



DISCOVERY PLACE

A DISCOVERY OF

# STEM

Your Ultimate Field Trip and  
Science Assembly Guide

2023 / 2024







## Our Mission

To activate a community of lifelong learners through the transformative power of learning about science, nature and technology.

# Unlock the Ultimate Active Learning Experience

Discover a world where learning leaps off the page and screen and into the hearts and minds of your students. Schedule your field trip and class at a Discovery Place Museum. We can even bring an engaging and interactive experience to you through our outreach program.

Exhibits and programs are STEM-based, immersive, interactive and aligned with state and NGSS standards. Demonstrations will spark curiosity and foster a lifelong interest in learning.

Let your students explore the fascinating realms of science, technology, engineering and mathematics, all within the safe, accessible and budget-friendly environment of our Museums.

Experience the difference of a field trip where each student is an active participant, exploring and discovering at their own pace. Our knowledgeable and passionate educators guide your class through various activities, ensuring a tailored experience for your students. You can be confident that your field trip to a Discovery Place Museum will be an unforgettable adventure and a powerful learning experience.

Don't let cost or logistics keep your class from experiencing the wonders of Discovery Place. We're committed to making our field trips and outreach programs affordable.

So why wait?

Book your field trip and class or outreach program with us today!



Best Bets on  
Homeschool Field Trips



Top 10 Science Museums  
in the United States



Ranked #3 Best Thing  
To Do in Charlotte



The 15 Best Children's  
Museums in the U.S.



11 Best Science Museums  
in America in 2023



The Best Kids Museums  
In The Country For  
Building, Experimenting,  
And Blowing Stuff Up



DISCOVERY PLACE

[discoveryplacemuseums.org](https://discoveryplacemuseums.org) | 704.372.6261 x300


# Early Childhood Classes

**Early Childhood Classes** are thoughtfully designed for our youngest learners. These inquiry-based classes will have children building their emergent STEM literacy skills through developmentally appropriate exploration of topics such as sound, weather, forces and the amazing world in which we live.

 50 Minutes

 Minimum 15 Students

 Dates & Times Customizable

 301 N Tryon Street, Charlotte, NC 28202

## GRADE PRE-K - K

### Classifying Critters

NC: K.L.1, CD-14, CD-15 SC: K-LS1-1 NGSS: K-LS1-1

Prepare for an exhilarating adventure and meet some of the Museum's incredible Animal Ambassadors. These lively Museum residents will spark curiosity and inspire children's questions and observations as they discover the similarities, differences, and defining characteristics of different animal groups.

### Dig Into Earth Science

CD-1 NC: K.P.2, CD-1

Uncover the world beneath our feet as young scientists dig into the world of Earth science. Children will use scientific tools to investigate, measure, and describe the properties and uses of Earth materials. Dig deeper to discover what lives in the dirt and other wonders found under the ground.

### I Like To Move It, Move It

NC: CD-15, K.P.1 SC: K-PS2-1 NGSS: K-PS2-1

This high-energy class creates excitement around physics as children work together to experiment with the power of forces, including pushes, pulls, and gravity. Children will explore the captivating effects of forces and how they can control the movement and position of objects as they conduct investigations and attempt unique challenges.

### Mini Meteorologists

NC: CD-10, CD-15, K.E.1 SC: K-ESS3-2 NGSS: K-ESS2-1

Children will find their inner meteorologist as they build critical science skills, including measuring, comparing, collecting data, and making predictions. They will explore the ingredients that create weather and use authentic weather tools to learn more about the world around them.

### Operation Rainforest

NC: CD-14, CD-15, K.L.1 SC: K-ESS3-3 NGSS: K-LS1-1, K-ESS3-1

Hone your observation skills as you embark on an adventure to the lush rainforest inside Discovery Place Science. Children will encounter plants and animals that call the rainforest home, discover how the rainforest is connected to their lives and brainstorm ways to protect it.

## GRADES 1-2

### Can You Hear Me?

NC: 2.P.1 SC: 1-PS4-1, NGSS: 1-PS4-1

Listen closely as you discover the science of sound. Students will conduct experiments to test vibrations, manipulate pitch and volume, and measure sound waves.

### Weather Watchers

NC: 2.E.1, NGSS: ESS2.D

Students will experience the thrill of meteorology by using authentic weather tools. Students will gather crucial data reflecting various weather components and conditions. They will then employ qualitative and quantitative data to analyze, describe and forecast the weather.

### Everything Matters

NC: 2.P.2, SC: PS1.A, NGSS: 2-PS1-1

Students will explore and experiment with the fascinating world of matter. Through chemical reactions and observations, they will discover the physical properties that make solids, liquids, and gases unique.

### Engineering Solutions

NC: EEE.CR.2, SC: 2-PS1-2, 2-PS1-3, NGSS: K-2-ETS1-1, K-2-ETS1-3

The engineering design process will come alive as students become engineers. Interactive stations with unique challenges will focus on different branches of engineering, including civil, mechanical, and electrical. Students will work together to brainstorm, test, and iterate on their solutions.

### Hunting for Habitats

NC: 1.L.1, SC: LS2.A, 2-LS4-1, NGSS: 2-LS4-1

What is needed to survive at the poles and how do plants thrive in the desert? Through exploration of specimens and experimentation of adaptations, students will gain an understanding of why plants and animals live in certain habitats.

## Boost STEM Engagement

**Motivation and engagement:** A study by the University of California, Irvine, found that students who went on a field trip to a science museum had increased motivation to learn science and were more likely to pursue STEM-related careers.



# Lab Classes

**Discovery Place Science** labs are dedicated to the exploration of an array of topics, including matter, energy, biotechnology, plants, animals and design. Explore the amazing world in which we live through active learning that cultivates science and engineering skills.

🕒 50 Minutes

👤 Minimum 15 Students

📅 Dates & Times Customizable

📍 301 N Tryon Street, Charlotte, NC 28202

## GRADES 3-5

### Move It or Lose It

NC: 3.L.1.1, 5.L.1.2, SC: 4-LS1-1, NGSS: 4-LS1-1

The human body is a truly remarkable structure built for protection, movement, and support. Students will experiment with how the muscular and skeletal systems work together and discover the anatomical reasons behind survival.

### Animal Behavior and Adaptation

NC: 4.L.1, SC: 3-LS3-2, 4-LS1-1, 4-LS1-2, NGSS 3-LS4-4

Students will enter the captivating world of animal behaviors and adaptations as they test their skills using some of the natural world's unique and beneficial adaptations. Active exploration of specimens and interactive opportunities will build students' understanding, and meeting our Animal Ambassadors will strengthen connections.

### What's the Forecast?

NC: 5.E.1.1, 5.E.1.2, SC: 3-ESS2-1, NGSS: 3-ESS2-1

Discover the science behind the weather patterns and phenomena seen in our Carolina skies by conducting experiments and collecting data. Students will use data collection software to measure and analyze wind speed and take an in-depth trip through the water cycle.

### Ecosystem Explorations

NC: 5.L.2, SC: 3-LS3-2, 3-LS4-3, 3-LS4-4.

Prepare to travel the globe without leaving the lab. Compare the unique characteristics, species, and interconnected relationships found in biomes. Students will enhance their understanding as they observe specimens and draw conclusions. They will work together to identify adaptations of Animal Ambassadors and deduce which biome each animal calls home.

### Force & Motion

NC: 5.P.1, SC: 3-PS2.A, NGSS: 3-PS2-1

Students will see and feel the power of the invisible forces that shape our world through experiments exploring Newton's Laws of Motion. Then, they'll come together as a team to conquer a final challenge, putting their new found knowledge to the test.





### What's the Matter?

NC: 3.P.2, 5.P.3, SC: 5-PSI-4 1.A, NGSS: 5-PSI-4

Don't let the phrase fool you – it's all matter. Through a series of experiments, students will conceptualize atomic movement across various phases and discover the effects of density on objects. It will be a fascinating exploration of matter and its properties!

### Earth, Moon & the Great Beyond

NC: 3.E.1, 4.E.1

How well do you know your solar neighbors? Students will take off on an educational journey as they design a scale map of our remarkable solar system. They will uncover fascinating insights about our planetary neighbors and learn about the Moon's phases through an inquiry-driven investigation.

### Ohm My Circuits

NC: 4.P.1.2 SC: 3-PS2-3, 4-PS3-2 NGSS: 4-PS3-2

No trip to the science museum is complete without coming face-to-face with a Van de Graff generator! Students will conduct hair-raising experiments as they learn about static and current electricity, master the art of building circuits and test conductivity.

### Scratch the Surface NEW

NC: 35-CS-O2, 35-CS-O3 SC: 3.CS.3.1, 3.AP.4.2, 4.AP.1.1, 5.AP.2.1 NGSS: ETS.C, ETS1.A

Welcome to the world of coding and robotics! Students will join the world's largest coding community and build computational thinking and problem-solving skills as they use Scratch to program robots to complete tasks. Using a visual interface, students will learn about "if-then" statements, loops and troubleshooting strategies.

### Survival by the Numbers NEW

4.G.3, 4OA.5 SC: 4-LS1-1, 4.G.4 NGSS: 4-LS1-1

Prepare to break the code on mathematical wonders found in nature. Students will investigate plant and animal specimens to assess and identify mathematical concepts such as symmetry, patterns, and geometry. Then they'll collaborate to uncover the role of mathematics in survival.

### Nutrition Mission NEW

NC: 4.L.2, SC: 4-LS-1-1, NGSS: 4-LS1-1

Get a fascinating look at the science of metabolism with captivating activities demonstrating the body's natural process of breaking down food, the intricate absorption of vitamins and minerals and the vital energy equilibrium within our remarkable bodies.

### Motors, Circuits & Art

NC: 3.V.2, 3.V.3, 4.V.2, 5.V.2 SC: ETS1.A, ETS1.B NGSS: 4-PS3-4, 3-ETS1-1, 3-ETS1-2

Go beyond conventional art and engineer a bot that can draw autonomously! Students will tinker with circuits, conductors, and insulators as they immerse themselves in the design process. Teams of students will work together to create unique artwork using engineering and electricity.

### GRADES 6-8

#### MAKE: Wind Energy

NC: EEN2.2.2, EEN.2.8.1 SC: ETS1.A, ETS1.B, ETS2.B NGSS: MS-ETS1

Students will tap into the power of renewable energy sources by exploring the world of wind energy! Teams will compete to design and build the most successful wind turbine and harness the wind to sustain a glowing light bulb.

#### Energetic Contraptions

NC: 7.P.1; 7.P.2 SC: P-PS3-P, ETS1.A, ETS1.B, ETS1.C NGSS: MS-ETS1, MS-PS2

Students will need to brace themselves for physics in action! They'll uncover the science behind the catapult and its fascinating application of energy transfer. Working in teams, students will immerse themselves in the design process and launch their engineering skills to new levels as they construct and test catapults.





## Lab Classes CONTINUED

### Programming With Python NEW

NC: 68-CS-O2, 68-CS-O3 SC: 6.CS.3.1, 6.AP.2.1, 7.AP.1.1, 7.AP.1.2, 8.AP.3.1, 8.AP.3.2 NGSS: ETS1.A, ETS1.C

Discover the fascinating world of LEGO® robotics as students learn the coding language of Python! Students practice syntax and programming structures, bringing their code to life through real-world scenarios. This widely used coding language powers countless applications and websites, making it an essential skill in today's digital world.

### Concepts of Chemistry

NC: 6.P.2.1, 8.P.1 SC: 7-PS1-1 NGSS: MS-PS1-2

Start students on the path to chemistry and embark on an exhilarating journey through molecules and solutions. Students will manipulate chemical reactions, decipher physical and chemical changes, and concentrate on concentrations, all while getting well-versed in lab safety skills.

### DNA Detectives

NC: 7.L.2 SC: 8-LS1-5, 8-LS3-1, 8-LS4-5 NGSS: MS-LS1-5, MS-LS3, MS-LS4-5

Untangle the secrets stored in DNA's double helix and enter the captivating world of genetics. Students will explore genotypes, phenotypes, alleles, and traits through guided inquiry experiments and investigations.

### Fetal Pig Dissection

NC: 7.L.1.3, 7.L.1.4 SC: 6-LS1-3 NGSS: MS-LS1-3

Students will get up close and personal with the body's inner workings as they conduct a dissection. They will explore the inner workings of complex organ systems and compare them to their own. Take advantage of this tangible connection between science and life!

*An additional \$15 material fee is charged to each participant. Call for information about other specimens available for dissection.*



### Take a Cell-fie!

NC: 7.L.1.8, 8.L.2.1, SC: 6-LS1-1, 6-LS1-2 NGSS: MS-LS-1

Students will set off on an exploration into the microscopic world of cells and organelles by creating and analyzing microscope slides – some containing their own cells! Learning essential biotechnology skills along the way, students will build an understanding of how cells contribute to life and identify the defining characteristics of plant and animal cells.

### Drip, Drip, Drought

NC: 8.E.1.1, 8.E.1.4 SC: 7-ESS3-4 NGSS: MS-ESS3-3

Go with the flow as students discover and explore the hydrosphere. Water quality testing, an examination of the water cycle, and an investigation into water availability will highlight the importance of this natural resource and spark students to conserve and protect water.

### Energizing Ecosystems

NC: 8.L.3.1, 8.L.3.3 SC: 7-LS2-1, 7-LS2-2, 7-LS2-3

NGSS: MS-LS2.A

Students will follow the energy through an ecosystem and explore the intricate connections between food, water and nutrients. With the aid of our Animal Ambassadors and engaging interactive stations, students will understand the interconnected relationships and factors that govern the balance of life within an ecosystem.

### Intro to 3D Modeling

NC: 8.TT.1.3, 8.G.A.1 NGSS: MS-ETS1

3D printing could be the future, but what goes into designing and creating those objects? Students will embark on a journey exploring the design and manufacturing processes that bring 3D-printed masterpieces to life. They will use engineering, design, computer science and geometry to create using 3D modeling software.


# Huntersville Classes

**Discovery Place Kids - Huntersville** offers a childhood learning experience like no other. Students explore their world, test new ideas, develop fine and large motor skills and gain self-confidence.

 50 Minutes

 Minimum 15  
Students

 Dates & Times  
Customizable

 105 Gilead Road  
Huntersville, NC 28078

## GRADES PRE-K - K

### Going Green NEW

NC: CD-15, K.G.2.1.G.2, 2.G.2, OA.6.1, 1.L.1.1, 1.L.1.3, SC: 2-LS2-1

Investigate the 5 Rs of sustainability and learn new skills through interactive stations and stories. Students will unveil the secrets of environmental stewardship as they partake in recycling adventures, eliminate litter from a simulated “lake,” and discover the crucial role worms play in maintaining soil health.

### Forecasting the Weather

NC: K.E.1, SC: K-ESS2-1, K-ESS3-2 NGSS: K-ESS2-1, K-ESS3-2

Watch them transform into pint-sized meteorologists as they dive into the captivating world of weather. Unleashing their inner scientists, children will use tools to examine weather patterns, scrutinize data and hone their skills to forecast upcoming weather changes.

### Passport To Play

NC: K.C&G.1, K.C.1, SC: K.H.1, NGSS: K-PS2-1

How do kids around the world play? Students gain valuable insights into diverse cultures by playing and comparing games from other countries. They can discover how children everywhere have fun with just a little imagination.

### The Science of Senses

NC: CD-1, SC: 2-PS1-1, . NGSS: 2-PS1-1\*

Witness our budding scientists delve into the world of sensory perception. Using the scientific method, authentic instruments, and keen observations, they'll unravel the mysteries of how our senses interconnect. Children will formulate hypotheses, put their predictions to the test and derive conclusions as the five senses lead them on a journey of scientific discovery.

\*NC FOUNDATIONS CD-1, South Carolina: Science and Engineering Practices as they refer to obtaining, evaluating, and communicating information, analyzing and interpreting data, and engaging in argument from evidence.

## GRADES 1 - 2

### Out of This World NEW

NCES.K.P2.1;NCES1.E.2.1.;NCES 1.E.2.2.;NCES 2.E.2.2.1.; SC: 1-ESS1-1.

Blast off with us on an exhilarating lunar adventure! Our tiny astronauts will explore the Moon, delving into its mysterious phases and astounding crater formations. As they uncover the secrets of the day and night sky, students will unravel the wonders of gravity and force by propelling rockets into the cosmos and stepping into space as astronauts.

### International Explorers

NCES: 1.C.1, SC: 2.G.1

Climb on board to explore countries and cultures all over the world! Through the lens of traditions, cuisine, music and art, students will delve into the essence of what makes a culture unique. This eye-opening experience will reveal the striking similarities that connect us all, despite the vast distances separating our lands. Take advantage of this chance to expand their horizons and unite the world within the minds of our future leaders!

### Rocks Rock NEW

NCES1.E.1.1.;NCES2.E.1.1, SC: 2-PS1-1

Students will explore the origins and formation of rocks and minerals. They will crack geodes, seek treasures through rock panning and observe the hidden properties of newfound specimens. Strength, magnetism and buoyancy - all will be revealed in this geological discovery.

### Radiant Reactions NEW

NCES.2.P.2;NECS.K.P.2.1;NCES.K.P.2.2, SC: 2-PS1-4

Explore the states of matter and gain new science skills through interactive stations, chemical reaction experiments and stories. Watch as young minds discover the world of chemistry through sorting, ice melt experiments and observing similarities and differences among the density of solids, liquids and gases.




# Rockingham Classes

**Bring Discovery Place** experiences to your school or community! Outreach programs are designed to meet the interests and educational requirements of your group by aligning curriculum with both North and South Carolina state standards and Next Generation Science Standards. These programs complement both in-school and out-of-school learning for Pre-K through Grade 5.

 50 Minutes

 Minimum 15 Students

 Dates & Times Customizable

 233 E. Washington St. Rockingham, NC 28379

## GRADES PRE-K - K

### Community Helpers

NC: ESD-5, HPD-5 SC: ESD-5, HPD-5

Have they ever dreamt of becoming a crucial part of society—like a veterinarian, police officer, builder or doctor? Dive deep into the fascinating world of community helpers and discover the skills, passion, and tools required to excel in these professions. Join us as we reveal the pathways that await those who dedicate their lives to making a difference in their community.

### Push, Pull, GO!

NC: CD-15, K.P.1 SC: K-PS2-1, NGSS K-PS2

Children will go on an exciting adventure into physics through interactive play and discovery. Witness their curiosity fueled as they manipulate objects in motion, examine their positions and unravel the mysteries of the forces that govern them.

## GRADES 1 - 2

### Name That Force

NC: 1.P.1 SC: 3-PS-2

Forces are all around us. Students will delve into the intriguing effects of air, magnetism and gravity on object motion, unraveling the secrets behind their daily impact on us.

### Sound is Vibration

NC: 2P.1 SC: 1-PS4-1 NGSS: 1-PS4-1

Students will delve into the fascinating world of sound and unravel its mysteries. Watch them discover the connection between frequency, pitch, amplitude, and volume. They'll experiment with diverse vibrating materials, push speaker design limits for maximum amplification, and manipulate visual sound waves.

## GRADES 3 - 5

### Chemical Changes

NC: 3.P.2, 4.P.2, 5.P.2 SC: 5-PS1-4 NGSS P-PS1-4

Get ready for thrilling chemical adventures, including detonating hydrogen balloons, as students unravel the mysteries of material properties. They'll uncover the distinctions between physical and chemical transformations and learn how to identify when a chemical metamorphosis occurs.

### What a Bot Art? NEW

NC: 3.P.3, 4.P.1, 4.P.3, 5.P.1 SC: 4-PS3-2 NGSS 4-PS3-2

Students will explore the intersection of arts and robotics as they design a unique drawing tool – a vibrating scribble bot. With an understanding of motors and simple circuits, learners innovate to make their own interactive drawings come alive!



## Explore, Learn, Grow

**Cultural awareness:** A study by the University of Memphis found that field trips to science museums can help students develop a greater appreciation for science and the natural world, as well as cultural diversity." STEM beyond the classroom: The impact of out-of-school time on student engagement.





# Nature Classes

**Discovery Place Nature** classes provide an immersive learning experience for children to explore the Carolinas' native plants and animals and their role in our environment. Children will grow their sense of wonder and appreciation of the natural world through interactions with Animal Ambassadors, developmentally appropriate activities, and creative opportunities.

🕒 50 Minutes

👤 Minimum 15 Students

📅 Dates & Times Customizable

📍 1658 Sterling Road  
Charlotte, NC 28209

## GRADES PRE-K - K

### Carolina Critters

CD-14, CD-15 NC: K.L.1 SC: K-LS1-1 NCSS: K-LS1-1

Children will explore the fascinating world of biodiversity. With Animal Ambassadors and biofacts at their fingertips, they'll see the animal world in a new way as they discover the similarities and differences that make each group of animals unique.

### What's the Weather?

CD-10, CD-15 NC: K.E.1 SC: K-ESS3-2 NGSS: K-ESS2-1

Children will discover the ingredients needed to make weather and use authentic weather tools to collect data. Through guided exploration, they'll develop essential skills, including measuring, comparing, recording observations, and making predictions.

## GRADES 1 - 2

### Animal Life Cycles

NC: 2.L.1, 2.L.2 SC: 1-LS3-1 NGSS: 1-LS3-1

Students will follow animals through the captivating stages of their life cycles. They'll use Animal Ambassadors, Museum specimens, and interactive stations to compare different types of life cycles and explore variations found in members of the same species.



## GRADES 3 - 5

### Power of Pollinators

NC: 3.L.2, 5.L.2 SC: LS2.A, NGSS: 4-LS1-1

Students will gain an appreciation for the vital role pollinators play in our world. Through plant dissections, close encounters with pollinators, and the opportunity to try a pollinating simulation, they'll draw connections between their lives and pollinators.

## Nature Field Trips Inspire

**Environmental awareness:** A study by the University of Arkansas found that students who participated in a field trip to a science museum demonstrated increased environmental awareness and knowledge." -The 95 Percent Solution: School is Where Most Americans Learn Science

# In-Person Outreach Classes

**Bring Discovery Place** experiences to your school or community! Outreach programs are designed to meet the interests and educational requirements of your group by aligning curriculum with both North and South Carolina state standards and Next Generation Science Standards. These programs complement both in-school and out-of-school learning for Pre-K through Grade 8.

 50 Minutes

 Maximum 25 Students

 Dates & Times Customizable

## GRADES PRE-K - K

### Push, Pull, Go!

NC K.P.1, SC K-PS2-1, K-PS2-2, CD-15, LD-7

Children will go on an exciting adventure into physics through interactive play and discovery. Witness their curiosity fueled as they manipulate objects in motion, examine their positions and unravel the mysteries of the forces that govern them.

### Sensory Science

NC K.P.2, CD-15, LDC-3, LDC-7

Children will experience the wonder of science as they tap into their senses and discover a whole new world of descriptive vocabulary, unlocking the secrets of the world around them like never before.

### Little Builders

NC K.P.1, APL-6, APL-9, ESD-5, LDC-7, CD-11, CD-15  
NGSS K-2-ETS1-2, K-PS2-1

Get ready for an exhilarating adventure where young minds will tackle a series of intriguing challenges. With diverse building materials at their disposal, these future innovators will push their problem-solving skills to the limit, refining and optimizing their groundbreaking solutions.

## Call For Pricing

Customized programs require a minimum two-week lead time and pricing may vary.

We have a broad catalog of workshops to select from and offer customized programs to meet your needs.

### Animal Adventures

NC K.L.1, SC K-LS1-1, K-ESS2-2, K-ESS3-1, LDC-3, LDC-7, CD-15

Children will take an exciting journey into the animal kingdom by exploring a wide range of creatures and discovering their distinct features. Children will gain an appreciation for nature's many diverse forms by comparing the characteristics of animals that make them different from other animals and nonliving things. Live animal encounters provide additional insight as they observe these fantastic species in person.

### What's the Weather?

NC K.E.1, SC K-PS3-1, K-ESS2-1, K-ESS3-2,

Children will observe and describe weather conditions throughout the seasons, engage in critical thinking to choose weather-appropriate clothing and use real meteorological tools to explore how scientists utilize them to collect data.

### Dinosaur Days

NC K.L.1, HPD-4, HPD-5, APL-1, APL-2

Your class will be transformed into paleontologists as they explore the thrilling world of dinosaurs. Children will unearth authentic fossilized treasures, create models of imprint fossils, and explore real dinosaur fossils.

## GRADES 1 - 2

### Matter Matters

NC 2.P.2, SC 2-PS1-1, 2-PS1-2, 2-PS1-4, NGSS 2-PS1

Students investigate the properties of solids, liquids and gases through hands-on experiments and observe instantaneous phase changes featuring liquid nitrogen. They will collect data to compare different states of matter and test for special properties in a variety of materials.

### Today's Forecast

NC 2.E.1, SC 1-ESS1-2

Students will become amateur meteorologists by using authentic weather instruments to gather crucial temperature, precipitation and wind data. They'll investigate seasonal patterns through data comparison and analysis and showcase their meteorological prowess by delivering weather forecast presentations.

### All About Animals

NC 1.L.1, 1.L.2, 2.L.1, SC 1-LS1-2, 1-LS3-1, 2-LS4-1, NGSS 2-LS4-1

Students will get up close and personal with the animal kingdom in this tactile exploration of seven major classes of animals. They will examine authentic specimens, discovering the unique traits that make them truly remarkable. Students will also experience astonishing encounters with living creatures from Discovery Place while learning the science of animal classification like a biologist.



## In-Person Outreach Classes CONTINUED

### I'm an Engineer

NC 1.P.1.1, 1.P.1.3, SC 2-PSI-3, NGSS K-2-ETS1

Discover what it's like to be an Electrical, Mechanical and Civil Engineer. Using the Engineering Design Process, students will analyze engineering challenges, design and construct solutions, and test and improve their designs.

### You Can Build It

NC 1.P.1.3, SC 2-PSI-3, NGSS K-2 ETS1, 2-PSI-1

Prepare to unlock your class's inner engineering talents. Students will explore the fascinating world of balanced forces as they focus their problem-solving prowess. Together, they'll create, experiment and enhance model structures like towering skyscrapers, magnificent bridges and enigmatic pyramids.

### Sound is Vibration

NC 2.P.1.1, 2.P.1.2, SC 1-PS4-1, NGSS 1-PS4-1

Students will delve into the fascinating world of sound and unravel its mysteries. Watch them discover the connection between frequency and pitch and amplitude and volume. They'll experiment with diverse vibrating materials, push speaker design limits for maximum amplification, and manipulate visual sound waves.

### Catapult Creators

SC 2-PSI-3, NGSS K-2 ETS 1-1, K-2 ETS 1-3

Dive into the world of catapults and engineering marvels! Watch students unlock their creativity and expand their potential and kinetic energy knowledge as they use the Engineering Design Process to design, build, test and improve their catapult masterpieces.



### Dino Time

SC 2-ESS1-1, NGSS 2-LS4-1

Unearth the fascinating world of paleontology and unravel the secrets of the past. Students will explore genuine fossils, create unique imprint fossils and participate in an exciting fossil excavation to discover their own treasured keepsakes.

### Buddy 'Bots

NC K2-AP-03, K2-AP-04, K2-AP-05, K2-AP-07

Students will become computer programmers and apply computational thinking, problem-solving, and teamwork to code robots through thought-provoking challenges. Budding engineers will have a blast collaborating with their peers and bringing their robots to life.

## GRADES 3 - 5

### The Need for Seeds

NC 3.L.2.2, 3.L.2.3, 5.L.2.3, SC 2-LS2-2, 4-LS1-1, 5-LS1-1, 5-LS2-1, NGSS 3-5-ETS1-1, 3-5-ETS1-2, 3-5-ETS1-3

Students will delve into the fascinating world of plants. They'll investigate the stages of a plant's life cycle, explore actual plant specimens to discover various seed dispersal methods and apply their understanding in a captivating botanical design challenge.

### Engineering Artemis

NC 3.P.1.3, 3.E.1.1, 3.E.1.2, 4.E.1.1, 4.E.1.2, SC 4-PS3-1, 4-PS3-2, 4-PS3-4, 5-PS1-3, NGSS 3-5 ETS1-1, 3-5, ETS1-2, 3-5 ETS1-3

Get ready to witness the transformation of students into aerospace engineers, overcoming the complexities of space exploration. With an in-depth understanding of cosmic conditions, these young minds will design innovative solutions to genuine challenges inspired by the thrilling Artemis missions. Join them on this journey into the future of Artemis missions to the Moon and beyond.

### Musculoskeletal Marvels

NC 3.L.1, 5.L.1.2

Discover the fascinating world of human anatomy as students delve into the complex workings of the muscular and skeletal systems. Through hands-on exploration of actual bones, tissues and artificial joints, they'll gain a deeper understanding of how these systems function together to support, protect and move the human body.

### Wind Energy Engineer

NC 4.P.3.1, SC 4-PS3-2, 4-PS3-4, NGSS 4-PS3-4

Students will harness the power of green energy as they engage their analytical and inventive skills to transform wind power into electricity. With the Engineering Design Process as their guide, they will design, build and test turbine blades for optimal energy conversion.

## In-Person Outreach Classes CONTINUED

### QC Code Quest

NC 35-CS-03, 35-DA-07, 35-AP-08, 35-AP-10, 35-AP-11, 35-AP-15

Prepare for a class adventure as students harness their critical thinking prowess to navigate robots through real-world challenges. They'll dive deep into code-writing, master the art of troubleshooting and employ the powerful tool of computational thinking to conquer each task.

### All That Matters

NC 3.P.2.1, 3.P.2.2, 4.P.2.1, SC 5-PS1-1, 5-PS1-2, 5-PS1-3, NGSS 5-PS1-3

Discover the captivating world of matter as students compare the properties of solids, liquids and gases. Unleash students' scientific curiosity as they analyze materials, unveiling distinctive properties such as conductivity, magnetism and opacity. Witness the transformation during rapid phase changes through enthralling liquid nitrogen demonstrations.

### Animal Explorations

NC 4.L.1.2, 5.L.2.1, SC 3-LS1-1, 3-LS2-1, 3-LS3-1, 3-LS3-2, 3-LS4-2, 3-LS4-3, NGSS 3-LS4-3, 4-LS1-1

Students will explore the adaptations that help animals from six different biomes meet their basic needs and survive. By observing and collecting data from numerous real specimens, learners seek to understand how animals adapt differently to various environments.

### Chemical Changes

NC 5.P.2.3, SC 5-PS1-4, NGSS 5-PS1-4

Engage in action-packed chemical reactions, including exploding hydrogen balloons, while learning about the properties of materials, the difference between physical and chemical changes and how to recognize when a chemical change has occurred.

### Catapult Engineer

NC 3.1.P.1.1, 5.P.1.1, 5.P.1.2, 5.P.1.4, SC 3-PS2-3, 3-PS2-3, 4-PS3-4, NGSS 3-PS2-1, 4-PS3-1, 4-PS3-3, 3-5 ETS1

Students will explore the physics of projectiles and potential and kinetic energy as they use the Engineering Design Process to design, build, test and improve their catapults to achieve the ultimate launch.

### Forces and Motion

NC 3.P.1.1, 5.P.1.1, 5.P.1.4, SC 3-PS2-1, 3-PS2-2, 4-PS3-1, 4-PS3-3, 5-PS2-1, NGSS 3-PS2-1

Newton's Laws of Motion come alive in this action-packed class where students dive into hands-on experiments. Using innovative tools like hover pucks and fan cars, participants will bring each of Newton's Laws to bear and experience the excitement of physics in action.

### Dissection Connection

NC 4.L.1.2, 5.L.2.1, SC 3-LS4-3, NGSS 3-LS4-3, 4-LS1-1, 4-LS1-A

Learn owl about it! Students will dissect owl pellets and collect, analyze and interpret the data to make connections to broader environmental themes such as ecosystems, adaptations and biodiversity.

*An additional \$75 material fee is charged to each class.*

### Water, Water Everywhere

NC 4.L.1.1, 4.L.1.3

Prepare for an exhilarating journey as students explore water distribution, wastewater treatment and its cyclical return to local water sources. Acting as STEM professionals, students will immerse themselves in water testing, building and testing a water distribution system, all while unlocking the myriad of STEM career opportunities awaiting them.



## GRADES 6 - 8

### Robotics Engineer

NC 68-CS-03, 68-AP-13, 68-AP-15, 68-AP-17

Get ready for a thrilling adventure where students tackle a real-life challenge with the assistance of a trusty robot. Through the Engineering Design Process and the power of computational thinking, students will develop vital skills in troubleshooting, coding and programming, propelling them toward success.

### Catapult Engineer

NC 7.P.1.2, NGSS MS-ETS1

Students will explore the physics of projectiles and potential and kinetic energy as they use the Engineering Design Process to design, build, test and improve their catapults to achieve the ultimate launch.

### Our Changing Climate

NC 6.E.2.4, 7.E.1.6, SC 6-ESS2-6, 7-ESS3-1, 7-ESS3-3, 7-ESS3-4, 7-ESS3-5

Students will delve into this urgent global crisis, investigating the broad topic of climate change and how it affects our state. Through active learning, they will explore central themes such as carbon emissions, biodiversity and plastic usage.



# In-Person Outreach Workshops

**Perfect** for both schools and afterschool programs, these multi-session programs allow students to take a deeper dive into STEM through thematically linked, cross-curricular learning. Students will engage in real-world applications, make career connections and cultivate problem-solving skills in specially curated experiences.

 50 Minutes

 Maximum 25 Students

 Dates & Times Customizable

## GRADES PRE-K - K

### STEM Foundations

VARY BY CLASS CHOICE

Explore an extensive selection of courses spanning eight unique units of study, all designed to cultivate a passion for STEM. These classes will stoke curiosity and wonder in young explorers aged 4 to 6. Developed to align with North Carolina's Foundations of Early Learning and Development, each course fosters growth across all five domains.

## GRADES 1 - 2

### Mini Maker

NC VARY BY MAKE, SC 1.S.1A, 1.S.1B, 2.S.1A, 2.S.1B, NGSS K-2-ETS1-1, K-2-ETS1-2, K-2-ETS1-3

Discover the thrilling world of creation and innovation as students transform into skilled makers in this dynamic, hands-on workshop. Dive into a fascinating array of STEAM-focused projects that spark self-expression, ignite critical thinking and unleash the limitless potential of young minds.

### Mini CSI

NC 2.L.2.2

Let their inner detective shine during this crime-busting workshop, where students can hone their investigative skills. They'll uncover hidden elements to solve a mystery with chemical analysis tools, fingerprint analysis, and chromatography.

## GRADES 3 - 5

### Think It, Plan It, Make It

NC VARY BY MAKE, SC 3.S.1A, 3.S.1B, 4.S.1A, 4.S.1B, 5.S.1A, 5.S.1B, NGSS 3-5-ETS1-1, 3-5-ETS1-2, 3-5-ETS1-3

Watch students transform into scientists, engineers and artists. Using tools and technologies, they will innovate and devise solutions for an array of STEAM-driven challenges. Witness the power of collaboration and critical thinking as they bring their unique creations to life.

### Code Kids

NC 35-CS-03, 35-DA-07, 35-AP-08, 35-AP-10, 35-AP-11, 35-AP-15

Take the first step in preparing students for a potential career in coding. They'll gain an invaluable edge as they strengthen their grasp of essential concepts such as functions, loops, conditionals and troubleshooting through plugged and unplugged activities focused on opening up opportunities for success.



## In-Person Outreach Workshops CONTINUED



### Robotics

NC 35-CS-03, 35-DA-07, 35-AP-08, 35-AP-10, 35-AP-11, 35-AP-15, NGSS 3-5-ETS1-1, 3-5-ETS1-2, 3-5-ETS1-3

Dive into the thrilling world of robotics, where students will master coding and debugging techniques to conquer various challenges! Utilizing an assortment of robots, young innovators will skillfully program their way to success and become coding champions.

### GRADES 6 - 8

#### Forensics Crime Lab

NC 6.P.2.1, 7.L.1.3, 7.L.1.4, SC 7.L.3B.2, 7.L.4A.1

Get ready to witness students leverage technology to solve a crime. These young investigators will unravel the mysteries hidden within the depths of the crime scene by using the latest techniques in DNA analysis, chromatography, weapon matching and spatter analysis. Prepare to be captivated by their relentless pursuit of truth and justice.

### Bridge Building 101

SC 8.P.2A.1, 8.P.2A.2, 8.P.2A.3, NGSS MS-ETS1-1, MS-ETS1-2, MS-ETS1-3, MS-ETS1-4

Get ready to dive into the complex world of bridge engineering. Student engineers will explore the fascinating science behind forces acting on bridges. They'll unleash their creativity and ingenuity by designing, constructing and testing their own balsa wood bridge.

### Dive Into Dissection

NC 7.L.1.3, 7.L.1.4, SC 6.L.4.B.1, 7.L.3A.1, 7.L.3A.3, 7.L.3B.1, 7.L.3B.2

Students will explore the human body and its systems. They'll unlock the secrets of human anatomy while exploring the captivating similarities and differences between species! Hands-on dissections will guide them in uncovering the mysteries of our inner workings and comparing them with the animal kingdom's equivalents.

### Engineering Design Thinking

SC 6.S.1A, 6.S.1B, 7.S.1A, 7.S.1B, 8.S.1A, 8.S.1B, NGSS MS-ETS1-1, MS-ETS1-2, MS-ETS1-3, MS-ETS1-4

Embark with us on a journey of creativity and discovery. Students will use Design Thinking to unlock their full potential, turning challenges into opportunities. With this methodology, they'll practice empathy-driven problem-solving, foster innovative ideas, build prototypes and test solutions until the perfect one is found.

### Call For Pricing

Customized programs require a minimum two-week lead time and pricing may vary.

We have a broad catalog of workshops to select from and offer customized programs to meet your needs.



# Assemblies

**Energize** your students with a high-octane science experience.

Assemblies can accommodate up to 300 students at a time and cover a wide range of topics. The dynamic action includes audience participation, demonstrations and live experiments.

 50 Minutes

 Minimum 25 Students

 Dates & Times Customizable

## **Energy, Energy, Energy**

**Grades 3 - 8**

Students will experience the electrifying world of energy as we unveil the scientific secrets hidden within chemistry and physics. Witness stunning demonstrations that will spark your class's curiosity and fuel their passion for learning. Discover how vital energy is to every action, from listening to music, or playing sports, to completing their assignments. Get ready to power up your students' knowledge and transform their understanding of the world around them.

## **Matter of Science**

**Grades K - 8**

Chemistry and physics take center stage in this action-packed presentation! Ignite your students' curiosity and unleash their inner scientists with captivating demonstrations of combustion, mesmerizing matter transformations, enthralling experiments with electricity and the chilling wonders of liquid nitrogen. Don't miss your chance to spark their imagination and fuel a lifelong love for learning.

# Starlab Planetarium

**Starlab Planetarium** requires access to electricity and a minimum set-up space of 16 feet in height and clear floor area of 28 x 28 feet. Maximum capacity is 30.



Starlab Planetarium

## **Day and Night**

**Pre-K - Grade 2**

Explore our ever-changing sky and learn to recognize differences in the day and night sky, including changes in the appearance of the Moon.

## **Solar System Spectacular**

**Grades 3 - 8**

Explore the solar system to learn about the sun, planets, asteroids and moons that make up Earth's neighborhood.

## **Starry Starry Night**

**Grades 3 - 8**

Witness the wonders of the universe in this in-depth look at the relationship between Earth and its nearest neighbor in space. Learn about what causes day, night and changes in the appearance of the Moon.

# Digital Classes

## Matter Matters

### Grades Pre-K - 2

K.P.2, NC 2.P.2, SC 2-PS1-1, 2-PS1-2, 2-PS1-4, NGSS 2-PS1

Observe instantaneous phase changes featuring liquid nitrogen! Students will investigate the properties of matter and its different phases through hands-on experiments from their homes or classroom.

## All That Matters

### Grades 3 - 8

NC 3.P.2.1, 3.P.2.2, 4.P.2.1, SC 5-PS1-1, 5-PS1-2, 5-PS1-3, NGSS 5-PS1-3, NC 6.P.2, 6.P.2.2

Through amazing demonstrations featuring liquid nitrogen and experiments from their home or classroom, students will gain a greater understanding of the properties of matter in its various phases and how heat affects particle motion and density.

## Forces and Motion

### Grades 3 - 8

NC 3.P.1.1, 5.P.1.1, 5.P.1.4, SC 3-PS2-1, 3-PS2-2, 4-PS3-1, 4-PS3-3, 5-PS2-1, NGSS 3-PS2-1, NC 7.P.1.1, 7.P.1.2

Newton's Laws of Motion come alive in this class with exciting demonstrations coupled with at-home experiments. Students make predictions and investigate how changes in mass, force, gravity and friction affect the motion of an object.

## Storybook Science

### Grades Pre-K - K

NC K.A.1.1, RL.K.9, RL.K.10, NGSS K-2-ETS1-1, K-2-ETS1-3

Can your house withstand the mighty huffs and puffs of the Big Bad Wolf? Can you construct a stable bridge to span a river? Dive into the fascinating world of engineering and science as students apply their skills to unravel the truths within beloved tales.

**Bring exciting demonstrations** and at-home experiments right to your virtual classroom. These engaging and interactive classes are tailored to your class's grade level and curriculum standards.

 50 Minutes

 Maximum 25 Students

 Dates & Times Customizable

## Animals in Their Environment

### Grades 1 - 5

NC 1.L.1.1, "NC 4.L.1.2, 5.L.2.1, SC 3-LS1-1, 3-LS2-1, 3-LS3-1, 3-LS3-2, 3-LS4-2, 3-LS4-3, NGSS 3-LS4-3, 4-LS1-1

Students will be able to connect with wildlife in a dynamic and immersive class, where they will observe and encounter live animals from Discovery Place's incredible Living Collection. Guided by an expert educator, your class will uncover the secrets of diverse habitats, unravel the distinct needs of our planet's remarkable creatures and discover how they use amazing adaptations to survive in their natural environment.

## Push, Pull

### Grades Pre-K - 2

NC K.P.1, SC K-PS2-1, K-PS2-2, CD-15, LD-7, NC 1.P.1, 1.P.1.1, 1.P.1.2, 1.P.1.3

Students will explore how forces such as pushes, pulls, gravity and magnets affect the motion of an object. Ignite students' curiosity as they make predictions and participate in interactive experiments that captivate their minds.

## I'm an Engineer

### Grades Pre-K - 2

NGSS K-2-ETS1-1, K-2-ETS1-3, NC 1.P.1.1, 1.P.1.3, SC 2-PS1-3, NGSS K-2-ETS1"

Experience the thrill of engineering. Guided by the Engineering Design Process, students will analyze engineering challenges, design and construct solutions, and test and improve their designs.

## Musculoskeletal Marvels

### Grades 3 - 5

NC 3.L.1.1, 3.L.1.2

Students investigate real human bones, tissues and artificial joints to learn how the muscular and skeletal systems function together to support, protect, and move the human body.

# Digital Assemblies

Bring science and nature to your students through a virtual connection. Our educators will create an educational experience that draws students in and keeps them engaged.

## Backyard Biology

Students will take an exhilarating journey into the world of science and nature, engaging with live animals and witnessing thrilling discoveries. Our expert curators and resident animals will unveil secrets on how to best uncover the wonders hidden in your backyard. Your class will learn techniques to heighten their senses, enabling them to hear what is hiding in plain sight.

## A Matter of Science

Chemistry and physics come alive during this action-packed presentation. Wow your students with wonder-filled demonstrations featuring combustion, changing states of matter, electricity and liquid nitrogen.

## Animal Care: Behind the Scenes

Discovery Place museums are home to a wide variety of animal life. Go behind the scenes with our curators and resident animals to see what goes into providing proper diet, environment, and enrichment for our amazing living exhibitions and animal ambassadors.



# 7 Ways To Make Your Field Trip Unforgettable



Get ready for an amazing field trip to a Discovery Place Museum, where students will be immersed in a world of hands-on learning, teamwork and unforgettable memories. By following these tips, you'll make this adventure not only enjoyable but also educational and safe for your entire group!

## 1. Plan a Pre-Visit

Be the ultimate prepared educator by visiting the Museum ahead of time. You'll get the lay of the land, preview exhibits and activities and be ready to maximize your students' experience.

## 2. Set Clear Objectives

Make this field trip more than just a day off from school! Outline learning goals aligned with your curriculum, share them with students and chaperones and plan activities that bring those objectives to life.

## 3. Assign Responsibilities

Keep things running smoothly by designating roles for teachers, chaperones, and students. Set behavior expectations and establish a buddy system for an organized and well-managed trip.

## 4. Consider the Itinerary

Resist the urge to overstuff your agenda. Prioritize the most engaging and relevant experiences and schedule breaks and free exploration time to keep students excited and energized.

## 5. Remember Special Needs and Accommodations

Make this field trip fantastic for every student by inquiring about and planning for any necessary accommodations. Discovery Place is dedicated to inclusivity, so our staff is here to help!

## 6. Prioritize Safety Protocols

Partner with us in ensuring student safety by familiarizing yourself with Discovery Place's safety measures and communicating clear instructions to students and chaperones.

## 7. Debrief and Reflect

Extend the educational impact by scheduling a post-trip debriefing. Invite students to share their experiences and connect what they learned to the classroom curriculum, solidifying their newfound knowledge.

By embracing these best practices, your Discovery Place field trip will be a thrilling, secure and enlightening experience. Embark on your memorable adventure today and uncover the wonders our Museums have in store!

# Pricing

## Field Trips to a Discovery Place Museum

Enrich your students' experience by visiting a Discovery Place Museum. Pricing applies to a minimum reservation of 15 paid participants. One adult chaperone is required for every 10 students and admitted to the Museum for free; fees are charged for additional chaperones.

To ensure the safety of all students, chaperones must stay with their group at all times.

### DISCOVERY PLACE SCIENCE

Title I: (all year)	\$9.95
Fall: (8/14/23-12/31/23)	\$11.95
Spring: (1/1/24 - 6/2/24)	\$13.95
Summer: (6/3/24 - 8/11/24)	\$15.95

DISCOVERY PLACE NATURE	\$7
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### DISCOVERY PLACE KIDS-HUNTERSVILLE

Title I: (all year)	\$8
Fall: (8/14/23-12/31/23)	\$9
Spring (1/1/24 - 6/2/24)/Summer: (1/1/24 - 8/11/24)	\$11

DISCOVERY PLACE KIDS-ROCKINGHAM	\$6
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MUSEUM CLASSES	\$7
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## Outreach Options at Your School

Bring Discovery Place Educators to visit your school. This is a wonderful opportunity for your students to engage in an exciting and interactive learning experience. Our educators are ready to provide your students with a unique learning experience. They'll bring complex concepts to life and inspire your students to think critically and creatively. Don't miss out on this amazing opportunity to enhance your students' learning and growth!

Make your event even more memorable with our Festival Booths or create a Family STEM Night to bring in the whole community!

CLASS	\$250
ASSEMBLY	\$450
MOBILE STARLAB PLANETARIUM (LARGE)	\$300



## Festival Booths

Festival Booth programs display exciting STEM topics for visitors to explore at their leisure. Experiences include hands-on experiments and demonstrations as well as self-guided active-learning time. Festival Booths are a perfect addition to festivals, family nights, school functions and community events.

FESTIVAL BOOTH (FIRST HOUR)	\$250
FESTIVAL BOOTH (EACH ADDITIONAL HOUR)	\$200

## Family STEM Nights

Want to get the entire community involved in STEM? Family Nights are a great way to engage and inspire learners of all ages. From explosive assemblies and out-of-this-world Starlab planetarium programs, to live animal encounters, we can design an experience for the whole family. Perfect for back-to-school nights, PTA events and community celebrations.

FAMILY STEM NIGHT	call for pricing
IN-COUNTY MILEAGE	\$35