McWane Science Center

EDUCATION GUIDE

2025-2026

A Comprehensive Guide for Educators On All Things McWane Science Center

New Programs Inside!

McWane Science Center is a 501(C)(3) nonprofit organization. Our mission is to spark wonder and curiosity about our world through hands-on science experiences

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Note Worthy Dates

TEACHER'S NIGHT OUT

Tuesday, Sept 9, 2025

4:30 - 7:30 PM | $5 per person

To say thank you for being loyal friends to McWane Science Center, you are invited to join us for a special evening. Explore the Adventure Halls, see a special screening of *Jane Goodall: Reasons for Hope* on the IMAX Dome, enjoy refreshments, and enter to win great door prizes, including a one-year family membership to McWane Science Center!
Deadline to register is August 26, 2025.

Guests must be 18 years or older. Visit mcwane.org/events to learn more. Contact pchowning@mcwane.org for questions.

CELEBRATE SCIENCE

Attention all 3rd-5th grade teachers!

You and your students are cordially invited to apply for McWane Science Center's year long exhibit design competition, Celebrate Science! Your students will become exhibit designers and compete against other schools by creating innovative exhibit prototypes. The project will help incorporate STEM across curriculum with a chance to win cash prizes! The winning prototype will be on display at McWane Science Center for a full year!
Deadline to apply is Sept. 19, 2025.

Contact Savannah Teague at steague@mcwane.org for more information.

EDUCATOR ADVISORY COMMITTEE

The Educator Advisory Committee collaborates with McWane to develop and improve hands-on science programs that further our mission. It is open to all classroom teachers, Pre-K to 12th grade, college professors, informal educators with teaching experience, and community representatives working directly with children ages 0-18. Learn more on page 10. **Deadline to register is September 26, 2025.**

Contact pchowning@mcwane.org for questions.

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Fall 2025 - Spring 2026

Calendar

2025

Sept 9	Teacher's Night Out
Sept 17-20	Pollution Prevention Week
Oct 8-11	World Space Week
Oct 22-25	National Chemistry Week
Oct 30-31	Spooky Science
Nov 8	National STEM Day
Dec 10-13	Computer Science Education Week

2026

Feb 25-28	Engineers Week
Feb 27	Engineering Showcase
March 25-28	Brain Awareness Week
March 23-27	Spring Break
April 8-11	Robotics Week
April 22	Earth Day

SCIENCE, LEARNING, FUN!

Every school day you lead your students down an educational path teaching them the required science, technology, engineering, and math (STEM) learning concepts relevant to their grade level. We know the challenges of incorporating hands-on, engaging experiences. McWane Science Center wants to be a part of the science education journey with you and your students this school year. Together, we can make learning a fun and engaging adventure for all students.

The newest 2025-2026 Education Guide showcases the various standards-based programs we offer, serving Pre-K through 12th grades. Inside you will find helpful information about McWane field trip programs as well as exciting opportunities that can take place in your own classrooms. You'll also learn about the exhibits, IMAX documentaries, teacher resources, and additional learning experiences that will make STEM relevant for your students. Please reach out to me directly for comments or questions, and I look forward to getting to know you this school year. I can be reached at pchowning@mcwane.org.

Peggy Chowning

Vice President of Education,
McWane Science Center

Meet Our Education Team

At the heart of our science center is an exceptional team of science communicators and educators dedicated to sparking wonder and curiosity about our world through hands-on science experiences.

Where to Find Us:

You can find our educators throughout the science center ready to share their passion for STEM:

- Public Programs – Engage in workshops and demonstrations on every floor of the museum. Check our calendar to learn more.
- Labs – Participate in hands-on experiences and innovative projects in our McWane Field Trip Labs.
- Exhibit Interpretation – Look out for our educators around the exhibits for insightful explanations and answers to your questions.
- McWane on the Move – Our commitment to STEM education extends beyond our walls! Our educators bring the McWane magic to schools and community events across Alabama.

SCIENCE IS FOR *Everyone*

Because of so many wonderful supporters, McWane Science Center offers scholarships to Title I and other qualifying schools and youth-serving organizations across Alabama. Students may enjoy McWane on the Move outreach programs or field trips to the science center. And we thank the wonderful contributors listed on this page for making science and wonder possible for Alabama students!

Scholarship funds are used for Adventure Hall admission, educational programs, and outreach programs (all based on availability). Funds are limited and accessed on a first-come, first-served basis. Scholarships are not typically in support of transportation, food service or IMAX movies so we encourage you to plan for covering these other costs.

To see if your school or organization is eligible for the Education Scholarship Fund, fill out the forms on mcwane.org under Field Trips & McWane on the Move.

Thank You to Our Educational Program Supporters!

McWane Foundation · State of Alabama · City of Birmingham · Regions Bank · Protective Life Corporation · Alabama Industrial Development Training / Alabama STEM Council · Argosy Foundation · Blue Cross and Blue Shiels of Alabama / The Caring Foundation · Hill Crest Foundation, Inc. · The PNC Financial Services Group, Inc.Better Place Foundation · Leon Aland Family Foundation Joseph S. Bruno Charitable Foundation · Dunn-French Foundation · GCP · Honda Manufacturing of Alabama, Inc · Jefferson County Commission · Jefferson County Community Service Fund · Hugh Kaul Foundation · Kinder Morgan Foundation · M.R. Metzger Family Foundation · Medical Properties Trust · Robert R. Meyer Foundation · O'Neal Industries · Royal Cup Coffee and Tea · ServisFirst Bank · Shelby County Commission · Spire · Susan Mott Webb Charitable Trust · City of Vestavia Hills · Vulcan Materials Company · Vulcan Industrial Contractors · Walmart Supercenter - Bessemer · Walmart Neighborhood Market – Hoover · Walmart Neighborhood Market – Vestavia Hills · Walmart Supercenter - Hueytown

IMAX® Dome Theater

Don't Just Watch the Movie. *Experience It!*

The IMAX® Dome Theater at McWane Center utilizes a 5-story, 79' diameter dome screen to take audiences places they have only dreamed of and allows students to experience familiar subjects in a completely new way. Our IMAX® with Laser projection system, combined with crystal-clear digital sound, delivers stunning immersive experiences found nowhere else in Alabama. Designed to both captivate and inspire, our films present educational content in a larger-than-life format that brings science, nature, and history to life in vivid detail. More than just a movie, each documentary film is a fully immersive journey that sparks curiosity, deepens understanding, and helps students retain knowledge long after their visit.

The IMAX® Dome Theater is an exceptional complement to classroom learning and a highlight of any field trip to McWane Science Center.

To learn how to add an IMAX® documentary to your field trip, check out page 22. Concessions can also be booked in advance, so the popcorn is ready when you arrive!

2025-2026 IMAX® Documentaries

The Blue Angels

Imagine strapping into the cockpit of a fighter jet and soaring through the sky at 700 miles per hour—just inches from your wingman. *The Blue Angels* puts you in the flight suit of the Navy's elite Flight Demonstration Squadron as they push the limits of physics and teamwork. With jaw-dropping aerial footage and behind-the-scenes access, this immersive documentary reveals what it takes to join one of the most iconic aviation teams in the world. *The Blue Angels* is produced by JJ Abrams and Glen Powell in partnership with the U.S. Navy and directed by Paul Crowder.

Standards List (Grade.Standard): 8.9, 8.10, 8.11,
Hap: 8
Phys: 1, 2

Jane Goodall: Reasons for Hope

Drawing on decades of work by the world's most famous living ethologist and environmentalist, *Jane Goodall–Reasons for Hope* is an uplifting journey around the globe that highlights good news stories meant to inspire action and optimism. From the Northern Bald Ibis' migration over the Alps to the Blackfeet Nation's reintroduction of the American Bison, the film weaves together powerful narratives of renewal and resilience. *Jane Goodall–Reasons for Hope* invites audiences to see the world through Jane's eyes—and believe in a better future.

Standards List (Grade.Standard): 1.5, 1.6, 1.7, 2.7, 3.5, 3.6, 3.7, 3.10, 3.11, 3.12, 3.14, 4.8, 5.9, 5.12, 5.14, 6.11, 7.6, 7.7, 7.8, 7.9, 7.10
Bio: 6, 7, 8, 10
Env. Sci.: 3, 4, 5, 7, 8, 9, 12

Four Floors of *Fun!*

Explore all four levels of our Adventure Halls and experience engaging, live science demonstrations. Sometimes interaction is key to *getting it*. Seeing truly is believing! At McWane Science Center, we believe that nothing satisfies the curiosity as much as learning in a hands-on environment, and that is what you will find in every exhibit throughout our Adventure Halls.

Check out what experiences we have available during the 2025-2026 school year!

New Exhibit Coming in Fall 2025

Opening October 2025, *The Terrapin Nursery* invites students to explore the vital connection between science and conservation through the story of Alabama's own diamondback terrapins. This engaging new exhibit showcases Dr. Wibbels', of UAB, groundbreaking HeadStart program and features live young terrapins in aquarium habitats, offering an up-close look at a species crucial to the health of our coastal marshes. Interactive displays and documentary footage bring the conservation journey to life, while interpretive graphics explain how these keystone turtles help protect their fragile ecosystem. A special viewing window into McWane's conservation lab adds a behind-the-scenes perspective, making this exhibit an inspiring opportunity for students to see real-world science in action. New grade-specific Lab experiences connected to the exhibit will also be available—learn more about booking a Lab on page 12.

Under the Sea

Explore our aquarium, which features over 50 species of aquatic life in a wide variety of salt and fresh water tanks. Highlights of Alabama's largest aquarium include the popular Shark and Ray Touch Tank, the Jellyfish Tank, the Cahaba River Biorama, and a variety of fresh water fish.

Shark and Ray Touch Tank

Soak up the science at the Shark and Ray Touch Tank! This aquarium features a large, unique tank where visitors can observe sharks and rays. It is a great opportunity to learn about these fascinating creatures up close.

World of Water Cart

Navigate the world's waterways with watery demonstrations and marine animal meet and greets, while exploring how our actions can support a healthy environment. Public programming occurs daily and is free for museum visitors. Check out our website to learn more.

LOWER LEVEL

So Much Science!

Your students can lie on the Bed of Nails, learn about simple machines on the Pulley Chairs, experiment with bubbles, and more on the floor level of the Adventure Halls.

Rushton Theater

Rushton Theater houses many of our most exciting science demonstrations! Be sure to reserve a program in Rushton to enhance your field trip. *Learn more about available programs on page 14.*

GENEius Lab

GENEius is an engaging, day-long laboratory experience in molecular biology and genetics designed for grades 9-12.
Learn more about GENEius Lab on page 15.

Workshop

Join us for hands-on challenges in the Workshop where you'll test your engineering skills, design circuit paths, or explore simple machines. Public programming occurs daily and is free for museum visitors. Check our website calendar to learn more.

LEVEL ONE

LEVEL TWO

Dino-Fever!

McWane is not only a science museum; it also houses the state's largest fossil collection. Find Alabama's tyrannosaur, explore the Ice Age, and meet faces and fins that swam in Alabama's oceans 80 million years ago on Level 2.

Itty Bitty Magic City

Discover STEM around every corner in McWane's early learning exhibit, Itty Bitty Magic City. In familiar city scenes with play-based interactives, children will explore concepts such as force & motion, colors & patterns, & cause & effect. Itty Bitty Magic City welcomes kindergarten and below field trip groups on a first come, first served basis, as capacity is limited in this exhibt. A chaperone count of 1 adult per 5 children is required for entry.

Explore Lab

With the Collections Lab as your backdrop, participate in a variety of hands-on experiences that explore the natural world as you dig for shark teeth or plan a sustainable garden. Public programming occurs daily and is free for museum visitors. Check our website calendar to learn more.

LEVEL THREE

Art & Tech

Discover exciting, interactive exhibits about Art & Technology, like the popular Shadow Walls and the updated, digital Walking Piano!

Class Time

The third floor is home to a variety of classrooms designed to provide the best science education. *Learn on page 22 how to book programs in the McWane Classrooms.*

Rotating Exhibits

Each year, McWane Science Center hosts a number of traveling or temporary exhibits, like the holiday favorite, Magic of Model Trains, which are located on the 3rd floor. *Check out page 6 for info on upcoming exhibits.*

Education Guide
Program Index

The Education Guide Program Index is organized by grade level, making it easy to quickly find programs that align with your needs and explore everything McWane has to offer. This handy reference streamlines navigation and helps you get the most out of the guide.

Grades K - 2

Labs - pg. 12
Labs include: Curious Critters | Frantic Friction | Terrapin Tales

Rushton Field Trip Programs - pg. 14
Programs include: Fire and Ice | Lightning Strikes (2nd grade) | Science Spectacular (2nd grade)

McWane on the Move Programs - pg. 16
Programs include: Measure Up | Build-A-Bug | Sun Blocks Amazing Animals | Matter Matters | Enlightening Electricity: Circuits (2nd grade) | Solids and Liquids: The Science of Slime (1st & 2nd grade)

Assembly Programs - pg. 18
Programs include: Alabama Scientists (2nd grade) | Superhero Science (2nd grade)

STEM Kits - pg. 19
Kits include: Light and Sound (1st grade)

Grades 3 - 5

Labs - pg. 12
Labs include: Marsh Math | Molecular Mysteries | Ingenious Geology | Jr. Robotics | Surgical Solutions | Oceans of Energy

Rushton Field Trip Programs - pg. 14
Programs include: Sound of Science | May the Forces Be with You | Lightning Strikes | Science Spectacular | Chem Possible

McWane on the Move Programs - pg. 16 & 17
Programs include: Amazing Animals | Enlightening Electricity: Circuits | Inventive Engineering | Reactions in Action | A-MAZE-ing Robots | Solids and liquids: The Science of Slime

Assembly Programs - pg. 18
Programs include: Recipe for a Storm | Alabama Scientists | Superhero Science

Virtual Programs - pg. 18
Programs include: Dissection Live (4th & 5th grade)

STEM Kits - pg. 19
Kits include: Chemistry and Conservation of Mass (5th grade) | Light and Sound | Water testing (5th grade) | Natural Selection

Grades 6 - 8

Labs - pg. 13 & 15
Labs include: Blueprints for Tomorrow | Engineering Challenge: Bridges | Shell Science | Robotics Challenge | Under the Scope | All LabWorks Programs

Rushton Field Trip Programs - pg. 14
Programs include: Sound of Science | May the Forces Be with You | Lightning Strikes | Science Spectacular | Chem Possible

McWane on the Move Programs - pg. 16 & 17
Programs include: Amazing Animals | Enlightening Electricity: Circuits (6th grade) | Reactions in Action | A-MAZE-ing Robots

Assembly Programs - pg. 18
Programs include: Recipe for a Storm | Alabama Scientists | Superhero Science

Virtual Programs - pg. 18
Programs include: Dissection Live | On Demand: Recorded Shark Dissections | Surgical Systems

STEM Kits - pg. 19
Kits include: Chemistry and Conservation of Mass (8th grade) | Light and Sound (8th grade) | Water Testing (6th grade) | Natural Selection (7th grade)

Grades 9 - 12

Labs - pg. 13 & 15
Labs include: Life on a Slide | From Concepts to Creation: Exploring 3D Printing | Robotics Lab | The Rube Challenge | Terrapin Conservation Lab | All GENEius Programs

Rushton Field Trip Programs - pg. 14
Programs include: Lightning Strikes | Science Spectacular | Chem Possible

McWane on the Move Programs - pg. 16 & 17
Programs include: Amazing Animals | Amp'd Up

Virtual Programs - pg. 18
Programs include: Dissection Live | On Demand: Recorded Shark Dissections | Surgical Systems

Teacher Professional Resources

EMPOWERING *Educators*

AMSTI Affiliate

Educator Advisory Committee

This committee works to foster collaboration and learning among teachers and advocate for our mission, sparking wonder and curiosity about our world through hands-on science experiences. Members are involved in evaluating, piloting, and developing programs produced by McWane's Education Department. Educators must be willing to meet three times per year, for a two year term. Teachers will receive one free McWane on the Move classroom program and a one-year family membership to McWane Science Center.

Contact Peggy Chowning at pchowning@mcwane.org to receive an application. Deadline to apply is Sept 26, 2025.

The Educator Advisory Committee is open to all classroom teachers, Pre-K to 12th grade, college professors, informal educators with teaching experience, and community representatives working directly with children ages 0-18.

Did you know teachers get in free?

Teachers can visit McWane Science Center for FREE! Just bring a valid teacher's ID and you will be granted admission into the Adventure Halls. Let us show you what we have to offer you and your school.

Professional Development Workshops

Infuse your teaching with innovative ideas and strategies to engage students in STEM learning. Workshops may be held at your school or at McWane Science Center. These workshops are PowerSchool Credit Continuing Education Units (CEU).

Cost: $200 per workshop for 5-15 teachers; $400 per workshop for 16-30 teachers.

Storybook STEM: Accessing STEM through Storytime

Step into a world of imagination with techniques that empower educators to expand story time with STEM activities that enrich lessons and encourage STEM exploration.

New! Outside In: Integrating Nature Play into the Classroom

Incorporate the natural world in the classroom through supporting play, fostering curiosity, and facilitating meaningful interactions with the environment.

Design Challenge in the Classroom

Transform the classroom into a hub of creative exploration by examining real-world problems that inspire students to think critically and find innovative solutions.

New! The SCIENCE of STEM Education

Discover the key elements that make STEM Education engaging and transformative using our SCIENCE framework. Explore how to spark curiosity, build science capital, and strengthen science identity – essential steps to inspiring lifelong STEM engagement.

Tech Talks: Navigating Classroom Conversations about Future Technology

Embrace the ever-changing technological landscape as we grapple with ethical dilemmas, examine diverse values and perspectives, and build confidence to guide classroom conversations about our future.

McWane Summer Science Institute

June 22 - 24

Get ready to spark curiosity, ignite creativity, and amplify STEM opportunities in your classroom with our multi-day professional development workshop. Join McWane's team of educators and subject-matter experts to explore techniques for incorporating STEM into your curriculum with standards-based activities, challenges, and more.

For more information on our professional development workshops, visit mcwane.org/learning/teachers/teacher-workshops.

Labs at McWane

Science Education *Designed* For Your Students

Embark on an unforgettable educational journey with your students at McWane Science Center. Our hands-on learning experiences are tailored to grade level to align with Alabama science education standards. Choose from our diverse range of program topics designed to spark wonder and curiosity and enrich your McWane field trip experience.

Cost: $3 per student

Grades K - 2nd

NOTE: Maximum capacity for grades K-2 is 25 students per program; minimum is 10 students. Programs are 30 minutes long.

New! Terrapin Tales

Discipline: Life Science
Journey through the Alabama wetlands with the Diamondback Terrapin as we take a look at the adaptation and behaviors that help these critters thrive in their natural habitat.
Science: K.4, K.5, K.6, 1.5, 1.6, 2.7

Curious Critters

Discipline: Life Science
Join us as we introduce you to a wild world of fur, scales, and exoskeletons. With hands-on activities and a special meet-and-greet, we'll explore the diets and habitats of some of McWane's animal friends.
Science: K.4, K.6, 1.5, 2.7
ASELD: SEK Biological Science 1bOP-2, 1bOP-3

Frantic Friction

Discipline: Physical Science
Have you ever wondered why a racecar has smooth wheels? Learn how texture impacts speed as your car zooms (or slows) across our all-terrain ramps. The race is on!
Science: K.1, K.2
ASELD: SEK Physical Science 1cYP-1, 1cOP-1

Grades 3rd - 5th

NOTE: Maximum capacity for grades 3-5 is 25 students per program; minimum is 10 students. Groups of 2 or more children may be partnered for activities. Programs are 60 minutes long unless otherwise noted.

New! Marsh Math

Discipline: Life Science & Math
Explore food webs, keystone species, and ecosystem dynamics with the Diamondback Terrapin. Students link science and math using data collection to monitor terrapin populations and make predictions based on environmental changes.
Science: 3.10, 3.12, 5.14

3-5 grade programs cont.

Molecular Mysteries

Discipline: Physical Science
Unravel a molecular mystery with your team of lab detectives. Student sleuths will suit up with goggles and gloves to examine physical and chemical properties, mix solutions, collect data, and use their new-found knowledge to crack the code of chemical reactions.
Science: Grade 5: 2, 3, 4

Ingenious Geology

Discipline: Earth Science
Rocks and minerals have a story. To discover it, prepare to engage all of the senses and employ scientific tools like microscopes and magnifiers, ultraviolet light, electricity, and density tests. Students will examine the properties of rocks for texture, shape, color, smell and more. By testing local rocks from Alabama and samples from distant locations, they'll become true junior geologists.
Science: 4.11, 5.12, 5. 14, 6.5a, 6.5b, 6.5c, 6.5d, 6.7

Jr. Robotics

Duration: Program is 90 minutes
Discipline: Technology/Engineering/Computer Science
Imagination meets innovation with LEGO robotics. Junior Robotics will ignite curiosity and creativity as students use our favorite building blocks to build and program their own robots. These STEM challenges encourage teamwork, problem solving, and critical thinking.
Science: 3.3, 3.4, 4.2, 5.5, 5.7
Technology: 3rd-5th grade: 1,2,3,7,12
Digital Literacy Standards: R4, Grade: 3:2, 3, 4, 5, 7, 18, 19; Grade 4: 3, 4, 7, 17; Grade 5:2, 6, 8

Surgical Solutions

Discipline: Life Science/Engineering
Students will take on the role of biomedical engineers. Using the engineering design process, they will build tools for real-world veterinary surgical challenges.

Oceans of Energy

Discipline: Earth Science/Engineering
The ocean is a great source of renewable energy! Students will create energy farms over a model ocean. As various obstacles arise, they must use their critical thinking skills to adapt and harvest as much energy as they can.
Science: 3.12, 3.15, 4.4, 4.11, 4.14, 5.14, 6.11; Env: 6a, 6b, 8b

Grades 6th - 8th

NOTE: Maximum capacity for grades 6-8 is 25 students per program; minimum is 10 students. Programs are 60 minutes long unless otherwise noted.

New! Blueprints for Tomorrow

Discipline: Engineering
Design a city for tomorrow as you face real-world challenges, make high-stakes decisions, and race against time! Build, strategize, and harness real data to create a thriving, balanced community where every choice shapes the future.
Science: 5.14, 6.9c, 6.11, 7.7, 7.9; Earth & Space 7b, 8a, 8b, 8c; Env. 7, 11b; Tech 5, 7, 14

Engineering Challenge: Bridges

Discipline: Physical Science
Put those engineering skills to the test! Through this hands-on engineering challenge, students will design and build bridges to resist the pull of gravity. Their success depends on innovation, ingenuity and what they can make with a given set of supplies.
Science: 8.10, 8.11, 8.12, 8.14

New! Shell Science

Discipline: Life Science
Terrapins have incredible adaptations that allow them to survive in the most unique of environments. Dive into the morphology of these coastal critters to watch how their growth and development allows them to thrive in salty waterways.
Science: 6.11, 7.6, 7.8, 7.9, 7.17

Robotics Challenge

Duration: Program is 90 minutes
Discipline: Technology/Computer Science
Spark curiosity and build coding prowess with our versatile Edison robotics system. From programming in multiple coding languages, like Scratch or Python, to completing a variety of challenges, students will embark on a journey of exploration and innovation. Engage in hands-on experimentation, problem-solving, and teamwork as they navigate through the robo-obstacle course.
Science: Grade 8:8, 9, 10
Technology: 6th - 8th grade: 1
Math: Grade 6:20 (6-EE9); Grade 6:5, 6; Grade 7:3, 5; Grade 8:3, 5

Under the Scope

Discipline: Life Science
Magnify your curiosity with Under the Scope. Learn biotechnology skills with hands-on experience of real lab tools to observe and prepare slides, capture images, and uncover the hidden wonders of the microscopic world.
Science: 7.1a, 7.1b, 7.4, 7.6, 7.8, 7.9

Pictured: The Rube Challenge

Grades 9th - 12th

NOTE: Maximum capacity for grades 9-12 is 25 students per program; minimum is 10 students. Programs are 60-90 minutes long.

New! Life on a Slide

Duration: 60 minutes
Discipline: Biology, Anatomy & Physiology
Explore the most basic form of life as we take a closer look at cells. Gain experience with the process of cell sample collection, slide preparation and staining, and microscopy.
Science: Bio1, 3; HAP: 1

From Concept to Creation: Exploring 3D Printing

Duration: 90 minutes
Discipline: Technology
Explore the world of 3D printing from basic principles to the tech's far-reaching impacts across industries. This project-based workshop encourages creativity, develops critical thinking skills, and empowers students to discuss the ethical and social implications of this technology.

Robotics Lab

Duration: 90 minutes
Discipline: Technology/Engineering/Computer Science
Ignite innovation in our advanced robotics lab with cutting edge VEX robotics. This lab immerses students in project-based lessons that tackle real world STEM challenges and help students develop problem-solving and teamwork skills.
Physics: 1 | Technology: 2, 10
Digital Literacy Standards: (HS) R4, 3, 6, 9, 10
NSES: Science as Inquiry. Science and Technology

The Rube Challenge

Duration: 90 minutes
Discipline: Physical Science, Physics
Take the Rube Challenge! Use the properties of physics to design a complex way to solve a simple problem. Explore the engineering process from start to finish in this fun-filled, hands-on program.
Science: Phys Sci: 1a, 1d, 5a; Phys: 1d, 2d, 3b, 3d, 3e

New! Terrapin Conservation Lab

Duration: 60 minutes
Discipline: Life Science
Explore the real-world conservation efforts behind our Terrapin Nursey. Using case studies and conservation data, students analyze population trends, human impacts, and restoration strategies shaping the future of Alabama's Diamondback Terrapins.
Science: Bio: 6, 8, 9, 10; Env.: 3.a.b, 8, 9, 10

Specialty **Programs**

Rushton Theater

The Rushton Theater hosts many of our most amazing programs. These large scale demonstrations will leave students wowed by science!

NOTE: Many Rushton Theater programs involve loud noises and flashing lights and may not be suitable for younger audiences or those with sensory processing sensitivities. Headphones are provided. For a sensory-friendly experience, geared towards younger students, please consider the Fire and Ice Program.

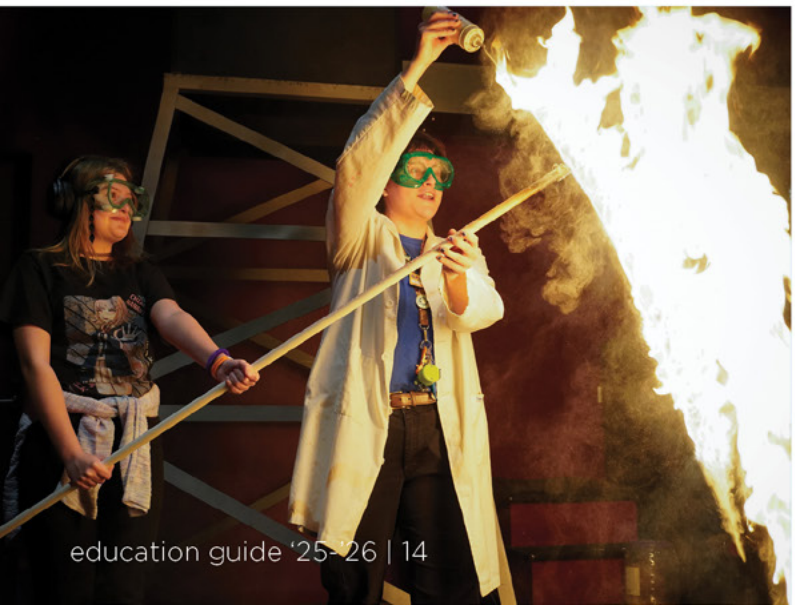
Seating Capacity: Max 100 | Min 50
Pricing: $3 per student
Duration: Programs are 30 minutes long, unless otherwise noted

Fire and Ice

Discipline: Physical Science
Grades: K4 - 1st
It's heating up and cooling down in this program that explores the extreme temperatures of hot and cold. Join us for a series of thermal demonstrations as we investigate icy concoctions and colorful flames.
This program is sensory-friendly and contains no loud noises or sudden flashes of light.
Duration: 20 minutes
Science: Grade 1.1
ASELD: SEK Scientific Inquiry 1aYP-4, 1aOP-3

Sound of Science

Discipline: Physical Science
Grades: 3rd - 8th grade
See frequency, feel amplitude, and grab a front-row seat to an electrifying performance of musical lightning. From sounds that make a splash to bizarre tricks of the mind, experience the science of sound like never before.
Science: Grade 4.6, 8.17



May the Forces Be with You

Discipline: Physical Science
Grades: 3rd - 8th
From gravity to air pressure, forces constantly surround us, pushing and pulling, affecting how everything moves (or doesn't). Explore the laws of motion, friction, and other physics concepts, as McWane unleashes surprising demonstrations of rocket launches, bouncing, and the world's fastest pencil.
Science: 3.1, 5.6, 8.8, 8.9, 8.10

Lightning Strikes

Discipline: Physical Science
Grades: 2nd - 12th
Delve into the power of electricity, as we explore the attractive (and repulsive) nature of electromagnetic forces, while comparing alternating and direct current. Students will see the hair-raising power of static from the Van de Graaff generator, light up fluorescent tubes without the use of wires, and witness our incredible giant Tesla coils.
Science: 3.3, 4.2, 5.1, 8.12

Science Spectacular

Discipline: Physical Science
Grades: 2nd - 12th
Brace yourself for our most incredible demonstrations, featuring high voltage electricity, red-hot combustion reactions, and super-cold liquid nitrogen.
Science: Grade 2.4, 3.3, 4.2 & 2b, 5.3, 8.5
Physical Science: 3
Physics: 5 & 11

New! Chem Possible

Discipline: Physical Science/Chemistry
Grades: 3rd - 12th grade
Explore the 6 signs of a chemical reaction as students go hands-on with larger-than-life chemistry demonstrations that will glow, bubble, change color, and even explode!
Science: 5.1, 5.3, 5.4, 8.6, 8.7, 8.8; Chem 2b, 3c, 6a

LabWorks & *GENEius Lab*

LabWorks & GENEius are a series of engaging experiments designed especially for middle school & high school students. Developed through a partnership between UAB's Center for Community Outreach Development (CORD) and McWane Science Center, these labs include modern scientific protocols and equipment that enable students to investigate contemporary questions in biology, chemistry, and physics.

Reservations: geneius@mcwane.org
Capacity: 25 students

LabWorks Programs

Grades: 6th - 8th
Times: 9 - 11 AM or 12 - 2 PM

Toothpaste Chemical Engineering

You do it every day, but how much do you really know about brushing your teeth? In this minty fresh lab, students take the role of chemical engineers to design and test out their own toothpaste. One of the most mundane daily routines becomes one of the most fun activities your students have ever done in the lab!

Science: Grade 8:2, 3; 5; MS Engineering

A Light in a Dark Room

How do we know what the universe is made of? In this lab, students explore the connections between elements and light as they investigate pigment, fluorescence, invisible ink, and even stars all while learning about chemical reactions and wavelength.

Science: Grade 8:1, 2, 5, 17, 18

The Eyes Have It

Have you ever wondered how we know if everyone sees the same colors? How do we know what colors animals can see? Are there colors out there we can't see? Students will explore these questions and find answers as they participate in simulations, test out illusions, and dissect a real sheep eye. This eye-opening day in the lab is one students will be sure to remember.

Science: Grade 7:3, 6, 8, 10

Isn't That a Crime?

One of McWane's most beloved animals has gone missing and we need help getting it back! In this exciting forensic lab, students learn to analyze multiple pieces of evidence including DNA, blood, and fingerprints. Put their critical thinking to the test in this fast-paced lab!

Science: Grade 7:12, 13

Carter Creek Mystery

Business is booming at the local paper and plastic factory that employs most of the city. But there's a big problem - the city's water source has been polluted and the factory is being blamed. In this lab, students are called in as EPA agents to test the water, solve the mystery, and save the day!

Science: Grade 6: 7, 15, 16

GENEius Programs

Grades: 9th - 12th
Times: 9 AM - 1:30 PM

Huntington's Disease Lab

Students learn structure and function of the human brain as they work in small groups to dissect a sheep brain and test their olfactory systems. After discussing the genetics of Huntington's disease, students act as medical examiners and determine the extent of damage in the caudate nucleus and its effect on the bodily systems.

Science: Human Anatomy and Physiology: 1, 4, 8; Biology: 1, 7, 8; Zoology: 1; Genetics: 5, 6, 7

DNA Fingerprinting and Exploration Lab

Can we use DNA to predict an observable trait? Students focus on genetic diversity and use contemporary techniques in molecular biology to isolate DNA from their cheek cells, use PCR to amplify the gene for PTC taste and employ gel electrophoresis to analyze samples. Then they will compare their predicted result to their phenotype and hope for sweet (or in this case, bitter) success!

Science: Biology: 1, 7, 8; Genetics: 3, 7, 8, 9; Forensic Science: 2, 4, 5

Sickle-Cell Anemia: Tracking Down an Inherited Trait

The molecular basis of this hereditary disease is the main focus as students use electrophoresis to analyze differences in the normal and sickle-cell hemoglobin at the protein and DNA levels. By cutting the patient samples with restriction enzymes, students will determine and diagnose the patients sickle cell status. Gene editing, such as CRISPR, is discussed as student learn of new techniques to cure patients of this disease.

Science: Human Anatomy and Physiology: 9; Biology: 1, 7, 8; Genetics: 2, 5, 6, 7, 8

HIV Detection and Medical Cures Lab

Students explore the life-cycle of HIV and perform an Enzyme- linked Immunosorbent Assay (ELISA) to determine the viral status in simulated patient samples. They will address the public health issues related to HIV/AIDS through a series of small group discussions, activities and a mock fluid exchange.

Science: Human Anatomy and Physiology: 1, 4, 8; Biology: 1, 7, 8; Zoology: 1; Genetics: 5, 6, 7

Can't Come to McWane?

Order Science on the Go!

McWane on the Move brings the magic of McWane to you! These interactive learning experiences are tailored to grade level to align with Alabama Course of Study Next Generation Science Standards (NGSS) and Alabama Performance Standards for 4-year-olds (APKS). Choose from our diverse range of program topics designed to spark wonder and curiosity while enriching the experience in classrooms, assembly programs, libraries, and community events.

NOTE: Mileage charge for outreaches, assembly programs, and STEM booths outside of Jefferson County is charged at the federal milage rate. This will be invoiced.

Classroom Programs:

Duration: Programs are 45 minutes unless otherwise noted
Price:

- **1 classroom (maximum of 30 students) program is $200.**
- **Each additional classroom program is $175 (It must be the same program and be on the same day for discount to apply.)**

Build-a-Bug

Discipline: Life Science
Grades: PreK - K
Duration: 30 minutes
Let's uncover the world of insects! Meet one of McWane's 6-legged friends and assemble your own unique species as we learn the numbers and patterns that help us identify some of the world's smallest creatures.
Science: K.6, 1.5, 2.7
ASELD: SEK Technology 2dYP-2, 2dOP-2

Sun Blocks

Discipline: Physical Science
Grades: PreK - 2nd
Duration: 30 minutes
We're catching some rays in a design challenge that combines sun safety and engineering. Using a variety of materials, you'll construct shady shelters that protect UV-sensitive critters from sunburn.
Science: K.8
ASELD: SEK Physical Science 1cYP-4, 1cOP-4

Measure Up

Discipline: Mathematics
Grades: PreK - K
Duration: 30 minutes
Get ready to rule the school as we explore the foundations of measurement! Using non-standard units, we'll tip the scale and find the height to investigate the concepts of equal, more, and less.
Math: Grade K: 16, 17
ASELD: SEK Math 4aYP-2, 4aOP-5

Pictured: Sun Blocks program

New! Matter Matters

Discipline: Chemistry
Grades: K-2
Duration: 30 minutes
Explore the properties of states of matter and phase changes from solids to gases and more! Students will witness dazzling and sensory-friendly displays, including liquid nitrogen and colorful, glowing plasma.
Science: 2.1, 2.3. 2.4

Amazing Animals

Discipline: Life Science
Grades: K - 12th
Duration: 30 minutes
Bring animals right into your classroom! Students will learn about each animal's natural habitat, diet, adaptions, and what makes them different from other living things.
NOTE: This program cannot travel more than 60 miles from McWane Science Center
Science: K.5, 2.7, 3.6, 3.9, 7.8
Biology: 9-12

Enlightening Electricity: Circuits

Discipline: Physical Science
Grades: 2nd - 6th
It's electric! Students will explore circuits and how they work in order to create a functioning electrical systems.
Science: 3.3, 4.3, 4.4

Inventive Engineering

Discipline: Physical Science
Grades: 3rd - 5th
Students will need to use creativity, determination, and the engineering design process when they face off in a kinetic and potential energy challenge. Get ready to plan, build, and test a motion machine in this highly interactive program.
Science: 3.1, 3.2, 4.1, 4.2, 4.3, 4.4, 8.14, 8.15

Reactions in Action

Discipline: Physical Science
Grades: 3rd - 8th
Students will get fired up about science as we explore combustion and dazzle them with color-changing reactions. These fascinating experiments teach students about chemical and physical changes.
Science: 2.1, 2.2, 2.3, 2.4, 5.1, 5.2, 5.4, 8.2, 8.6, 8.7, 8.8, 8.15

Pictured: Amazing Animals program

Solids and Liquids: The Science of Slime

Discipline: Physical Science
Grades: 1st - 5th
Prepare to examine the strange chemical chains called polymers, as students make their own long-lasting slime – and get to keep it! Is slime a solid? Or a liquid? Only testing for the properties of the different states of matter will tell.
Science: 2.1, 2.2, 5.2, 5.41

A-MAZE-ing Robots

Discipline: Physical Science
Grades: 3rd - 8th
Experience the world of computer coding using Ozobots, one of the world's smallest programmable robots.
Technology: Grade 3rd-5th 3, 7
Digital Literacy: Grade 3:2, 3, 4, 5, 7, 18, 19; Grade 4:2, 3, 4 & 7; Grade 5:2, 4, 5, 6; Grade 6:6, 15, 21, 30; Grade 7:5; Grade 8:5

New! Amp'd Up

Discipline: Physical Science/Physics
Grades: 8-12
Time to get amped up! In this lab, students will explore the electrical engineering field, designing series and parallel circuits and calculating voltage, resistance, and current using Ohm's Law. Nobody will be left in the dark with this one!
Science: 8.16; Phys Sci: 3; Phys: 6.b.c.d; Env.: 6

Assembly Programs:

Price: $325 | 150 student maximum
Each additional assembly program is $250.
Duration: Programs are 45 minutes
This must be the same program and on the same day for the discount to apply.

Recipe for a Storm

Discipline: Earth Science
Grades: 3rd - 8th
Forecasts call for wet, windy, and wild weather as we reveal the secret ingredients behind our planet's most extreme weather. Students will marvel at the meteorology of subzero temperatures, gale-force winds, and more as they learn what it takes to brew up a storm.
Science: 4.10, 5.12, 6.9, 6.10

Alabama Scientists

Discipline: Physical Science, Life Science
Grades: 2nd - 8th
From electricity to rocket science, medicine to ecology, Alabama has a rich scientific heritage! Students will get an exciting introduction to famous Alabama scientists and amazing discoveries from our home state.
Science: Grade 2:2; Grade 3:3, 9; Grade 8:3, 18

Superhero Science

Discipline: Physical Science, Chemistry
Grades: 2nd - 8th
In this super-powered presentation, we'll use exciting demonstrations to explore the science behind super heroes!
Science: Grade 2:4; Grade 3:3; Grade 4: 2a; Grade 5:1, 3, 4; Grade 8:2, 4, 5, 11, 12

Pictured: Recipe for a Storm program

Virtual Programs:

Plug in the excitement of McWane directly in your classroom with our live stream and recorded sessions led by expert educators.
Price: $100 per session
Contact Abby Gwinn at agwinn@mcwane.org for booking information and questions.

Dissection Live

Discipline: Life Science, Biology, Human Anatomy/ Physiology, Physical Science
Grade: 4th - 12th
Duration: 45 minutes
Explore animal specimens inside and out as we investigate the structure and function of preserved organs and organisms like squid, frogs, sheep brains, and cow eyes.
Science: 4.3, 4.6, 4.7, 4.9; 7.4; Bio: 1, 3; HAP: 1, 5

New! On Demand: Recorded Shark Dissections

Discipline: Life Science, Biology
Grade: 6th-12th
Duration: Flexible
Options:
- External Anatomy
- Internal Anatomy: Heart & Liver
- Internal Anatomy: Intestine & Stomach

Surgical Systems

Discipline: Life Science, Biology, Human Anatomy/ Physiology
Grade: 6th-12th
Duration: 60 minutes
See the human body like you've never seen it before with footage from a real surgery! No scrubs or scalpel required, this program connects students with medical professionals from the UAB Department of Surgery to explore human anatomy, surgical tools, and future STEM careers.
Options:
- Live Stream – Offered on a limited basis and scheduled around the surgeons' availability.
- *New!* On Demand – Watch a recorded session when it works for your schedule.

STEM Festivals & Event Booths

Price: $150
Program Type: Table
Our interactive table lets attendees explore scientific concepts at their own pace while sparking curiosity and creativity. Perfect for family-friendly events and local festivals!
Booking can be found at mcwane.org/learning/teachers/mcwane-on-the-move/

Check Out Our *Awesome* STEM Kits

Looking to meet curriculum standards in your classroom? McWane can help with **FREE** science kits that include lesson plans, background info, equipment, and materials—available for three-week checkout.

Kit Subjects:

Chemistry and Conservation of Mass

Grades: 5th & 8th
Standards: 5.1, 5.2, 5.4; 8.5, 8.6
This kit includes enough chemicals, laboratory equipment, and other materials to accommodate one class of 32. There are 3 activities in total. One demonstrating the Law of Conservation of Mass for physical changes (takes up to 30 minutes to complete) and two demonstrating the Law of Conservation of Mass for chemical changes (each takes up to 45 minutes to complete).

Light and Sound

Grades: 1st, 4th, & 8th
Standards: 1.1, 1.2, 1.3, 1.4; 4.6, 4.7, 4.8; 8.17, 8.18, 8.19
This kit includes prisms, lenses, color filters, tuning forks, and other materials for 6 lessons, each taking between 30 and 60 minutes to complete.

Water Testing

Grades: 5th & 6th
Standards: 2.1; 5.1, 5.3, 5.4; 6.15, 6.16; 8.2
This kit includes laboratory plastic-ware, refractometers, pH/nitrate testing strips, dissolved oxygen testing kits, household chemicals, and worksheets to accommodate 30 students. There are materials for 5 activities, each taking approximately 60 minutes to complete.

Natural Selection

Grades: 3rd, 4th, 5th, & 7th
Standards: 3.7, 3.8, 3.10, 3.11; 4.9; 5.11; 7.6, 7.7, 7.8, 7.10, 7.18
This kit provides enough materials for a class containing 32 students. This will include seeds, worksheets, forceps, and artificial fur. There are four different activities, covering the heredity of traits and natural selection, which will take approximately three hours to complete.

For information on reserving a kit, contact Abby Gwinn at agwinn@mcwane.org

SCI SPARKS on YouTube

Need a quick spark to ignite curiosity in your classroom? Sci Sparks is our bite-sized video series designed to share spectacular science fast. Perfect for perfect for brain breaks or science warm-ups, these videos are available on YouTube. Subscribe to McWane Science Center's channel to get the newest episode as soon as it airs!

youtube.com/c/McWaneScienceCenter
Scan the QR code to check out our Sci Sparks playlist on McWane's YouTube page.

Science Labs for *Every Child*

Are you a parent looking for a way to spark a love of science in your child? Our month-long homeschool labs are designed to supplement what children are learning at home, giving them the opportunity to safely engage with scientific equipment, experiments, and principles in ways that aren't easily executed in the home classroom. Let us help you introduce your child to the wonders of the universe with our hands-on labs!

Details

Price: $100 | For McWane Members: $80
Time: 9:30 - 11:30 am
Fall Semester Dates: September 3, 10, 17, 24
Winter Semester Dates: January 7, 14, 21, 28
Children must be at least 6 years old by September 1st to attend Homeschool Labs.

Visit **mcwane.org/learning/parents/homeschool-labs** to learn more about the 2025 Homeschool Labs offered.

	1st - 2nd Grade	3rd - 4th Grade	5th - 6th Grade	7th - 8th Grade	9th - 12th Grade
Fall 2025	Earth & Our Environment	Citizen Science	Art & Engineering	Cybersecurity	STEM Careers
Spring 2026	Engineering to Solve Problems	Working with Robots	Conservation	Project-based Learning & Engineering Design	Robotics

Spend the Night at McWane Science Center

Bring your group for an unforgettable Overnight Adventure at McWane Science Center! These customizable experiences are designed to engage school groups, scouts, churches, and other groups with hands-on science fun after hours. Each adventure combines the excitement of IMAX, exclusive time in the Adventure Halls, and engaging science programming to create a comprehensive, one-of-a-kind experience. Groups of 100 or more can book exclusive overnight events, while select Open Nights are available for smaller groups.

For more information or to book your adventure, please contact events@mcwane.org.

Prices:

Base Price: $60 per person

Science Program: +$150

Features:

- Dinner
- Continental Breakfast
- After-hours Admission to Adventure Halls

Group Requirements:

- Minimum of 100 people
- Children must be kindergarten age or older

Ready to Book Your *Field Trip?*

You've seen everything McWane has to offer—now let's make it official with your field trip reservation!

Reservation Guidelines

- Deposits are not required to book a field trip.
- Please provide a valid email address & cell phone number.
- Cancellation notices must be submitted in writing to reservations@mcwane.org.
- If a field trip has been rescheduled more than once, a $50 fee will be added to your account.
- Alabama schools and groups will need to provide a State Tax Exemption form to be tax exempt. Out of state schools may provide their state tax exemption form.
- It is recommended that you submit your forms early, as space is booked on a first come, first served basis.

START HERE

Visit our website by going to mcwane.org/learning/teachers/field-trips/ or scan the QR code

School Groups

Fill out the "School Form" field trip request form

All Other Groups

Fill out the "Non-School Form" field trip request form

Booking Your Reservation

A McWane Reservation Specialist will build your reservation and email you with your reservation confirmation. If you have not received this email within 1 week, please call us at (205) 714-8414 or email: reservations@mcwane.org

Finalizing Your Reservation

We will reach out to you 3 weeks before your scheduled field trip to confirm final numbers and arrival details.

Price Breakdown

Payment can be made with check or credit card. NOTE: Group pricing is different than field trip pricing. For group pricing, contact our reservations department

Adventure Halls Only Field Trip

- Students: $9
- Teachers: Free!
- Adult Chaperones: $6 when included with group reservation within the 1 adult per 2 student ratio. After this ratio is met, adult chaperone tickets are $10.

IMAX Documentary Only Field Trip

- Students: $9
- Teachers: $8
- Adult Chaperones: $8

Best Value! Combo IMAX Documentary & Adventure Halls Field Trip

- Students: $14
- Teachers: $8
- Adult Chaperones: $13

Add-on Options

- Educational Programs: $3 per student
- Concession Package (popcorn & 12oz soft drink): $7.50 | Pre-ordered packages must be paid in full 2 weeks before scheduled visit

Additional Costs

- On-site parking

Booking *information*

Group Size Requirements

- General Admission/IMAXReservations: 15 people min to receive discounted pricing
- Classroom Programs: 10 students min
- Rushton Programs: 50 students; less than 50 students will be a flat rate of $100

For Last Minute Bookings

Bookings made within 2 weeks (14 days) of arrival date are based on availability. Bookings made within 1 week (7 days) of arrival date require special approval.

Educational *program information*

Reserved educational programs are available for booking Wednesday-Friday during the normal school year. Educational programs are not available during school breaks or summer.

Reserved educational programs are limited and are booked on a first come, first serve basis and are subject to approval by the McWane Science Center Education Department.

Educational Programs Price: $3 per student

For more information, start on page 12 for a full list of educational programs offered.

Chaperone *requirements*

School staff are included in chaperone count

- **Pre K-Kindergarten:** 1 adult for every 5 students
- **Elementary School (1-5 grade):** 1 adult for every 10 students
- **Middle School (6-8 grade):** 1 adult for every 15 students
- **High School (9-12 grade):** 1 adult for every 20 students

NOTE: Discounted chaperone pricing limited to 1 chaperone for every 2 students. Additional fees may apply. McWane Science Center reserves the right to reject booking requests and entry into the center should your group not meet chaperone requirements.

Lunch *policies*

Lunch times must be scheduled for use of McWane Science Center lunchrooms (subject to availability). Scheduled lunchtimes are 30 minutes. Lunches may be brought from home or school. No commercial food delivery is allowed. Lunches may also be purchased from Beansprouts Cafe located inside the museum. Learn about their hours and menu at **mcwane.org/bean-sprouts-cafe/**

Pre-purchased *concessions*

If your group is planning to purchase concessions during your visit to the IMAX Theater, consider pre-ordering your concessions. Pre-ordered concession packages assist in providing snacks to larger groups quickly. Packages are prepared ahead of time and ready for pickup by your group as they enter the IMAX Theater.

Pre-ordered concession packages must be requested a minimum of 2 weeks before date of arrival and paid in full 2 weeks prior to your visit.

Concession Package: $7.50 for a small popcorn & 12oz drink. No substitutions.

Cool Stuff Store, *McWane's Gift Shop*

COOL STUFF STORE
McWane Science Center

Stop by the Cool Stuff Store during your visit. We offer a wide range of cool science experiments, dinosaur & nature related merchandise, and small mementos to remember your visit!

Note: Children must be supervised while inside the Cool Stuff Store.

McWane Science Center

200 19TH STREET NORTH, BIRMINGHAM, AL 35203

MCWANE.ORG