



4th Grade Course Offerings

Adapt to Survive ♦

Students will learn about physical and behavioral adaptations that enable animals to live in many diverse Texas ecosystems. Students will explore which animals live in their neighborhood and understand the adaptations that allow those animals to survive in their urban backyard! Various taxidermy specimens, skulls, shells, and other objects will be used to engage students in a lively discussion for this program.

Duration: Standard 50-minute Classroom Program

Class Size: 15-60 students at MNS, 15-30 students at your school

Available at MNS or your school

TEKS: 4th Grade: 1b, 2abf, 3ad, 4a, 9abc, 10ab

Air and Weather 🌍

In this program, students will explore the water cycle and discover the many types of weather. A Van der Graff generator will provide kids with the “shocking” facts about lightning. Your students will also learn how clouds are formed and the explosive power of tornadoes. Hands-on experiments will demonstrate air pressure and student volunteers will be asked to join our educator ‘on stage’ as an assistant meteorologist.

Duration: Standard 50-minute Classroom Program

Class Size: 15-60 students

Available at MNS only

TEKS: 4th Grade: 1a, 2a, 3acd, 4ab, 5ab, 8b

CSI: Diamond Heist ✂

A diamond necklace was stolen! Who had the motive and opportunity? Your students will become forensic scientists and use fingerprints, footprint identification, fragment analysis and other critical deductive reasoning skills to solve the crime.

Duration: Standard 50-minute Classroom Program

Class Size: 15-30 students

Available at MNS or your school

TEKS: 4th Grade: 2adef, 3a, 4a

CSI: Dog-napping ✂

Someone has taken the dog show champion, Manny, from his dog kennel and is holding him for ransom. The dog-napping happened the night after his 1st place win in the North Texas Dog Show, where he won a \$50,000 prize and a trophy. The dog-napper is demanding the \$50,000 prize and the trophy in exchange for the dog's safe return! We need your students to help us solve this crime through deductive reasoning by analyzing hair and DNA samples to figure out which of four suspects is the guilty party!

Duration: Standard 50-minute Classroom Program

Class Size: 15-30 students

Available at MNS only

TEKS: 4th Grade: 2adef, 3a, 4a

CSI: Mystery Dot ✂

Mrs. Parker, the 6th grade English teacher, knows someone looked at her grade book while she was out of the room. There was a small black smudge that she knew wasn't there before – and she needs to know who left it there! Students will learn about matter and mixtures while using paper chromatography to solve the mystery and determine exactly who looked in Mrs. Parker's book. Was it Laura, Stacey, Derek or Paul? Only you will know!

Duration: Standard 50-minute Classroom Program

Class size: 15 – 30 students

Available at MNS or your school

TEKS: 4th Grade: 1a, 2abcdef, 3a, 4a, 5ac

Electric Theater ✂

Explore the world of electricity and magnetism through this exciting (and “shockingly” cool) demonstration led by one of our educators. Student volunteers will join our presenter on stage to demonstrate the workings of Van der Graff generators, electromagnets, step-down transformers, Tesla coils and more!

Duration: 50 minutes

Class Size: 15-175 students at MNS, 30–250 as outreach

Available at MNS or your school

TEKS: 4th Grade: 2ab, 3a, 4a, 6ab

Exploring the Past: The Archaeology of Texas 🌐

Imagine a world with no supermarkets, restaurants or electricity! Discover how the first naturalists survived in Texas thousands of years ago using their extensive knowledge of our natural resources. Realistic replicas of American Indian artifacts including clothing, tools, food sources and instruments will be shown and discussed in this hands-on interactive program.

Duration: Standard 50-minute Classroom Program

Class Size: 15-30 students

Available at MNS or your school

TEKS: 4th Grade: 2f, 3ad, 10a

Farming for Fuel ♠

In this hands-on, center based program, students will conduct experiments to understand the carbon cycle as well as how biofuels made from non-food plants are appropriate for transportation. Students will use these inquiry-based activities to understand the balance of energy on our planet and ways to improve and maintain that balance through the use and

production of biofuels. This program is made possible by a grant from the U.S. Department of Energy and the BioEnergy Science Center in Oak Ridge, Tennessee.

Duration: Standard 50-minute classroom program

Class Size: 15-30 students

Available at MNS or your school

TEKS: 4th grade: 1ab, 2abcd, 3acd, 4ab, 5ab

Fire and Ice ✂

This explosively entertaining program teaches about the states of matter in a unique way. Student volunteers help the presenter explore how temperature affects matter. Both physical and chemical changes are demonstrated using fire and liquid nitrogen.

Duration: 50 minutes

Class Size: 15-175 students at MNS, 30–250 at your school

Available at MNS or at your school

TEKS: 4th Grade: 1a, 2ab, 3a, 4ab, 5ab, 6a

Fossils: Clues to the Distant Past 🌐

Follow the eras of geologic time from trilobites to dinosaurs to mammals with authentic fossils and casts. Students will learn the steps in fossilization, what materials most often fossilize, and what fossils can reveal.

Duration: Standard 50-minute Classroom Program

Class Size: 15-30 students

Available at MNS or your school

TEKS: 4th Grade: 2adf, 3ad, 10a

LEGOs®: Simple Machines ✂

In this hands-on array of guided activities, students will learn all about simple machines and what makes them...not always so simple. By building with LEGO® blocks to construct levers, fulcrums and other machines your kids will walk away with a stronger understanding of what 'mechanical advantage' really means!

Duration: Standard 50-minute Classroom Program

Class Size: 15-30 students

Available at MNS or your school

TEKS: 4th Grade: 1a, 2af, 6ad

Look Out: The Eye 🦋

Discover the inner workings of the eye and vision. By dissecting a cow eye, students will see how an eye works. Comparing cow and human eyes will provide "insight" into differences and similarities among species. This program is customized for each grade level and is adapted to meet your class needs.

Duration: Premium 50-minute Classroom Program

Class Size: 15-30 students

Available at MNS or your school

TEKS: 4th Grade: 1a, 2a, 3a, 4ab

Measure Up to the Mavs ⌘

How do basketball players launch three-pointers? Are there machines and physics on the basketball court? In this program, students will build wooden catapults and shoot miniature basketballs at a goal...all in the name of helping them understand energy, mechanics and the three classes of levers. By analyzing their distance data and using what they learn from these simple machines, they'll be able to compare catapults to the structure of a human arm to find out just what makes the Mavs so great!

Duration: Standard 50-minute Classroom Program

Class size: 15 – 25 students

Available at MNS or your school

TEKS: 4th Grade: 1a, 2bcdf, 3ac, 4ab, 6a

Mineral Mystery 🕵️

It's the case of the imposter mineral – or is it? Students will become detectives and solve this Mineral Mystery by delving into a locked box, tricky riddles and clever codes, and precious metals and gems to uncover the truth about precious metals and gems. Once they have broken the code they will identify minerals by the properties of hardness, streak, color and fluorescence to determine if the treasure is real or fake.

Duration: Standard 50-minute Classroom Program

Class Size: 15-30 students

Available at MNS only

TEKS: 4th Grade: 1a, 2adef, 3a, 4a, 5a

Moments in Time: An Archaeological Investigation ⌘

Students will work as archaeological “lab techs” to interpret the history and meaning of artifacts covering 12, 000 years of human life from a site near Texas A&M University. The hands-on analysis of the artifacts will allow them to explore human technological advances through time.

Duration: Standard 50-minute Classroom Program

Class Size: 15-30 students

Available at MNS or your school

TEKS: 4th Grade: 2f, 3ad, 4a, 10a

Pump Up: The Heart 💓

Explore the fascinating world of the heart through this hands-on guided dissection of a pig heart! Students will have an up-close encounter with real hearts as they learn about heart structure and function as well as the need to stay healthy. If you want students to learn about their heart, this program can't be “beat”! This program is customized for each grade level and is adapted to meet your class needs.

Duration: Premium 50-minute Classroom Program

Class Size: 15-30 students

Available at MNS or your school

TEKS: 4th Grade: 1a, 2a, 3a, 4ab

Rockin' Through Texas 🌐

Discover the earth through its geologic past. In this program the rock cycle is taught and the students will have hands on experience identifying the different types of rocks: metamorphic, igneous, and sedimentary. Students will have the opportunity to examine the differences between rocks and minerals. This program also includes a close look at the geology of Texas with its many land formations and the effect on the flora and fauna of the state and fossil fuel resources.

Duration: Standard 50-minute Classroom Program

Class Size: 15-30 students

Available at MNS only

TEKS: 4th Grade: 1a, 2af, 3ac, 7bc

StarLab 🌐

We will bring the stars to you with our state-of-the-art digital portable planetarium. Students will be guided through their discovery of constellations to the immense size of the universe. They will explore star movement, color and brightness, and learn how to locate stars and constellations. This program is well suited for both cultural and scientific studies.

Duration: 50 minutes

Attendance: 10 - 30 students (depending on students' age)

Requirements: large air-conditioned indoor room with dimensions of at least 25 ft. X 25 ft and 13 ft. overhead clearance; 110 V electric outlet

Available at your school only

TEKS: 4th Grade: 1a, 2af, 3acd, 8c

Texas Ecosystems ♣️

Take close-up look at the state's diverse ecosystems ranging from shoreline to forests and mountains. Emphasis will be on the Blackland Prairie, considered the most endangered large ecosystem in North America. Why should we care about this important piece of land and what can we do to protect it? Come and find out. The Museum's original dioramas will help students understand how this land once looked and serve as a comparison for today's modern world.

Duration: Standard 50-minute Classroom Program

Class Size: 15-60 students

Available at MNS only

TEKS: 4th Grade: 1b, 2b, 3a, 4a, 7c, 9ab

Urban Nature Walk ♣️

Join one of the Museum Naturalist for a guided walk in our own backyard! With the aid of field guides and binoculars, students will identify and learn about urban wildlife, explore various habitats and learn about the diversity of life within the confines of the Metroplex. This program can be adapted for all grades and helps to reinforce food webs, pond ecology, adaptations and biodiversity. The nature walk is available any season, please dress accordingly.

Duration: Standard 50-minute outdoor program

Class Size: up to 25 students

Available at MNS only

TEKS: 4th Grade: 1a, 4a, 9ac

Water Cycle: Basics of Life ♦

Explore the water cycle like never before!! Your students will become citizen scientist and collect real data used in monitoring the water quality of the Trinity River watershed. Hands on experiments will include measuring water transparency, dissolved oxygen, pH and water temperature. Learn how to become better stewards of our most precious resource by discussing how humans affect the urban water cycle in our own backyards.

Duration: Premium 50-minute Classroom Program

Class Size: 15-30 students

Available at MNS only

TEKS: 4th Grade: 1ab, 2ad, 3a, 4a, 7bc, 8b