Interdependence BIO.13.A

Investigate and evaluate how ecological relationships, including predation, parasitism, commensalism, mutualism, and competition, influence ecosystem stability.

Students use fossil evidence to identify and discuss ecological relationships in ancient ecosystems.