Lynn Meadows Discovery Center For Children

Educator's Guide to STEM Related Exhibits

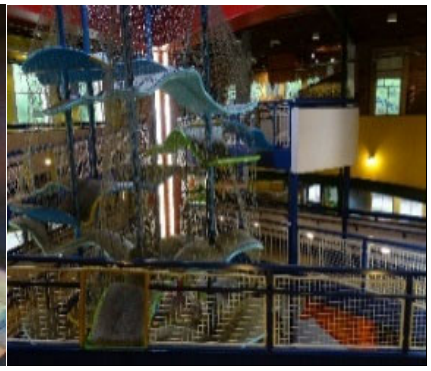
Lynn Meadows Discovery Center (LMDC) provides children with the opportunity to learn and discover through play, and our STEM focused exhibits offer the necessary hands-on experience needed to develop profound understanding. This guide showcases some of LMDC's STEM related exhibits and lists the science standards that relate to those exhibits. This is not a comprehensive guide; STEM lessons can be supported through many exhibits at LMDC.

Indoor Exhibits

Inside, 15,000 square feet of hands-on exhibits offer exciting play time, rain, or shine.

Super Colossal Climbing Structure

This exhibit simulates the sea with murals and suspended aquatic life. It also stimulates physical fitness, coordination and problem solving with multiple uneven surfaces and entry/exit opportunities.



Standards
L.K.3A Students will demonstrate an understanding of what animals and plants need to live and grow.
L.2.3A Students will demonstrate an understanding of the interdependence of living things and the environment in which they live.
L.3.1 Students will demonstrate an understanding of internal and external structures in plants and animals and how they relate to their growth, survival, behavior, and reproduction within an environment.
MS Physical Education 2.2 Demonstrate understanding of movement principles, strategies, and tactics as they apply to the learning, development, and performance of physical activities. (Gross Motor, Fine Motor, Fitness)

Sun Earth Universe

The Sun, Earth, Universe exhibition is an engaging and interactive museum exhibition about Earth and space science for family audiences.

To learn more about all that this exhibit has to offer watch the *Sun Earth Universe Exhibition Walkthrough Video* and download the *Sun Earth Universe K-12 Teacher Field Trip Guide*.

Standards
E.K.8A Students will demonstrate an understanding of the pattern of seasonal changes on the Earth.
E.K.8B Students will demonstrate an understanding that the Sun provides the Earth with heat and light.
E.1.9A Students will demonstrate an understanding of the patterns of weather by describing, recording, and analyzing weather data to answer questions about daily and seasonal weather patterns.
E.2.8 Students will demonstrate an understanding of the appearance, movements, and patterns of the sun, moon, and stars.
E.3.9 Students will demonstrate an understanding of how the Earth's systems (i.e., geosphere, hydrosphere, atmosphere, and biosphere) interact in multiple ways to affect Earth's surface materials and processes.
E.5.8A Students will demonstrate an understanding of the locations of objects in the universe.
E.5.8B Students will demonstrate an understanding of the principles that govern moon phases, day and night, appearance of objects in the sky, and seasonal changes.
E.6.8 Students will demonstrate an understanding of Earth's place in the universe and the interactions of the solar system (sun, planets, their moons, comets, and asteroids) using evidence from multiple scientific resources to explain how these objects are held in orbit around the Sun because of its gravitational pull.

Art Knows Anything Goes

Each week a new lesson and art project is presented. Lessons may cover 3D and 2D construction, color theory, mixtures, and art elements which often overlap scientific principles.

Standards
Art lessons can be developed to teach many of the 2018 MCCRS for Science. Please contact LMDC for specific requests.

WLMDC TV

At WLMDC, children become directors of their own TV show. This area has recently been renovated to have a green screen with more current technology. It includes a Game Show, Talk Show and Weather Station. Next to WLMDC, Discover Adventures offers an additional green screen area for students to use their imaginations.

Standards
E.K.8B Students will demonstrate an understanding that the Sun provides the Earth with heat and light.
E.1.9A Students will demonstrate an understanding of the patterns of weather by describing, recording, and analyzing weather data to answer questions about daily and seasonal weather patterns.
L.2.3A Students will demonstrate an understanding of the interdependence of living things and the environment in which they live.
E.4.9B Students will demonstrate an understanding of weather and climate patterns.

Pet Vet

The pet vet has exam tables, stethoscopes, x-rays, scale, lab coats, grooming station, and kennels.

Standards
L.K.1B Students will demonstrate an understanding of how animals (including humans) use their physical features and their senses to learn about their environment.
L.K.2 Students will demonstrate an understanding of how living things change in form as they go through the general stages of a life cycle.
L.K.3A Students will demonstrate an understanding of what animals and plants need to live and grow.
L.K.3B Students will demonstrate an understanding of the interdependence of living things and the environment in which they live.
L.1.2 Students will demonstrate an understanding of how living things change in form as they go through the general stages of a life cycle.
L.2.1 Students will demonstrate an understanding of the classification of animals based on physical characteristics.
L.2.2 Students will demonstrate an understanding of how living things change in form as they go through the general stages of a life cycle.
L.2.3A Students will demonstrate an understanding of the interdependence of living things and the environment in which they live.
L.2.3B Students will demonstrate an understanding of the interdependence of living things.
L.2.4 Students will demonstrate an understanding of the ways animals adapt to their environment in order to survive.
L.3.1 Students will demonstrate an understanding of internal and external structures in plants and animals and how they relate to their growth, survival, behavior, and reproduction within an environment.
L.3.2 Students will demonstrate an understanding that through reproduction, the survival and physical features of plants and animals are inherited traits from parent organisms but can also be influenced by the environment.
L.3.4 Students will demonstrate an understanding of how adaptations allow animals to satisfy life needs and respond both physically and behaviorally to their environment.
L.4.2 Students will demonstrate an understanding of life cycles, including familiar plants and animals (e.g., reptiles, amphibians, or birds).

Dolan Avenue Depot

All aboard the Dolan Avenue Express. Costumes and props take kids back to a time when trains were a popular form of transportation.

Standards
P.2.6 Students will demonstrate an understanding of how the motion of objects is affected by pushes, pulls, and friction on an object.
E.2.10.3 Use informational text and other media to summarize and communicate how Earth materials are used
E.3.10 Students will demonstrate an understanding that all materials, energy, and fuels that humans use are derived from natural sources.

The Port

Drag the Gulf for shrimp and operate and load cargo with a crane. The port teaches children about life on the Mississippi Gulf Coast.

Standards
L.K.1B Students will demonstrate an understanding of how animals (including humans) use their physical features and their senses to learn about their environment.
L.2.1 Students will demonstrate an understanding of the classification of animals based on physical characteristics.

A Matter of Science

This exhibit makes science exciting! Mass, motion, sight, sound, and safety are some of the topics explored through interactive activities. A Matter of Science will challenge and motivate kids to learn more about the world around them.

Exhibit Activity	Standards
Pedal Power	**P.2.6** Students will demonstrate an understanding of how the motion of objects is affected by pushes, pulls, and friction on an object.
	P.3.6 Students will demonstrate an understanding of magnets and the effects of pushes, pulls, and friction on the motion of objects.
	E.3.10 Students will demonstrate an understanding that all materials, energy, and fuels that humans use are derived from natural sources.
	P.4.6A Students will demonstrate an understanding of the common sources and uses of heat and electric energy and the materials used to transfer heat and electricity.
	P.5.6 Students will demonstrate an understanding of the factors that affect the motion of an object through a study of Newton's Laws of Motion.
Magnetic Fun	**P.2.6** Students will demonstrate an understanding of how the motion of objects is affected by pushes, pulls, and friction on an object.
	P.3.6 Students will demonstrate an understanding of magnets and the effects of pushes, pulls, and friction on the motion of objects.
	P.5.6 Students will demonstrate an understanding of the factors that affect the motion of an object through a study of Newton's Laws of Motion.
	P.5.5A Students will demonstrate an understanding of the physical properties of matter.
Wind Tunnel	**P.2.6** Students will demonstrate an understanding of how the motion of objects is affected by pushes, pulls, and friction on an object.
	P.3.6 Students will demonstrate an understanding of magnets and the effects of pushes, pulls, and friction on the motion of objects.
	P.5.6 Students will demonstrate an understanding of the factors that affect the motion of an object through a study of Newton's Laws of Motion.
Pulley Chairs	**P.2.6** Students will demonstrate an understanding of how the motion of objects is affected by pushes, pulls, and friction on an object.
	P.3.6 Students will demonstrate an understanding of magnets and the effects of pushes, pulls, and friction on the motion of objects.
	P.5.6 Students will demonstrate an understanding of the factors that affect the motion of an object through a study of Newton's Laws of Motion.
Tornado Tube	**E.1.9A** Students will demonstrate an understanding of the patterns of weather by describing, recording, and analyzing weather data to answer questions about daily and seasonal weather patterns.

	E.4.9C Students will demonstrate an understanding of how natural processes and human activities affect the features of Earth's landforms and oceans.
Lite Brite	**P.1.6A** Students will demonstrate an understanding that light is required to make objects visible.
	P.4.6A Students will demonstrate an understanding of the common sources and uses of heat and electric energy and the materials used to transfer heat and electricity.
	P.4.6B Students will demonstrate an understanding of the properties of light as forms of energy.
PVC Pipe organ	**L.K.1B** Students will demonstrate an understanding of how animals (including humans) use their physical features and their senses to learn about their environment.
	P.1.6B Students will demonstrate an understanding of sound.
	P.4.6C Students will demonstrate an understanding of the properties of sound as a form of energy.
Make Noise wall	**L.K.1B** Students will demonstrate an understanding of how animals (including humans) use their physical features and their senses to learn about their environment.
	P.1.6B Students will demonstrate an understanding of sound.
	P.4.6C Students will demonstrate an understanding of the properties of sound as a form of energy.
Kaleidoscope	**P.1.6A** Students will demonstrate an understanding that light is required to make objects visible.
	P.4.6A Students will demonstrate an understanding of the common sources and uses of heat and electric energy and the materials used to transfer heat and electricity.
	P.4.6B Students will demonstrate an understanding of the properties of light as forms of energy.
Ball Ramps	**P.2.6** Students will demonstrate an understanding of how the motion of objects is affected by pushes, pulls, and friction on an object.
	P.3.6 Students will demonstrate an understanding of magnets and the effects of pushes, pulls, and friction on the motion of objects.
	P.5.6 Students will demonstrate an understanding of the factors that affect the motion of an object through a study of Newton's Laws of Motion.
Other STEM activities: Stroop Effect and The Bird Cage	

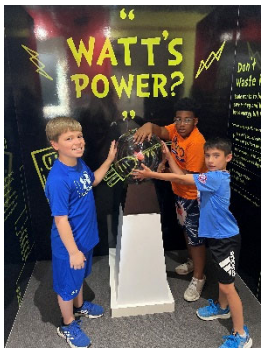
History Hotel

Kids hold the key to having fun and learning about history at this 1890's Mississippi City hotel.

Standards
L.K.1B Students will demonstrate an understanding of how animals (including humans) use their physical features and their senses to learn about their environment.

Louie's Lab

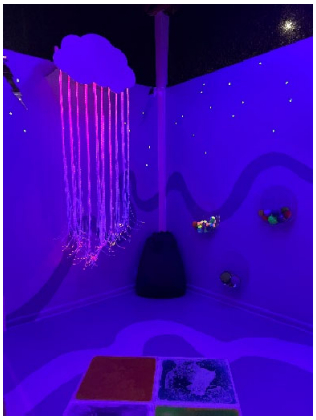
Louie's Lab sponsored by Mississippi Power Foundation is designed to teach students and visitors about energy, energy safety, and how to save energy!



Standards	
Watt's Power	**P.4.6A** Students will demonstrate an understanding of the common sources and uses of heat and electric energy and the materials used to transfer heat and electricity.
Lego Table	**P.K.5B** Students will demonstrate an understanding of how solid objects can be constructed from a smaller set.
	E.4.10 Students will demonstrate an understanding of the various sources of energy used for human needs along with their effectiveness and possible impacts.
Louie's Computer	**E.4.10.2** Use technology or informational text to investigate, evaluate, and communicate various forms of clean energy generation.
Louie's River Rescue	**E.1.10** Students will demonstrate an understanding of human dependence on clean and renewable water resources.
	L.2.3A Students will demonstrate an understanding of the interdependence of living things and the environment in which they live.

Sensory Space

Designed to be a space of calm engagement, the Sensory Space offers a journey into the imagination.



Standards
P.5.6 Students will demonstrate an understanding of the factors that affect the motion of an object through a study of Newton's Laws of Motion.
P.5.5A Students will demonstrate an understanding of the physical properties of matter.
P.4.6B Students will demonstrate an understanding of the properties of light as forms of energy.

To Market, To Market

Kids will have fun filling their carts with fruit, bread, seafood, and everything on their list at this real Mississippi grocery store. Or, they can play cashier and add up the items.

Standards
L.K.3A Students will demonstrate an understanding of what animals and plants need to live and grow.
L.K.3B Students will demonstrate an understanding of the interdependence of living things and the environment in which they live.
L.2.3B Students will demonstrate an understanding of the interdependence of living things.

Outdoor Exhibits

Outside, oak-covered acres provide more space to let their imaginations run wild.

Kids Street

This real-life subdivision in kid-sized proportions offers big fun. The homes are constructed to give kids a glimpse at what goes into building.

Standards
L.K.3B Students will demonstrate an understanding of the interdependence of living things and the environment in which they live.
P.4.6A Students will demonstrate an understanding of the common sources and uses of heat and electric energy and the materials used to transfer heat and electricity.

Treehouse Village

Tree House Village was created for habitation and imagination! Our towering live oaks spread their branches and welcome kids of all ages to come and play. So come have fun and discover a new appreciation for nature.

Standards
L.K.3B Students will demonstrate an understanding of the interdependence of living things and the environment in which they live.

Chimney Swift

Nest, video, graphics (Ornithology).

Standards
L.K.3A Students will demonstrate an understanding of what animals and plants need to live and grow.
L.2.3A Students will demonstrate an understanding of the interdependence of living things and the environment in which they live.
L.3.1 Students will demonstrate an understanding of internal and external structures in plants and animals and how they relate to their growth, survival, behavior, and reproduction within an environment.

On the Green

Discover our barrier islands and local birds at the Ship Island Lookout. Paint with water on a canvas of natural slate. Tap a tune on instruments planted in the ground. Check the wind and other weather at the Weather Station. Enjoy the fresh air and outdoor fun!

Exhibit Activity	Standards
Weather Station	**E.K.8B** Students will demonstrate an understanding that the Sun provides the Earth with heat and light.
	E.1.9A Students will demonstrate an understanding of the patterns of weather by describing, recording, and analyzing weather data to answer questions about daily and seasonal weather patterns.
	L.2.3A Students will demonstrate an understanding of the interdependence of living things and the environment in which they live.
	E.4.9B Students will demonstrate an understanding of weather and climate patterns.
Slate panels to paint with water (evaporation)	**E.K.8B** Students will demonstrate an understanding that the Sun provides the Earth with heat and light.
	E.4.9A Students will demonstrate an understanding of how the water cycle is propelled by the sun's energy.
Outdoor musical instruments	**L.K.1B** Students will demonstrate an understanding of how animals (including humans) use their physical features and their senses to learn about their environment.
	P.1.6B Students will demonstrate an understanding of sound.
	P.4.6C Students will demonstrate an understanding of the properties of sound as a form of energy.
Telescopes	**P.1.6A** Students will demonstrate an understanding that light is required to make objects visible.
	P.4.6B Students will demonstrate an understanding of the properties of light as forms of energy.

Bubbles

This exhibit allows students to experiment with surface tension and have fun at the same time.

Standards
P.5.6.5 Predict how a change of force, mass, and/or friction affects the motion of an object to convert potential energy into kinetic energy.

H2Oh! On the Porch

Kids will love to splash and play as they discover the physical properties of water as it moves and works.

Standards
E.4.9A Students will demonstrate an understanding of how the water cycle is propelled by the sun's energy
P.K.5A.2 Describe and compare the properties of different materials and classify these materials by their observable characteristics and by their physical properties.
P.5.5A.4 Make and test predictions about how the density of an object affects whether the object sinks or floats when placed in a liquid.

Outreach Exhibits

For an additional fee, LMDC will bring the excitement of learning through play to your school or set up these exhibits for your students to experience during a museum field trip.

Imagination Playground

Mobile large blue foam block-based play system that stimulates children's minds and bodies through active, creative play for construction. The little kid's area, Bear Camp Bayou, has a small version.

Standards
P.K.5B Students will demonstrate an understanding of how solid objects can be constructed from a smaller set.
P.2.6 Students will demonstrate an understanding of how the motion of objects is affected by pushes, pulls, and friction on an object.
P.3.6 Students will demonstrate an understanding of magnets and the effects of pushes, pulls, and friction on the motion of objects.
P.K.5B Students will demonstrate an understanding of how solid objects can be constructed from a smaller set.
P.2.6 Students will demonstrate an understanding of how the motion of objects is affected by pushes, pulls, and friction on an object.

Stuffee

Health ambassador, from The Children's Museum of Pittsburgh. Stuffee teaches children the function of the human body, the importance of eating healthily and fitness, medical questions, and organ and tissue donation. Stuffee is a 7' foot tall "doll" with a giant zipper down the front that when unzipped, children can view and hold his internal organs: colorful soft reproductions of the hearts, lungs, intestines, etc.

Standards
L.K.1B Students will demonstrate an understanding of how animals (including humans) use their physical features and their senses to learn about their environment.
L.4.1 Students will demonstrate an understanding of the organization, functions, and interconnections of the major human body systems.

Rigamajig

Rigamajig is a new large-scale building kit designed by Cas Holman for hands-on free play and playful STE(A)M learning. This collection of wooden planks, wheels, pulleys, nuts, bolts, and rope allows children to follow their curiosity through play while learning 21st century skills. There are no right or wrong answers; the act of playing and building is the goal, not the finished product.

Standards
P.K.5B Students will demonstrate an understanding of how solid objects can be constructed from a smaller set.
P.2.6 Students will demonstrate an understanding of how the motion of objects is affected by pushes, pulls, and friction on an object.
P.3.6 Students will demonstrate an understanding of magnets and the effects of pushes, pulls, and friction on the motion of objects.
P.K.5B Students will demonstrate an understanding of how solid objects can be constructed from a smaller set.
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