TENNESSEE SCIENCE ALLIANCE
The Museum of Science & History Pink Palace receives funding from the State of Tennessee for the Tennessee Science Alliance program, providing instructor-led, museum-based science education for Tennessee students. Both the Governor and Legislature are involved in affirming the importance of science education efforts and promoting museums as valued partners with school systems across the state.

EDUCATIONAL STANDARDS ARE NOTED NEXT TO EACH PROGRAM.
Tennessee Science Standards 2018
Mississippi College and Career Readiness Standards for Science 2018
Arkansas K-8 Science Standards 2015
Tennessee Social Studies Standards 2019
Mississippi College and Career Readiness Standards for Social Studies 2019
Arkansas Social Studies Curriculum Framework 2014
A List of standards is on pages 34 - 35.

OPEN DOORS, OPEN MINDS
PROVIDES NO-COST ADMISSION FOR STUDENTS WHO QUALIFY
The Museum of Science & History Pink Palace believes students need to ‘see it to be it.’ To ensure no child is excluded from an entertaining and educational field trip, students who attend Title I schools in Tennessee receive select admission and programs at no cost to them. The following are provided at no cost through February 28, 2021: exhibits at the Museum of Science & History, shows in the AutoZone Dome Planetarium, tours at Mallory-Neely historic house, and Exploring Nature Your Way program at Lichterman Nature Center.
The classroom outreach program Suitcases is available for two-week free rentals during the entire academic year.

Title 1 students served 2019-2020: 128,821

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LETTER FROM THE DIRECTOR

Anyone else feeling a little crazed right now? Wow! We are all learning to do new things, and it’s such a bigger effort to serve less students! In the 2019 school year, we served over 205,000 students. Last year, that number was halved due to COVID, and this school year, we expect that number to be even lower. Like you, what we are doing is changing what we have been doing.

We must provide our students with an opportunity for experiential learning. Give them an experience that resonates in their soul, solidifies the education you provide, and plants an inspirational seed that stays with them through their life journey. We are working to serve as many students as possible in the 2020/2021 school year. I would really like to see those 2019 numbers again!

For the first time, we are offering virtual field trips either live or recorded. Covering science, history and nature, our team has worked hard over the summer to bring these programs to life.

We have asked for grant funds to expand our suitcase and passport program. Whether you are teaching in person or virtually, these programs can assist in demonstrating concepts to your students. And they will be deep cleaned upon return, because we think it makes a safer environment for you.

We have over 170,000 square feet of space at Central Avenue, and 65 acres at Lichterman Nature Center. We think our space makes for a safer environment for you and your students.

We are closing our museum on Mondays and Tuesdays this fall, but we are open to you. Our programming is available in person, and we think these two days will provide an even safer environment for your students.

Our theater and planetarium have significantly reduced seating capacity. Our 400 seat theater is now seating 50. Our 149 seat planetarium now seats 20. That’s about 13% of our normal capacity. We do this because we think it makes a safer environment for you and your students.

And lastly, if what we are doing is not working for you, then contact me at 901-636-2371 or kevin.thompson@memphistn.gov. We must work together this school year to inspire our students to go beyond their current dreams. We are in this with you, and we are committed to making it happen.

Thank you for your support over the years. We would not be where we are today without it. More than ever, we need that continued support. So please, spend some time with our ed guide and find a way to engage with us this school year.

Kevin Thompson
Executive Director, Museum of Science & History Pink Palace
VIRTUAL FIELD TRIPS, PINK PALACE MUSEUM

Each Virtual Field Trip will include: Link information to a recorded 30-45 minute lesson that includes demonstrations for your students or a live virtual field trip that will show at 9:30 am or 11:00 am. Please call to request other available times.

Prices and Materials:
- Recorded field trips will be $4.00 per student with a minimum of 10 students.
- Live field trips will be $6.00 per student with a minimum of 20 students.
- Materials will be included in the cost.

Call Reservations at 901-636-2362 to schedule your field trip. When booking a field trip, please allow us at least 3 business days before your scheduled virtual field trip. Materials will be delivered to schools in Shelby County before the scheduled virtual field trip. Schools outside of Shelby County will need to cover shipping costs of materials, or make arrangements to pick materials up at the Museum. You will receive the video link the day before the scheduled field trip.

MEMORABLE MEMPHIANS GALLERY TOUR
(Grades 3 - 8) RECORDED VIRTUAL FIELD TRIP ONLY, TIMELINE ACTIVITY SHEET
Contrast how the principles set forth in the Declaration of Independence clashed with the treatment of different groups including: Women, enslaved people, and Native Americans. Describe the effect of the Great Depression on Tennessee and the impact of the New Deal policies on the state. Hear the stories of eight Memorable Memphians who contributed to our city’s rich culture.

FUN WITH PHYSICAL SCIENCE
(Grades K - 8) ACTIVITY: RUNAWAY PEPPER (SURFACE TENSION)
Use household materials to explore the properties of matter including density, surface tension, and magnetism.

SOUND SCIENCE
(Grades K - 8) ACTIVITY: MAKE YOUR OWN KAZOO
Explore three requirements needed to create sound. See how a Slinky can demonstrate different types of waves. Find out how sound waves move through air and water. Learn how our ears interpret sound.

WEATHER WHYS
(Grades K - 8) ACTIVITY: MAKE A WIND VANE
Observe clouds and learn how weather measurement tools can predict the weather. Investigate air pressure while a miniature tornado forms. Learn what you can do to keep safe in floods, thunderstorms and tornadoes.

LEARNING LABELS
(Grades 4 - 8) ACTIVITY: DISSOLVING CARBS & MAKING A NUTRITION BRACELET
Proteins, carbohydrates, fats ~ oh my! Learn about nutrition labels and the nutrients in the foods we eat. After this virtual class, your students are bound to make healthy food choices!
VIRTUAL FIELD TRIPS, LICHTERMAN

Each Virtual Field Trip will include: Link information to a recorded 30-45 minute lesson that includes demonstrations for your students or a live virtual field trip that will show at 9:30 am or 11:00 am.

Prices and Materials:
- Recorded field trips will be $4.00 per student with a minimum of 10 students.
- Live field trips will be $6.00 per student with a minimum of 20 students.
- Materials are included in the cost.

Email the reservations desk at Nature.Reservations@memphistn.gov to schedule your field trip.

When booking a field trip, please allow us at least 3 business days before your scheduled virtual field trip. Materials will be delivered to schools in Shelby County before the scheduled virtual field trip. Schools outside of Shelby County will need to cover shipping costs of materials, or make arrangements to pick materials up at the Nature Center. You will receive the video link the day before the scheduled field trip.

FOREST HABITATS
(Grades K - 8) ACTIVITY: FUN WITH TREE COOKIES
Learn all about forest habitats of the Mid-South with a Lichterman Nature Center naturalist. Compare and contrast the different native animal and plant species living in different layers of the forested ecosystem. Meet a live Virginia Opossum, a forest dwelling mammal of the Mid-South.

MEADOW HABITATS
(Grades K - 8) ACTIVITY: CREATE YOUR OWN FOOD CHAIN
Ecological processes which take place in a native Mid-South meadow habitat are crucial for the survival of many native plant and animal species. With a Lichterman naturalist, learn all about seed dispersal, food chains and life cycles of animals living in a meadow habitat. Meet a live snake, a reptile often hunting in meadow habitats.

LAKE HABITATS
(Grades K - 8) ACTIVITY: 3-D Frog Life Cycle Project
An array of diverse animal and plant life exist in a Mid-South lake habitat. Explore the ways these species survive in and around the lake. Compare and contrast the life and survival strategies of these plant and animal species. Meet a live Red-eared slider turtle, a lake dwelling reptile, with a Lichterman naturalist.

AMPHIBIANS
(Grades K - 8) ACTIVITY: FROG JUMPOLYMPICS
Amphibians include an array of specialized animals using many life strategies to make it to adulthood for reproduction. Explore the differences and similarities of animals belonging to this group by studying characteristics, specialized adaptations, and life cycles of the many amphibians living in our world. Meet a live toad and spotted salamander up close with a Lichterman naturalist.
BIRDS
(Grades 4 - 8) Activity: CALL OF THE WILD!
Birds may not be the only animals that fly, but they are the only ones with feathers! Learn the parts of a feather and how the feather allows for precise flight. Compare and contrast feet, body shape, beaks, nest building and egg type to determine where the bird lives and what it eats. Differentiate among the very different survival strategies of an array of bird species with a Lichterman naturalist.

INSECTS VS ARACHNIDS
(Grades K - 8) Activity: STRENGTH IS IN THE SILK! BUILD A SPIDER WEB
There are more insects on Earth than any other family of animals. Explore the vast differences between insects and arachnids. Differentiate between adaptations of insects versus those of arachnids. Learn which insects and arachnids are native to the Mid-South and how each survives in the environment. Meet live insects and arachnids with a Lichterman naturalist.

MAMMALS
(Grades K - 8) Activity: HOW MANY BEARS CAN LIVE IN THESE WOODS?
Mammals are very different in their use of the environment but have distinct characteristics which only belong to this group of warm-blooded animals. Distinguish adaptations, camouflage techniques, diets, habitat requirements and movement style of the different mammals in this group. Follow along with a Lichterman naturalist to learn all about the life processes of mammals. Meet a live rabbit and Virginia opossum in this extensive look at the mammal world.

REPTILES
(Grades K - 8) Activity: FRUIT LOOP SNAKES
Reptiles are often the most misunderstood animal group with very distinctive characteristics. Compare and contrast the adaptations, life cycles and habitat needs of this diverse group. Learn how snakes use their senses in very different ways from any other animal group. Dispel some of the myths about this misunderstood group of scaly animals. Meet a live lizard, snake and Eastern box turtle, the state reptile of Tennessee with a Lichterman naturalist.
Driving new and interesting ways to digitally engage teachers, students and home schoolers, Museum to Go brings the museum to you. Museum to Go offers a variety of resources for educational curriculum including Curator’s Choice which highlights curator favorites, Activities at Home offering fun and educational experiments to do at home, and a deep dive blog A Closer Look. Museum to Go also includes digital tours, Tributaries podcast, and Explorers Challenge as well as Spanish versions of Curator’s Choice and Activities at Home.

**ACTIVITIES AT HOME**

How does gravity work? What causes an eclipse? Why does the Earth bulge at the equator? Activities at Home gives you the answers through eye-opening, jaw-dropping experiments that can be done with things around the house. Activities at Home offers intriguing, hands-on learning experiences for students curious about science, mechanics, biology and nature.

**A CLOSER LOOK BLOG**

A Closer Look takes a deep dive into topics such as Yellow Fever, Systemic Racism, Memphis Neighborhoods and more. It is a great educational tool for targeted studies.

**CURATOR’S CHOICE**

Parakeets on the Mississippi River, wooden hats, the International Space Station, Curator’s Choice has a little something for everyone. Space nut, history buff or nature lover, there is something to peak the interests of your students.

**DIGITAL TOURS**

Learn about animals in your neck of the woods, take a tour of an exhibit, learn more about how the Museum works. You can discover all this and more at Digital Tours in Museum to Go.

**TRIBUTARIES**

The more you listen, the more you learn when you tune in to the Museum’s podcast, Tributaries. The show examines where science and history converge, from the Yellow Fever epidemic, to why Memphis is called the Bluff City, to the geology that gave the Pink Palace its name. You’re invited to close your eyes, open your ears, and drift back into time.
EXPLORERS CHALLENGE

The Explorers Challenge includes experiments, scavenger hunts, crafts, and more which are bundled into individual Challenge packets. Each packet includes five intriguing, individual challenges for $10 to $15. Those who complete a challenge earn an explorer certificate for that subject. These challenges are excellent learning tools for school age students. All proceeds help to support programming at the Museum of Science & History Pink Palace. Explorers Challenges are available for purchase by phone at the Museum's Reservations, 901-636-2362, Wednesday - Saturday, 10:30 am - 5:30 pm or at brown paper tickets. Explorer Challenge Kits will come with materials for the activities and must be picked up from the Museum Store at 3050 Central Ave. Packets are downloadable with no extra materials.

Each completed challenge earns students an explorers certificate in that subject. Explorer Challenge topics below:

EXPLORER CHALLENGE KITS - MUST BE PICKED UP FROM MUSEUM STORE

Fun with Physical Science Kit - $15
Jump into science with this packet full of fun experiments. Students will learn about surface tension, air pressure, chemical reactions and more in this hands-on kit. Materials included.

DIY Engineering Kit - $15 (Available September)
Introduce your students to engineering with this packet. Students will learn how to make an instrument, build 3D structures, create their own lava lamp and more with this STEAM-inspired kit. Materials included.

Spooky Science Kit - $15 (Available October)
Let out your inner mad scientist with this packet of spooky experiments. Students will learn how to make non-Newtonian ooze, bring gummy worms to life, identify creatures of the night and more. Materials included.

EXPLORER CHALLENGE PACKETS - DOWNLOADABLE

Constellations Packet - $10
Unravel the mysteries of the night sky with this packet. Students will learn how to navigate by starlight, identify constellations in different seasons, explore cultural myths, and more with this outdoor activity packet.

Sustainability Packet - $10
This packet was developed to encourage sustainable practices in your home and community. Students will learn about sustainable practices, renewable energy, non-renewable resources, and what it means to reduce, reuse, and recycle.

Nature Packet - $10
Inspired by the nature around you and developed by the staff at Lichterman Nature Center. Students will learn to identify various birds, clouds, trees and leaves, insects and more with this outdoor activity packet.
TIGER HOOPS
Memphis Basketball Exhibit
March 07, 2020 - April 4, 2021

Tiger Hoops: 100 Years of Memphis Basketball explores the history of the women’s and men’s basketball programs from their beginnings as the West Tennessee State Normal School to the present. The men’s team at what is now the University of Memphis is celebrating its 100th anniversary. Over the course of its history, this squad has not only reflected the state of this educational institution, but also evolved into a representation of the city itself. Sometimes for better, and sometimes for worse, Tiger basketball tells a story about Memphis. The exhibit is guest curated by Dr. Aram Goudsouzian, University of Memphis History Department Chair. *Sponsored by Wells Fargo.

RACE TO THE END OF THE EARTH
February 8th, 2020 - October 18, 2020

Race to the End of the Earth recounts one of the most stirring tales in the annals of Antarctic exploration, the contest to reach the South Pole. This exhibition focuses on the challenges that the two leaders—Roald Amundsen on the Norwegian side and Robert Falcon Scott on the British — faced as they undertook their separate 1,800-mile journeys from the edge of the Ross Ice Shelf to the South Pole and back.

Photographs, paintings, and rare historical artifacts from these expeditions place visitors in the midst of Antarctic exploration and research at the dawn of the last century. Highlights include clothing and equipment used by both crews during their journeys; life-sized models of portions of their base camps; and a diorama featuring the largest penguin species alive today — the Emperor Penguin.

ENCHANTED FOREST
November 21 - DECEMBER 31, 2020

A Memphis holiday tradition, the Enchanted Forest is full of delightful animated characters, model trains and dozens of beautifully decorated trees. This is a fundraiser on behalf of Le Bonheur Children’s Hospital.

Note: Special ticketing prices apply to Enchanted Forest.

*Subject to change, due to COVID 19. Following Le Bonheur’s protocols
THROUGH DARKNESS TO LIGHT:
Photographs Along the Underground Railroad
April 06, 2021 - August 11, 2021

An estimated 100,000 slaves between 1830 and the end of the Civil War in 1865 chose to embark on this journey in search of freedom. Occasionally, they were guided from one secret, safe location to the next by an ever-changing, clandestine group known as the Underground Railroad.

This exhibition features beautifully dramatic color photographs, ephemera, and narratives that together tell the story of the Underground Railroad. Photographer Jeanine Michna-Bales has spent more than a decade meticulously researching “fugitive” slaves and the ways they escaped to freedom. From the cotton plantations south of Natchitoches, Louisiana, all the way north to the Canadian border, this series of photographs by Michna-Bales helps us imagine what the long road to freedom may have looked like as seen through the eyes of one of those who made this epic journey.

DINOSAURS IN MOTION:
Where Art and Science Meet
January 30 - May 2, 2021

Dinosaurs in Motion is a new, interactive, engaging STEAM (Science, Technology, Engineering, Arts & Mathematics) exhibition that is truly for visitors of all ages. Dinosaurs in Motion engages and educates the visitor by using 14 magnificent, fully interactive, recycled life-size metal dinosaur sculptures inspired by actual fossils. The life-sized metal sculptures captivate visitors while their exposed mechanics illustrate science and technology principles in a fun and engaging way. The exhibition weaves the science, art and innovation themes throughout and touches on each of these educational topics at each sculpture. The art portions highlight sketching, drawing, and sculpting; the science segments explore kinetics, biomechanics, and robotics; and the innovation areas encourage observing and experimenting.

The visitor is taken on a highly interactive apprentice’s path that follows the story of the master artist, John Payne. The exhibition’s narrative is reinforced with experiential learning, as every dinosaur is available for visitors to touch and move. Visitors will have the unique ability to manipulate dinosaurs via lever and pulley systems, as well as with remote controls, offering large-scale dinosaur interaction unprecedented in a museum setting. Additionally, visitors will be able to test out their own artistic creativity and newfound technological inspiration with hands-on activities at the Innovation Stations, where they can create a variety of art and science projects of their own!
SKELETONS
Skeletons and skulls of reptiles, amphibians, fish, birds and mammals illustrate biological adaptation and evolution. See how an animal’s skeleton reflects its way of life.

HUMAN EVOLUTION TIMELINE
From discoveries made at different locations in Africa, Europe and Asia, scientists have found evidence of how our ancestors evolved. Track the progression of our species from our humble beginnings to the cunning, social creatures we are today.

OXBOW LAKE
Detailed dioramas and color photographs show animals and plants that inhabit river, lowland, upland and disturbed environments in this unique Mississippi Valley ecosystem.

SMALL WORLDS
Learn about the history of biology illustrated by the development of the microscope. Replica microscopes include those used by Anton van Leuwenhoek and Charles Darwin. Peek into one today.

COON CREEK & FRANKSTOWN FOSSIL SITES
70 million years ago, the Mid-South lay beneath an inland sea. Examine fossil remains of a 30-foot mosasaur and hundreds of other plant and animal species excavated from a west TN creek bed. Identify fossil sharks’ teeth, shells, reptile and dinosaur bones discovered during road construction in north MS.

MID-SOUTH ANIMALS
A great diversity of mammals once inhabited our region. Vignettes show animals in their natural habitats. Learn about man’s impact on these mammals and why some are now extinct.

GEOLOGY
See exceptional examples of rock and mineral specimens. Trace the history of Earth from its formation 4.6 billion years ago to the last Ice Age. Learn about dinosaurs, mastodons, giant amphibians and other fascinating creatures. Monitor earthquakes as they happen.

NATIVE AMERICANS
The Museum’s extraordinary collection of beautiful pottery and finely-crafted tools reveals much about the myths, beliefs and lifestyle of these First Americans. Learn how contact with explorers and settlers changed this thriving civilization forever. *temporarily closed for renovations

HISTORY OF MEMPHIS 1800 - 1900
Discover Memphis’ fascinating story, from a sleepy frontier river town to a modern city. See a reconstructed log cabin from the 1840s, an upscale 1850s parlor, a Civil War cannon and crew, and an elaborate 1890s music room. *temporarily closed for renovations

SADDLEBAGS TO SCIENCE 1830 - 1930
Explore the history of medicine, dentistry, nursing and pharmacy in Memphis. See a frontier doctor leeching a woman with tuberculosis, an 1890s doctor’s office and a 1920s dentist office. Visit a well-stocked drugstore and pharmacist’s workroom of the early 1900s.
COUNTRY STORE
Before self-service grocery stores, there were country stores, which supplied people with goods from the cradle to the grave. Shoppers gave clerks a list, and then the clerks selected the goods. They also served as neighborhood gathering places and as the post office. This exhibit recreates an early twentieth-century country store with a wood-burning stove, post office window, back office and sundry goods.

PIGGLY WIGGLY
Clarence Saunders revolutionized the shopping world with his innovation of the self-service grocery store. Our recreated model allows visitors to walk through a 1916 Piggly Wiggly the way shoppers did then. Saunders designed his stores so that everyone entered through a turnstile, walked past all of the goods in the store, checked out and exited through a turnstile.

MEMPHIS STREET LIFE 1915-1930
The cases in this area explain aspects of Memphis life in the period surrounding the early years of the Piggly Wiggly. Cases include commerce, World War I and music. Two important artifacts are on display in this area — W.C. Handy’s trumpet and a stained-glass window from T.H. Hayes & Sons Funeral Home, one of the longest operating black-owned businesses in Memphis.

COSSITT LIBRARY
The Cossitt Gallery recreates the first museum in Memphis, which was on the upper floor of the Cossitt Library’s tower. There are over 600 artifacts on display in a manner similar to how they were shown in the early 19th century. Artifacts include taxidermied birds, curios, Mississippian pottery, antiquities and weapons. The artifacts at the Cossitt Library became one of the first collections acquired by the Museum of Science & History Pink Palace.

CLARENCE SAUNDERS & THE PINK PALACE
This area tells the story of Clarence Saunders’ early life and the beginnings of his idea for Piggly Wiggly. Panels discuss his early life, his work as a wholesale drummer selling to country stores, and his joint wholesale business venture. The panels in “Saunders Loses His Fortune” detail how Clarence Saunders lost control of Piggly Wiggly, his fortune and the Pink Palace mansion.

MANSION INTO MUSEUM
This gallery features construction images of the mansion and panels explaining what happened to the Pink Palace after Clarence Saunders declared bankruptcy. Panels include discussion of how the city developed a plan to open a museum in the former house.

MANSION AS A MUSEUM
This gallery chronologically traces the growth of the Museum of Science & History by displaying artifacts in order of their acquisition, beginning with objects that were in the mansion when it opened as a museum in 1930 and ending with what was here when the mansion closed to the public in 1975. The shrunken head is in this gallery.

ROTUNDA
There is a graphic timeline that is repeated on both sides of the rotunda. It uses graphics and words to explain the history of the mansion and its life as a museum. This area also contains architectural drawings of the mansion.

MEZZANINE
Walk up the grand staircase past Burton Callicott’s PWAP (Public Works of Art Project) murals. Also on display is another of Callicott’s paintings, Mid-South Allegory. Panels on the mezzanine discuss the Great Depression, New Deal and Burton Callicott. We also have panels that discuss Saunders’ plans for the mansion grounds and what happened to them after his bankruptcy.

CLYDE PARKE MINIATURE CIRCUS GALLERY
Interpretive panels detail the history of circuses in Memphis, as well as Clyde Parke’s biography. There is also an interactive area where kids can make their own circus on our magnet wall, take a photo in a circus poster and explore a life-size version of the miniature circus’ ticket wagon.
AMERICA'S MUSICAL JOURNEY 3D

Celebrate the unique diversity of cultures and the creative risk-taking that characterize America, as told through the story of its music.

SUPPORTS CURRICULUM STANDARDS RELATED TO:
» TN Soc St: C, H, TN
» MS Soc St: CR/HR
» AR Soc St: 12

APOLLO 11 2D

A thrilling cinematic experience with the real-life moments of humankind’s first steps on the moon. See the final moments of preparation, liftoff, landing and return of this historic mission.

SUPPORTS CURRICULUM STANDARDS RELATED TO:
» TN Sci: ESS2, ETS2
» MS Sci: E8
» AR Sci: ESS2, ETS2

JOURNEY TO THE SOUTH PACIFIC 3D

An underwater voyage to Indonesia to learn about its inhabitants such as giant rays and whale sharks as well as efforts being made in the region for ocean conservation.

SUPPORTS CURRICULUM STANDARDS RELATED TO:

NATIONAL PARKS ADVENTURE 3D

Follows a trio of adventurers and revisit Roosevelt and Muir’s camping trip when the Park System was born. Celebrate America’s natural wonders.

SUPPORTS CURRICULUM STANDARDS RELATED TO:
» TN: LS1, LS2, LS4 / ESS2, ESS3
» MS: L1, L3, L4, E9, E10
» AR: LS1, LS2, LS4, ESS2, ESS3

WALKING WITH DINOSAURS 3D

Visit an extraordinary prehistoric world. Experience a year in the life of dinosaurs fighting, feeding, migrating, playing & hunting.

SUPPORTS CURRICULUM STANDARDS RELATED TO:
» TN: LS1, LS2, LS3, LS4, ESS2
» MS: L1, L3, L4, E7
» AR: LS1, LS2, LS3, LS4, ESS2
WILD AFRICA 3D

Fly from the highest snow-covered mountains in Kenya, along great rivers, into steamy rainforests and wide-open savannahs.

EXTREME WEATHER 3D

Weather has always been one of the most dynamic and complex forces shaping our planet, Extreme Weather takes us to the frontlines where few have gone.

SUPERPOWER DOGS 3D

Experience the life-saving superpowers and bravery of some of the world’s most remarkable dogs. Discover the astonishing science behind their amazing abilities.

FLIGHT OF THE BUTTERFLIES 3D

Weighing less than a penny, the monarch butterfly makes one of the longest migrations on Earth across a continent to a place it has never known.

TINY GIANTS 3D

Revealing the astonishing lives of the smallest of animals, audiences are transported in a very intimate way into another world to experience the lives these creatures live.

For Pricing & Booking Information, see pages 34 - 35
GIANT SCREEN THEATER
HOLIDAY FILMS & VIRTUAL FILMS.

THE LIGHT BEFORE CHRISTMAS 3D
December 1, 2020 - December 24, 2020

Featuring state-of-the-art stop motion animation, this holiday movie casts a cozy Christmas spell, while examining holiday traditions and history.

VIRTUAL FILMS
TEACHERS CHOICE

Coral Reef Adventure

Bringing the beauty and mystery of the coral reef environment to the big screen with a film that both celebrates this vital ecosystem and warns of its imminent decline.

Humpback Whales

Experience rarely seen behaviors as you explore the ecological health and survival of these giants of the ocean.

The Living Sea

Celebrate the beauty and power of the ocean as it explores our relationship with this complex and fragile environment.
See the natural beauty and exquisite strangeness of the world's largest living wonder and meet the visionaries and citizen scientists who are helping us better understand and protect this awesome, bizarre, and vibrant living world.

**GREAT BARRIER REEF 3D**
September 19, 2020 - September 17, 2021

CUBA will transport audiences across breathtaking landscapes, under the ocean surface to iridescent reefs, and into streets throbbing with music and dance in the heart of Havana.

**CUBA 3D**
February 13, 2021 - February 11, 2022

Journey to the south polar landscapes of Antarctica hundreds of millions of years ago. Roam the primitive forests and thick swamps with bizarre dinosaurs and colossal amphibians. Enter a surreal world of bug-eyed giants and egg-laying mammals—where survival means enduring the sunless six-month polar winter.

**DINOSAURS OF ANTARCTICA 3D**
February 22, 2020 - May 27, 2021

See the natural beauty and exquisite strangeness of the world's largest living wonder and meet the visionaries and citizen scientists who are helping us better understand and protect this awesome, bizarre, and vibrant living world.

**GREAT BARRIER REEF 3D**
September 19, 2020 - September 17, 2021

CUBA will transport audiences across breathtaking landscapes, under the ocean surface to iridescent reefs, and into streets throbbing with music and dance in the heart of Havana.

**CUBA 3D**
February 13, 2021 - February 11, 2022

Journey to the south polar landscapes of Antarctica hundreds of millions of years ago. Roam the primitive forests and thick swamps with bizarre dinosaurs and colossal amphibians. Enter a surreal world of bug-eyed giants and egg-laying mammals—where survival means enduring the sunless six-month polar winter.

**DINOSAURS OF ANTARCTICA 3D**
February 22, 2020 - May 27, 2021

See the natural beauty and exquisite strangeness of the world's largest living wonder and meet the visionaries and citizen scientists who are helping us better understand and protect this awesome, bizarre, and vibrant living world.
EARTH, MOON AND SUN
(GRADES 4 - 7) Explore the relationship between the Earth, Moon and Sun with the help of Coyote, an amusing character adapted from Native American oral traditions who has many misconceptions about our home planet and its most familiar neighbors.

SUPPORTS CURRICULUM STANDARDS RELATED TO:
» TN: ESS1
» MS: E8
» AR: ESS1

FIREFALL
(GRADES 4 - 12) From possibly providing water and life, to the threat of worldwide destruction, this is the story of comets.

SUPPORTS CURRICULUM STANDARDS RELATED TO:
» TN: ESS1
» MS: E8
» AR: ESS1

FOLLOW THE DRINKING GOURD
(GRADES Pre-K - 3) The story is a poignant and inspiring tale of one African-American family’s desperate flight to freedom and how they used constellations to guide the way. The program is based on a children’s book, “Follow the Drinking Gourd”.

SUPPORTS CURRICULUM STANDARDS RELATED TO:
» TN: ESS3
» MS: E9
» AR: ESS3

LIFE: A COSMIC STORY
(GRADES 4 - 12) Take a journey through time, see how life began and evolved right here in our own Milky Way Galaxy.

SUPPORTS CURRICULUM STANDARDS RELATED TO:
» TN: ESS1
» MS: E8
» AR: ESS1

MEXICA ARCHAEOASTRONOMY
BETWEEN SPACE AND TIME (GRADES 4 - 12) Learn how the pre-Hispanic cultures in central Mexico used calendrical and astronomical knowledge to observe space and time.

SUPPORTS CURRICULUM STANDARDS RELATED TO:
» TN: ESS3, ETS1
» MS: E8, E9
» AR: ESS1, ESS3

ONE WORLD, ONE SKY
(GRADES PRE-K - 2) Follow Sesame Street’s Big Bird and Elmo as they explore the night sky with Hu Hu Zhu, a Muppet from Zhima Jie, the Chinese co-production of Sesame Street.

SUPPORTS CURRICULUM STANDARDS RELATED TO:
» TN: ESS1
» MS: E8
» AR: ESS1

PERFECT LITTLE PLANET
(GRADES 3 - 5) Discover our solar system through a different set of eyes – a family from another star system seeking the perfect vacation spot. Fly over the surface of Pluto. Sail through the rings of Saturn. Feel the lightning storms at Jupiter. And walk on the surface of Mars.

SUPPORTS CURRICULUM STANDARDS RELATED TO:
» TN Sci: ESS1, ESS2
» MS Sci: E7, E8
» AR Sci: ESS1

PHANTOM OF THE UNIVERSE
(GRADES 6 - 12) Witness an exciting exploration of dark matter, from the Big Bang to its anticipated discovery at the Large Hadron Collider.

SUPPORTS CURRICULUM STANDARDS RELATED TO:
» TN Sci: ESS1
» MS Sci: E8
» AR Sci: ESS1

OUR SKY TONIGHT
(GRADES 4 - 12) Hop through constellations, learn cool star names, and groove to planetarium space music in this full-dome audiovisual experience.
SECRET OF THE CARDBOARD ROCKET
(GRADES 1 - 3) Embark on an amazing adventure as two children spend a night touring the solar system alongside their ship’s navigator, a talking astronomy book.

SUNSTRUCK
(GRADES 4 - 12) Travel back to the beginning of time and experience the birth of the Sun. Discover how it came to support life, how it threatens life as we know it, and how its energy will one day fade away.

TWO SMALL PIECES OF GLASS
(GRADES 4 - 12) Learn about the 400 year history of the telescope, from Galileo, to the advancements of modern observatories. See the discoveries made over time and into the future.

WE ARE ALIENS
(GRADES 4 - 12) Earth. It’s now a small world. The human race is connected better and faster than ever before but what about elsewhere? Is Earth the only planet with life?

WE ARE ASTRONOMERS
(GRADES 4 - 12) We Are Astronomers reveals the global collaboration, technology and dedication required to answer the unresolved questions of the Universe.

SEASON OF LIGHT
(GRADES 1 - 3) Our planetarium show for the holidays, Season of Light is an exploration of the astronomical meanings behind seasonal traditions, including the “Star over Bethlehem”. *Opens Nov.21, 2021

LASER LIGHT SHOW - LEGENDS OF THE NIGHT SKY
A lighthearted and imaginative look at the myths and stories associated with the constellation Orion, the great hunter of the winter sky. The autumn show is Legends of the Night Sky: Perseus & Andromeda.

BONUS: PARADIGM SHIFT
Two laser shows for the price of one. Add this to your laser show for no additional cost. Take a journey through constellations, sail across a starry night sky, and experience the wonders of our universe told through story and laser light.
JOURNEY TO THE POLES
(GRADES K - 8 LENGTH 45 - 60 MINUTES:
From glaciers to reindeer, students discover the similarities and differences between the Arctic and Antarctic. Investigate the climate and explore the adaptations of the many animals living in these extreme environments.

MAKING SENSE OF MY SENSES
(GRADES PRE-K - 2) LENGTH 45 - 60 MINUTES:
This “please touch” class has eye-opening experiments, aromas to sniff, sounds to hear and treats to taste. Learn how our sense organs help us explore the world and avoid danger.

I DIG DINO FOSSILS
(GRADES K - 3) LENGTH 45 - 60 MINUTES:
Become a young paleontologist. Excavate dinosaur fossils. Compare eggs, teeth, skulls, claws and sizes of various dinosaurs. Investigate the “dino” diet and touch real dinosaur eggs and bones.

FUN WITH PHYSICAL SCIENCE
(GRADES 1 - 5) LENGTH 45 - 60 MINUTES:
Build a density column. Float a paper clip on water. Test the strength of a magnet. Use household materials to explore properties of matter including density, surface tension and magnetism.

SOUND SCIENCE
(GRADES K - 8 LENGTH 45 - 60 MINUTES:
Explore three requirements needed to create sound. Use a Slinky to demonstrate different types of waves. Find out how sound waves move through air and water. Learn how our ears interpret sound.

LIGHT & COLOR
(GRADES 3 - 8) LENGTH 45 - 60 MINUTES:
It reflects, it refracts, it colors our world. Join us for an interactive program all about the science of light. Learn how light bends through different materials. Discover how mirrors can alter your perception.

ROCKS & MINERALS
(GRADES 1 - 8) LENGTH 45 - 60 MINUTES:
Conduct tests that give clues to a mineral’s identity. Examine minerals that glow in the dark. Find out how rocks are formed and why they look the way they do. Discover some surprising uses for rocks and minerals.
For groups of 10 – 15
For Pricing & Booking Information, see pages 34 - 35

**CELLS & MICROSCOPE TECHNIQUES**

**CELL STRUCTURE** *(GRADES 3 - 8)* **LENGTH 45 - 60 MIN*:
Take a closer look through the lens of a compound microscope. View slides of plant and animal cells. Develop microscope and scientific note-taking skills.

**MITOSIS** *(GRADES 6 - 8)* **LENGTH 45 - 60 MIN*:
Learn to focus a compound light microscope while viewing slides of plant and animal cell mitosis. Draw and identify phases of mitosis.

**DIVE INTO SHARKS** *(GRADES 3 - 8)* **LENGTH 45 - 60 MINUTES*:
Discover why sharks are the ocean’s “master predators.” Hold a shark jaw. Inspect a fossil shark tooth. Examine preserved dogfish shark specimens to learn about specialized adaptations of shark skeletons, eyes, teeth and senses.

**WEATHER WHYS** *(GRADES K - 8)* **LENGTH 45 - 60 MINUTES*:
Observe clouds and learn how weather measurement tools can predict the weather. Investigate air pressure while a miniature tornado forms. Learn what you can do to keep safe in floods, thunderstorms and tornadoes.

**AFRICAN AMERICAN HISTORY** *(GRADES K - 8)* **LENGTH 45 - 60 MINUTES*:
Hear the stories of eight African American residents who contributed to our city’s rich culture. Follow a timeline of their lives. See emancipation papers, medical instruments related to yellow fever, and the uniform of a WWI soldier as we guide you through Memphis history.

**NATIVE AMERICANS OF THE MID-SOUTH** *(GRADES K - 5)* **LENGTH 45 - 60 MINUTES*:
Touch buffalo hide. Inspect spear points. Grind corn. Use museum artifacts to experience how the earliest Americans lived, hunted, grew crops, formed dugout canoes and played games in the Mississippi Valley.

**ON THE MID-SOUTH FRONTIER** *(GRADES 3 - 8)* **LENGTH 45 - 60 MINUTES*:
Split a roof shingle. Wash clothes against a metal washboard. Practice rolling an old-fashioned hoop. Observe and participate in demonstrations of skills required for survival on the Mid-South frontier.

**SUPPORTS CURRICULUM STANDARDS RELATED TO:**
- TN Sci: LS1
- MS Sci: L1
- AR Sci: LS1

**AFRICAN AMERICAN HISTORY** *(GRADES K - 8)* **LENGTH 45 - 60 MINUTES*:
Hear the stories of eight African American residents who contributed to our city’s rich culture. Follow a timeline of their lives. See emancipation papers, medical instruments related to yellow fever, and the uniform of a WWI soldier as we guide you through Memphis history.

**SUPPORTS CURRICULUM STANDARDS RELATED TO:**
- TN Soc St: C, E, H, TN
- MS Soc St: H, CI, CR
- AR Soc St: 5, 10, 12, 13

**NATIVE AMERICANS OF THE MID-SOUTH** *(GRADES K - 5)* **LENGTH 45 - 60 MINUTES*:
Touch buffalo hide. Inspect spear points. Grind corn. Use museum artifacts to experience how the earliest Americans lived, hunted, grew crops, formed dugout canoes and played games in the Mississippi Valley.

**SUPPORTS CURRICULUM STANDARDS RELATED TO:**
- TN Soc St: C, E, H, TN
- MS Soc St: H
- AR Soc St: 9, 12, 13

**ON THE MID-SOUTH FRONTIER** *(GRADES 3 - 8)* **LENGTH 45 - 60 MINUTES*:
Split a roof shingle. Wash clothes against a metal washboard. Practice rolling an old-fashioned hoop. Observe and participate in demonstrations of skills required for survival on the Mid-South frontier.

**SUPPORTS CURRICULUM STANDARDS RELATED TO:**
- TN Soc St: C, E, G, GC, H, TN
- MS Soc St: H, CR, E
- AR Soc St: 1, 5, 9, 12, 13
EDUCATION
DISCOVERY THEATER EXPLORATIONS

JOURNEY TO THE POLES
(GRADES K - 8) LENGTH 45 - 60 MINUTES:
From glaciers to reindeer, students discover the similarities and differences between the Arctic and Antarctic. Investigate the climate and explore the adaptations of the many animals living in these extreme environments.

SUPPORTS CURRICULUM
STANDARDS RELATED TO:
» TN Soc St: C, G
» MS Soc St: G, H
» AR Soc St: 9, 12, 13

SOUND SCIENCE
(GRADES K - 8) LENGTH 45 - 60 MINUTES:
Explore three requirements needed to create sound. Use a Slinky to demonstrate different types of waves. Find out how sound waves move through air and water. Learn how our ears interpret sound.

SUPPORTS CURRICULUM
STANDARDS RELATED TO:
» TN Sci: PS1, PS3, PS4
» MS Sci: P5, P6
» AR Sci :PS1, PS3, PS4

LIGHT & COLOR
(GRADES 3 - 8) LENGTH 45 - 60 MINUTES:
It reflects, it refracts, it colors our world. Join us for an interactive program all about the science of light. Learn how light bends through different materials. Discover how mirrors can alter your perception.

SUPPORTS CURRICULUM
STANDARDS RELATED TO:
» TN Soc St: C, G
» MS Soc St: G, H
» AR Soc St: 9, 12, 13

DINOSAURS & FOSSILS
(GRADES 3 - 8) LENGTH 45 - 60 MINUTES:
Explore the life of dinosaurs by examining fossils. Compare their skulls, teeth, claws and sizes of various dinosaurs. Investigate the “dino” diet and touch real dinosaur eggs and bones.

SUPPORTS CURRICULUM
STANDARDS RELATED TO:
» TN Sci: LS1, LS4
» MS Sci: L1, L3, L4
» AR Sci :LS1, LS4

THE MAGIC OF SCIENCE
STATIC ELECTRICITY:
( GRADES 2 - 6) LENGTH 45 - 60 MINUTES:
Charge it up! Watch pie pans float. Create lightning and link hands to light up a light bulb. Learn how atoms, positive and negative charges, conductors and insulators work to produce static electricity.

PHYSICAL SCIENCE SAMPLER
( GRADES 2 - 6) LENGTH 45 - 60 MINUTES:
Hold a balloon aloft in a stream of air. Use static electricity to light a fluorescent tube and stand a student’s hair on end. Participate in physical science demonstrations that motivate students to hypothesize “how” and “why” things happen.

SUPPORTS CURRICULUM
STANDARDS RELATED TO:
» TN Sci: PS1, PS3
» MS Sci: P5, P6
» AR Sci :PS1, PS3
WEATHER WHYS
(GRADES K - 8) LENGTH 45 - 60 MINUTES:
Observe clouds and learn how weather measurement tools can predict the weather. Investigate air pressure while a miniature tornado forms. Learn what you can do to keep safe in floods, thunderstorms and tornadoes.

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(GRADES K - 5) LENGTH 45 - 60 MINUTES:
Touch buffalo hide. Inspect spear points. Grind corn. Use museum artifacts to experience how the earliest Americans lived, hunted, grew crops, formed dugout canoes and played games in the Mississippi Valley.

ON THE MID-SOUTH FRONTIER
(GRADES 3 - 8) LENGTH 45 - 60 MINUTES:
Split a roof shingle. Wash clothes against a metal washboard. Practice rolling an old-fashioned hoop. Observe and participate in demonstrations of skills required for survival on the Mid-South frontier.

LEARNING LABELS
(GRADES 4 - 8) LENGTH 60 MINUTES:
Proteins, carbohydrates, fats – oh my! Don’t forget serving sizes and calories! Come learn about nutrition labels and the nutrients that are in the foods we eat. After participating in this class, your students are bound to make healthy food choices!

THE MAGIC OF SCIENCE HOLIDAY EDITION
(GRADES 2 - 6) LENGTH 45 - 60 MINUTES:
Enjoy the magic of the season with this holiday show. Light the night with chemistry candles, tinker with tinsel, and frolic with magic snow! See how electricity, polymers, and the scientific method make the season merry and bright.
SUITECASE EXHIBITS
USE IN YOUR CLASSROOM OR VIRTUAL CLASSROOM FOR FREE

Spark the imagination of your students with teaching objects, lesson plans and educational displays packed inside rolling trunks and available FREE for use in TN classrooms for two-week periods.

Suitcase Exhibits contain hands-on teaching objects/specimens, teacher’s manual with content background, lesson plans and listings of TN state curriculum standards for grades K-2, 3-5 and/or 6-8 supported by these activities.

Reserve Suitcases for two-week reservation periods by calling 901-636-2362.
FREE for TN schools. $25/topic for out-of-state schools.

Delivery and return available through Shelby County Schools mail services All others pick up and return Suitcases at the Museum of Science & History Pink Palace Security Office Mon-Sat 9 am - 5 pm, Sun noon - 5 pm.

Earth & Space/Science Topics
• Earthquakes
• Fossils
• Planets & The Solar System
• Rocks & Minerals
• The Sun & The Moon
• Weather

Life Science Topics
• Dinosaurs
• Magnifiers
• Microscopes & Cells
• Plant Reproduction
• Skulls/Predator & Prey
• Trees &Leaves
• The Science of Small

Physical Science Topics
• Electricity
• Magnets & Magnetism
• Electric Circuits

Social Studies Topics
• The Civil War
• Native Americans

Delivering Suitcases to:
• Arlington
• Bartlett
• Collierville
• Germantown
• Lakeland

SUITCASE EXHIBITS
USE IN YOUR CLASSROOM OR VIRTUAL CLASSROOM FOR FREE

Make your visit to our natural history galleries more exciting and educational with the help of our free Discovery Quests. These activity sheets turn the galleries into a self-guided tour by helping students engage more with the exhibits through puzzles, exercises, and critical thinking questions. Go to https://www.memphismuseums.org/pink-palace-museum/programs/scavenger-hunt–discovery-quest/ to download and print these sheets before you come to the museum. Discovery Quest is available in a wide range of ages, from Kindergarten to 8th grade, in both English and Spanish. Don’t forget to bring your pencils!

SCAVENGER HUNT

Search the museum’s permanent exhibits to find the answers in this scavenger hunt with a simple question and answer format. Download the Scavenger Hunt and answer key from the Museum’s website at www.memphismuseums.org/education or on the Pink Palace app.

EQUATOR TREK

Review geography, social studies, and biology concepts by following the journey of our Museum’s Education Team to the Equator! Learn about the Earth as a whole by taking a closer look at the Amazon Rainforest, Andes Mountains, and Galapagos Islands through journal entries, photos, and printable activities (including worksheets, puzzles, recipes, and more!)
PASSPORT PROGRAM
USE IN YOUR CLASSROOM FOR $10

PASSPORT PROGRAM TOPICS
- Pollinators
- Giant Plant & Animal Cell Models
- Animal & Plant Cell Models (Animal Cell Mitosis Models Set of 9 phases)
- Compound Light Microscope (with set of prepared slides - Cell Structure, Cell Mitosis or Household Curiosities)
- Ten Microslide viewers (with slide strips - Cell Structure, Cell Mitosis, or Cells of the Body)
- Extreme Cold Weather Gear
- Sharks
- Weather Instruments
- Weddell Seals
- Tree Cookies (cross-sections of tree branch/trunk)
- Primary Sources & US Documents
- Leaves & Seeds
- Insects
- Fit Kids
- Learning Labels (Baptist Memorial Health Care Sponsored)

MEMORABLE MEMPHIANS :
HIGHLIGHTING OUR HOMETOWN HEROES
- Arts – W. C. Handy, Burton Callicott, and STAX
- Yellow Fever
- The Chickasaw Nation in the Removal Era
- Sports – The Memphis Red Sox, Sputnik Monroe, and Penny Hardaway
- Clarence Saunders, Entrepreneur
- Hometown Heroes – Millie Swann, Ida B. Wells, Julia B. Hooks, Robert R. Church, and Earnest Withers

Our passport program is your students’ “Ticket to learning!” These outreach kits feature hands-on teaching materials available for use in Memphis-area classrooms for two-week reservation periods. Objects are packed into a tool-box style container with photos, activity cards and other materials. Cost is just $10 per topic.


Delivery and return available through Shelby County Schools mail services. All others pick up and return Passports at Pink Palace Security Office Monday - Saturday, 9am - 5pm, and Sunday, noon - 5pm.

Delivering Passports to:
- Arlington
- Bartlett
- Collierville
- Germantown
- Lakeland
HUMAN IMPACT
Discover how there is very little of Earth that is untouched by some form of human impact. Find out what you can do everyday to heighten your appreciation and stewardship for the natural world.

ADAPTATIONS
Learn how each living creature has adapted a unique combination of features and behaviors in order to survive. See physical adaptations like turtle shells, furs and webbed feet, and also observe behavioral adaptations like camouflage, communication and hibernation.

SEASONS
Seasonal changes are gradual and ongoing. See how some changes are easier to notice, like colorful leaves on a fall day, while other changes, like animal behaviors, are sometimes harder to recognize.

URBAN WILDLIFE
Learn about animals that once roamed freely in the Mid-South, including some still found here. See preserved specimens of rare animals like the Ivory-billed woodpecker.

LIFE CYCLES
See how life passes through a series of stages as part of a greater continuing cycle. Learn how animals are born, grow, reproduce and die, just as plants sprout, grow, reproduce and die.

BUCKMAN WATER SCIENCE TRAIL
The panels around Mertie’s Lake display information about the science of water and how it relates to human and environmental health.

BACKYARD WILDLIFE CENTER
Frogs, turtles, and snakes, oh my! This educational gold mine is filled with both living and preserved specimens of native animals. Engage your students with fascinating exhibits like Bites, Stings and Exotic Things, Forest Board Walk, the Lake Viewing Area and the Nature Nook.

URBAN SPECIES
Despite the negative impacts that urbanization can have on an environment, some species adapt and thrive. Coyotes are one species that have adapted to live in urban environments, feeding on the trash and rodents that are associated with human settlements. Originally, red wolves (Canis rufus) were the dominant canines in the Mid-South, but by the 1970s, their population was eradicated from the area. After their elimination, the coyote population spread into the area. Historically, coyotes were confined to the western United States, but they are now found across the country in both rural and urban habitats.

ARMADILLO EXPANSION
Nine-banded armadillos (Dasypus novemcinctus) are common in modern day Shelby County, but it has not always been that way. The first documented sighting of an armadillo in our county was in 1974, and sightings continued to be rare until the 2000s. Prior to 1850, nine-banded armadillos were not found north of the Rio Grande River. Now armadillos are as far north as Illinois, potentially spreading as far north as New York. Researchers believe the rapid range expansion is because of decreased predators, milder winters, and high reproductive rate of armadillos.

*In the case of COVID 19 and CDC regulations, hours are subject to change.
The first accredited Nature Center in the U.S., Lichterman Nature Center features both live and preserved animal specimens, interactive exhibits, and lake, meadow and forest habitats. Putting students in touch with nature has never been easier. The Backyard Wildlife Center and Visitor’s Center are filled with engaging displays that help students make meaningful connections to major themes in life science.

LICHTERMAN NATURE CENTER
TEMPORARY EXHIBITS

SCARECROWS ON DISPLAY
October 1 - November 28, 2020
Come see scores of scarecrows that convey messages on conservation, ecology, recycling and planting for wildlife. Each year, senior centers, scouts, clubs, classrooms, individuals, duos, and others create scores of scarecrows to win prizes and celebrate fall.

*Entries accepted through September 30, 2020. Applications are available online. Prizes for greenest, best critter, most creative, and best children’s story!

INCLEMENT WEATHER / CANCELLATION POLICIES

Inclement Weather and Cancellation Policies: Programs are conducted rain or shine. During inclement weather, programs are presented indoors. If you must cancel your visit, please call no later than 24 hours before planned visit.

Scheduling Tips: Classes are held outdoors. Be sure to dress for the weather and wear walking shoes. Picnic tables are available on a “first-come, first-served” basis. There is a 15-student minimum for all instructor-led programs. No minimum for Exploring Nature Your Way (self-guided visits) or Naturalist Notebooks.

Group rate is only offered if lead teacher pays for all parents as a group. Individuals paying outside of group payment pay regular admission of $9.00 per adult.
*Cancellations may occur due to COVID 19 and CDC regulations.

5992 Quince, Memphis, TN 38119 / www.memphismuseums.org
Book Your Field Trip Today by emailing: nature.reservations@memphistn.gov or 901.636.2221
HABITAT DETECTIVES
(GRADES K - 12) UP TO 2 HOURS
FEE: $7.00 per student, UP TO 180 STUDENTS
Investigate the lake, forest and meadow habitats with interactive learning that incorporates live and preserved wildlife specimens highlighting seasonal, environmental, ecological and conservation concepts.

WILD LUNCH
(FUN FOR ALL AGES) Free with Admissions:
Every Tuesday-Saturday in the Backyard Wildlife Center at noon, come and observe the snakes, turtles or raptors at lunch time. Ask questions, meet animals and find out what the animals are having for lunch!

EXPLORING NATURE YOUR WAY
(PRE-K - 12) SELF GUIDED
FEE: $4.00 per student (Free for TN Title 1 Students)
Walk a forest boardwalk two stories high. Discover what lives in the lake at our underwater viewing area. Watch fish and turtles from the lake & marsh boardwalks and check out interactive exhibits and beautiful trails!

IN YOUR BACKYARD
(GRADES K - 8) LENGTH 45 - 60 MINUTES:
FEE: $6.00 per student, Up to 150 Students
Meet your wild neighbors! See live animals, preserved specimens and learn more about animals that call the Mid-South home.

COME TO YOUR SENSES
(GRADES PRE-K - 1) UP TO 1 HOUR:
FEE: $6.00 per student, UP TO 35 STUDENTS
Humans use five senses to survive and explore the world around them. Use your own senses to learn more about the senses that other animals use to survive.

NATURALIST NOTEBOOKS
(GRADES 2 - 6) LENGTH 45 - 60 MINUTES:
FEE: $2.00 per student
Add an educational nature journal experience to enhance your students’ learning experience. Take-home souvenir notebooks encourage students to draw pictures and record observations as they explore habitats, seasonal changes and adaptations at the Nature Center.

*In the case of COVID 19 and CDC regulations, numbers may have to be decreased, and hours are subject to change.
NATURE 2 U: ON & OFFSITE  
(GRADES PRE K - 8) LENGTH 45 MINUTES:
Come to us or let us travel to your classroom. Activity-packed programs include live or preserved animals, educational games and hands-on exploration. Available afternoons year-round and selected mornings during the school year. (25 - 30 students)

Topics: Amphibians, Arachnids, Bats, Bees, Birds, Butterflies, Insects, Mammals, Nocturnal Animals, Pond life, Reptiles, Spiders

ANIMALS ALIVE! (Grant Program)  
(GRADES K - 8) UP TO 1 HOUR, UP TO 150 STUDENTS
Students will gain a new respect and appreciation for native wildlife, and sharpen sensory and observation skills. Presentations include live animals, preserved specimen and interactive demonstrations. This program is FREE of charge for up to 2,000 Title 1 students. Programs will be offered in August - September and December - March.

OFFSITE FEES:
$150 per program  
$125 (2 consecutive programs) per program  
$115 (3 or more consecutive programs) per group.

SUPPORTS CURRICULUM STANDARDS RELATED TO:  
» TN: LS (1-4), ETS2  
» MS: L (1-4), E (9-10)  
» AR: LS 1, 2, 3, 4

NATURE LAB SERIES

$8.00 per student, 90 min of instructor-led activities. 30 students min, 60 students max.
Enjoy the best of both worlds bringing outdoor observations into the lab classroom. In this hands-on series, students develop science and technology processing skills by learning to use laboratory equipment and recording observations. Students apply the Scientific Method to draw data-driven conclusions from their outdoor field studies.

OWL PELLET DISSECTION:  
(GRADES 4 - 8) 90 MINUTES High school groups welcome. Pre and post-visit materials available.  
Discover the WHOOO and why behind owl pellets! Students are introduced to the biology and life history of owls while learning how to use dissecting instruments in the laboratory. Students dissect owl pellets in the lab and use data to determine the habitat use of owls.

SUPPORTS CURRICULUM STANDARDS RELATED TO:  
» TN: LS (1-4), ETS2  
» MS: L (1-4), E10  
» AR: LS 1, 2, 3, 4

TREE SCIENCE  
(GRADES 2 - 8) 90 MINUTES High school groups welcome. Pre and post-visit materials available.  
Tree Science lab is focused on tree identification using dichotomous keys to deciper leaf, bark and size differences. After field sampling on Lichterman forested trails, recorded data will be analyzed in the lab classroom to determine tree diversity and health of the overall forest stand.

SUPPORTS CURRICULUM STANDARDS RELATED TO:  
» TN: LS (1-4), ESS3, ETS2  
» MS: L (1-4), E10  
» AR: LS 1, 2, 3, 4

WATER ECOLOGY (Available March - November)  
(GRADES 5 - 8) 90 MINUTES High school groups welcome. Pre and post-visit materials available.  
Students learn field collection techniques for sampling water, collecting aquatic invertebrates and testing water quality of Mertie’s Lake for parameters including pH, dissolved oxygen, temperature and turbidity. Students then work in the lab area to investigate hypotheses and experiments measuring and recording abiotic and biotic factors to describe the water quality of the Lake using the Scientific Method, technology and math skills.

SUPPORTS CURRICULUM STANDARDS RELATED TO:  
» TN: LS (1-4), ESS3, ETS2  
» MS: L (1-4), E10  
» AR: LS 1, 2, 3, 4

$8.00 per student  
30 students minimum, 60 students maximum.
ADA ACCESSIBILITY
• Handicapped van parking space on site
• Carriage house/visitor’s center is fully accessible
• First floor of the house is fully accessible
• A video of the second floor tour is shown in the carriage house/visitor’s center
• A video of the Magevney House tour is available to view at the Mallory-Neely House visitor’s center

MALLORY-NEELY HOUSE GUIDED TOUR

Mallory-Neely house guided tour (Grades 3 – 12)
652 Adams Avenue, Memphis, TN 38105

Step inside a Victorian time capsule to discover everyday life for the people who lived and worked in a wealthy 19th century Memphis home. Located in the Victorian Village National Historic District, this Italianate mansion was built circa 1852 and lavishly redecorated in the 1890s.

PARKING - Metered spaces are available along Adams Avenue.

Fees: $4.00 per student
Program length: approximately 1 hour (depending on group size)
Number of students: 10 (minimum)

Free for TN Title 1 students, August - February

SUPPORTS CURRICULUM STANDARDS RELATED TO:

» TN Soc St: C, E, H, TN
» MS Soc St: CR/HR, E, C
» AR Soc St: 5, 10, 12, 13

Funding for restoration projects at the Mallory-Neely House provided by The Hitchcock Foundation.

MAGEVNEY HOUSE GUIDED TOUR

Magevney House Guided Tour (Grades K-8)
198 Adams Avenue, Memphis, TN 38103

Discover Memphis in the mid-1800s while visiting one of the oldest homes still existing in Memphis. Built circa 1836, the Magevney House was home to Eugene Magevney, an Irish immigrant, teacher, and religious leader.

Fee: Free. Suggested donation $2.00 per student
Number of students: 10 (minimum)

SUPPORTS CURRICULUM STANDARDS RELATED TO:

» TN Soc St: C, E, H, TN
» MS Soc St: CR/HR, E, C
» AR Soc St: 5, 10, 12, 13

» TN Sci: EST1
» MS Sci: Tools & Techniques
» AR Sci: EST1
Back to School – Let knowledge grow: If you’re looking for the average or the ordinary, you won’t find it at the Museum of Science & Histories Store… In these unusual times, we are all adjusting to a different way of living and learning. No matter where your classroom may be, the Museum Store is open and ready to assist; putting unique items complementing our exhibits, movies, and Planetarium shows within your reach.

We offer an extensive variety of products for you – parents, caregivers, educators – to share with children (and adults!) of all ages. Hands-on science kits and experiments, educational books, specialty crafts, unique toys, word finds, and coloring books are just a few examples of items available to keep minds sharp and fuel creativity. If you’re looking for ways to add variety to a school day or your next family game night, we even have puzzles and board games. Please stop by & take a look, we’ve got a little something for everyone! Some examples below of various educational materials the Museum Store carries:

- Gyroscopes are used in countless devices. From smartphones, tablets, and video game controllers to airplanes and space telescopes, gyroscopes perform tasks ranging from the everyday to the extraordinary. With this kit, explore the astonishing powers of the gyroscope by building seven motorized models.

- Whether learning how to identify rocks and minerals or learning how they were formed, these kits provide a hands on learning experience.

- These fun notebooks are also a treasure trove of information on these foundations of education. They are a great starting point or supplemental resource for anyone interested in mastering these core school subjects.

Teachers, receive a 10% discount every time you shop at the Museum Store with our Educator Reward Program!

To obtain your card, bring your teaching certificate or appropriate identification to the Museum Store. This offer is good throughout the school year. Cards are renewable and non-transferable.

All proceeds from Museum Store sales support the Museum of Science & History Pink Palace. Check our website for color photos and more information including our order form.
PRICING GUIDE

Prices per student are based on a minimum of 15 students. Groups whose numbers fall below 15 are subject to regular admission prices.

MUSEUM FACILITIES

- Museum Exhibits ................................................................. $5.00
- Planetarium Shows .............................................................. $5.00
- 3D Movies ........................................................................... $5.00
- Lab/Classroom Explorations ................................................ $5.00
- Discovery Theater Programs ................................................. $5.00

COMBINATION RATES
Any 2 of the above ................................................................. $9.00
Any 3 of the above ................................................................. $12.00
Museum Suitcase Exhibits for TN Schools ................. FREE
Museum Suitcase Exhibits for schools outside TN ....... $25.00
Passport Programs ................................................................. $10.00

LICHTERMAN NATURE CENTER

- Habitat Detectives ............................................................... $7.00
- In Your Backyard ................................................................. $6.00
- Come to Your Senses ............................................................. $6.00
- Naturalist Notebook ............................................................. $2.00
- Exploring Nature Your Way (self guided visit) ............... $4.00
- Nature to U: Onsite
  (per child) ........................................................................... $6.00
  (per adult chaperone) .......................................................... $4.00
- Nature to U: Offsite ................................................................. $150.00 per class
  (per program for two same topics, same day outreach programs) ... $125.00 ea
  (per program for three same topics, same day outreach programs) ... $115.00 ea
- Nature Lab Series: Owl Pellet Dissection ......................... $8.00
- Nature Lab Series: Water Ecology ....................................... $8.00
- Nature Lab Series: Tree Science ......................................... $8.00

MALLORY-NEELY HOUSE

- House Admission ................................................................. $4.00

How To Book A Reservation

Now that you’re ready to book a reservation, please read these tips and be prepared to answer the following questions. If you have additional questions, don’t hesitate to ask a reservationist.

Tips
1. It is best if you have a few dates in mind before calling.
2. Check your school’s calendar to avoid scheduling conflicts.
3. Be aware of time constraints that could affect your visit and make the reservationist aware of them (i.e., bus schedules, travel time, etc.).
4. Please review the deposit and cancellation policies (see below).
5. Please review the chaperone policy (see below).
6. Check to make sure that the program you are considering is appropriate for your students’ grade level.
7. To book reservations at the Museum of Science & History, Giant Screen Theater and the AutoZone Dome Planetarium, call 901.636.2362 Lichterman Nature Center, email nature.reservations@memphistn.gov or call 901.636.2221
8. If a Tennessee School, do you have subsidized/fee waiver students?
   If yes, how many?

Please have the following information ready:

1. Your e-mail address, school address, phone number and fax number.
2. The names of both the school contact and group leader (if different).
3. The grade level of your students.
4. Which program(s) you have chosen.
5. The dates and times you are considering.
6. Total number of students you will be bringing.
7. Total number of ALL adults including teachers, assistants, parents, drivers, etc. in your group. A ratio of 1 chaperone per 10 students is required, and that chaperone receives free admission. Additional chaperones will be charged the chaperone rate. (See chaperone policy.)
8. If a Tennessee School, do you have subsidized/fee waiver students?
   If yes, how many?

POLICIES

Payment Policy
- An advance deposit of 20% is required to hold reservations for all groups.
- Deposits must be paid by school check, money order, cashier’s check, MasterCard, Visa or cash.
- Deposits may be paid at the facility’s box office. The box offices close one hour before the facility closes.
- Deposits may be mailed directly to the facility you will be attending, marked “Attention: Reservations.”
- Addresses of each facility of the Museum of Science & History can be found at the bottom of each facility listing in this guide.
- Live and recorded content must be paid in full at time of reservation.

Cancellation Policy
- Notification of cancellation must be received one week prior to date of reservation. Reservations cancelled less than one week prior will forfeit their deposit.
- Cancellation due to weather conditions are made at the discretion of the Museum. In that event, the Museum will contact the group and reschedule the program. If the program cannot be rescheduled, the deposit will be refunded.
FREQUENTLY ASKED QUESTIONS

Q. How long will it take us to see the exhibits?
A. We suggest that you allow two hours to tour the Museum exhibits. For specific programs, please see the program listing.

Q. When can I make reservations?
A. The Museum’s Reservation Office is open Tuesday - Saturday to schedule school groups. The Lichterman Nature Center Office is open Monday - Friday. You must speak with a representative and receive a Reservation I.D. number before you have a confirmed reservation.

Q. My group has reservations at Lichterman Nature Center. What if it rains?
A. Lichterman is set up to conduct all instructor-led programming indoors if needed.

Q. How far in advance do we have to make reservations?
A. At least two weeks.

Q. What if I don’t have one adult for every ten students?
A. It is required that all schools have one adult for every ten students. Your school may be refused admission without the number of required adults.

Q. Can my parents call to make their own reservations?
A. No, they need to be included in the reservation with the students in order to receive their chaperone rate.

Q. Can we take pictures?
A. You may take pictures without the flash in the Museum exhibits. No photography or recording is allowed during the programs or movies.

Q. Is there anything in the Museum that will scare my students?
A. • The interiors of the 3D Giant Theater and Planetarium are dark.  
• Some movies are not appropriate for children under second grade.  
• Some children, three years and under, do not respond well to the Planetarium experience.

Q. Can students use their family’s membership?
A. Memberships and vouchers can be used for Self-Guided Visits but Memberships and vouchers may not be used by students or chaperones for free admission to Education Programs.

If you have questions that have not been answered, please call: 
The Museum’s Reservation Office at 901.636.2362.  
Lichterman Nature Center Reservation Office 901.636.2221 or email: nature.reservations@memphistn.gov  
Mallory-Neely House 901.523.1484

3D Giant Theater Snack policy: Snacks and drinks are available for pre-order when you make your reservation. Snack and drink orders must be made at least three (3) weeks in advance and must be paid in full when you make your reservation. Your snacks and drinks will be waiting for you at the 3D Giant Theater the day of your visit. An order form is included in your reservation packet.

Chaperone Policy: In order to ensure proper supervision, one adult (teacher or chaperone) is required for every ten (10) students. These teachers/chaperones will be admitted free of charge. Additional adults over the one to ten ratio will be charged the chaperone rate. Chaperones and teachers are to remain with the students at all times. Chaperone rates will only be provided to those adults that are included with the school reservation and paid for at check-in with the group payment. Additional adults that pay on their own will be charged our regular rates. Special Education Groups should ask the Reservationist about special accommodations.
### TENNESSEE

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<th>STRANDS</th>
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### MISSISSIPPI

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TENNESSEE - 2019
SIX CONTENT STRANDS

(C) Culture: Students will use culture and cultural diversity to understand how human beings create, learn, share, and adapt to culture and appreciate the role of culture in shaping their lives and society, as well the lives and societies of others.

(E) Economics: Students will use economic reasoning skills and knowledge of major economic concepts, issues, and systems to make informed choices as producers, consumers, savers, investors, workers, and citizens in an interdependent world.

(G) Geography: Students will use knowledge of geographic locations, patterns, and processes to show the interrelationship between the physical environment and human activity and to explain the interactions that occur in an interdependent world.

(P) Politics/Government: Students will use knowledge of the purposes, structures, and processes of political systems at the local, state, national, and international levels to understand that people create systems of government as structures of power and authority to provide order, maintain stability, and promote general welfare.

(T) Tennessee: Students will use materials drawn from various sources to explore history through a Tennessee lens while focusing on the events, patterns, and themes that impacted both the U.S. and Tennessee.

(TCA) Tennessee Code Annotated: Students will learn mandatory content, as specified in the Tennessee Code Annotated.

MISSISSIPPI - 2019
FIVE CONTENT STRANDS

(E) Economics: This strand emphasizes economic reasoning which helps students gain an understanding of economic concepts, while demonstrating an understanding of economic and financial literacy.

(G) Geography: The geography strand equips students with knowledge, skills, and perspectives of world geography.

(H) History: The history strand investigates events that change the way people live.

(CI) Civics: The civics strand should provide students with a basic understanding of civic life, politics, and government.

(CR) Civil Rights: This strand should lead learners to understand and appreciate issues such as social justice, power relations, diversity, mutual respect, and civic engagement.

ARKANSAS – 2019
FOUR STRANDS / 12 CONTENT STANDARDS

Civics/Government
1. Civic and Political Institutions: Students will analyze the impact of origins, structures, and functions of institutions on society and citizens.
2. Participation and Deliberation: Students will analyze civic rights, roles, and responsibilities.
3. Processes, Rules, and Laws: Students will analyze the sources and functions of laws as well as the process of making and amending laws.

Economics
4. Economic Decision Making: Students will analyze economic decision making.
5. Exchange and Markets: Students will analyze the exchange of goods and services and the role of producers, consumers, and government in the market place.
7. Global Economy: Students will analyze economic interdependence within a global economy.

Geography
8. Geographic Representations: Students will use geographic representations and skills to become geographically-informed citizens.
9. Human-Environment Interaction: Students will analyze the interaction between humans and the environment.
10. Spatial Patterns and Movement: Students will interpret the spatial characteristics and patterns of human settlement.
11. Global Interconnections: Students will compare global places and regions and the connections between them.

History
12. Chronology, Change Over Time, and Contextualization: Students will analyze chronology, patterns of continuity and change over time, and contextualization on historical events.
13. Perspective, Historical Evidence, and Causation: Students will analyze ways people gather, view, construct and interpret historical evidence.
## MAJOR SUPPORTERS

<table>
<thead>
<tr>
<th>Company/Institution</th>
<th>Name/Individual</th>
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<tr>
<td>Ameriprise Financial, Inc.</td>
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<td>Ag for Autism</td>
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<td>ANF Architects</td>
<td>Murff and Duncan Galbreath*</td>
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<td>Arizona State University</td>
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<td>Vincent Astor</td>
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Over 128,821 Title 1 students were served 2019-2020
Thank You for your support
Support of the Open Doors, Open Minds program is provided by:

[International Paper]
[AutoZone]