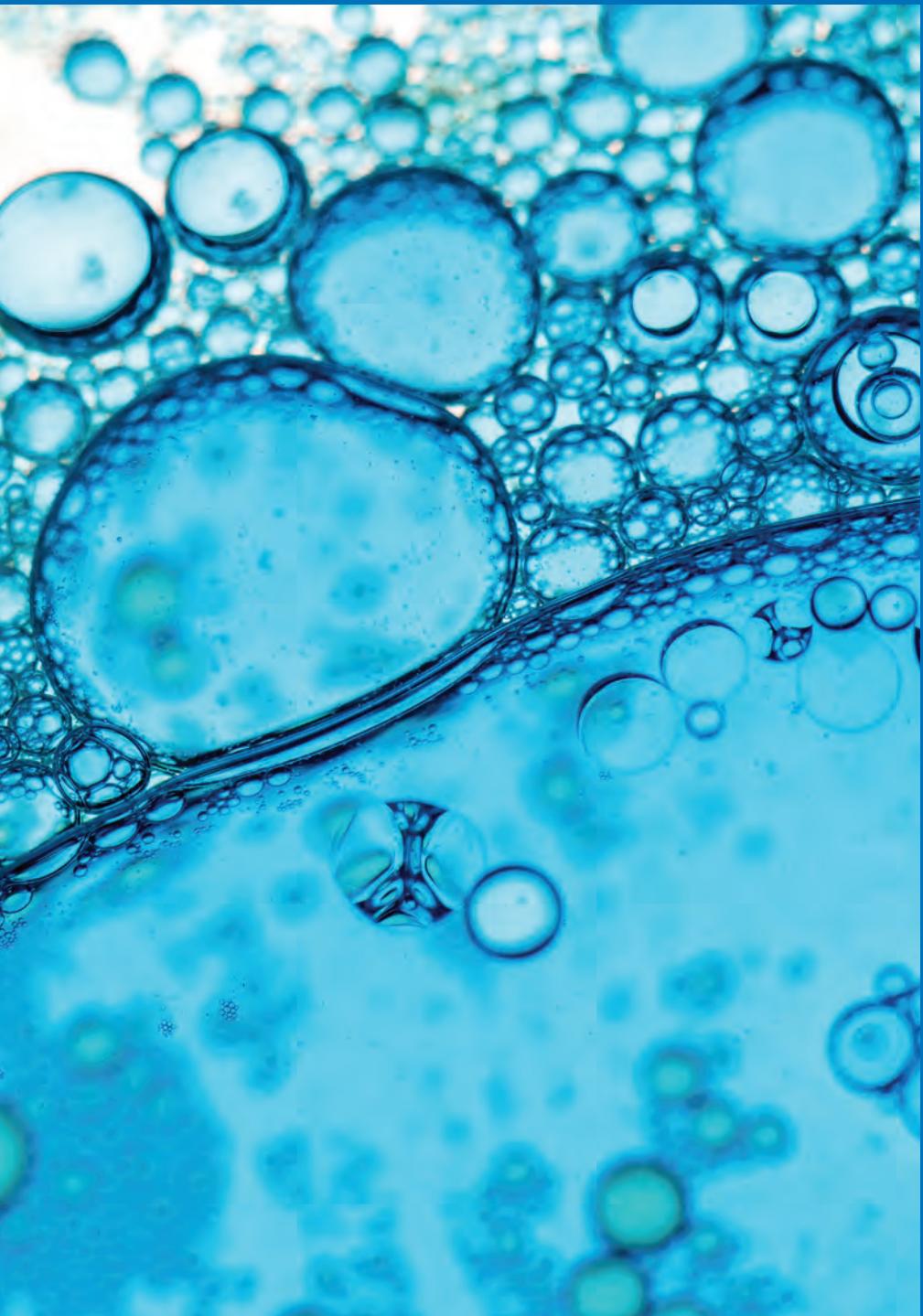




DISCOVERY PLACE

2022-2023
EDUCATOR'S GUIDE





Discovery Place is the place for all your curious learners.

Discovery Place is right where you need it to be. A regional network of four hands-on museums (science, nature, and two kids Museums), an Outreach team, and newly developed digital content are all designed to engage and inspire our community to learn science, nature, and design.

Active learning is at the heart of the transformative Discovery Place experience because an active learner is an engaged learner, curious about the world and determined to make the future. An active learner applies what they know and have learned to design a better future for themselves and their community.

Consider how Discovery Place offerings can be paired to reinforce content and build 21st-century skills over time. For example, combine a museum field trip with an IMAX movie at Discovery Place Science, or a field trip with a class at Discovery Place Kids. Even better, share one of our at-home science experiments with families as a follow-up to an in-school visit from our Outreach team, or even host a STEM Family Night for your entire school community! By combining experiences, science becomes a transformative part of your community, not just a one-time destination.

Join us, as we embark upon a new school year, right where you are, and let's partner to engage your students in meaningful experiences in science, nature, and design.

COVID-19 SAFETY

Whether you bring your class to one of our Museums, or welcome us into your classroom, you can rest assured that we have safety down to a science. We have modified our Outreach programs to address the health and safety of all our students and partners. These updated programs allow for students to engage in hands-on, high-energy learning experiences in science, technology and nature while maintaining a safe environment for everyone. We also offer Digital Classes and Digital Assemblies that you can stream live from anywhere.

All programs meet NC Health and Human Services (NCDHHS) Standards for Schools.



**DISCOVERY
PLACE
SCIENCE**

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 hands-on 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, SC: K.S.1, CD-14, CD-15, NGSS: K-LS1-1

Children will be introduced to some of the Museum's amazing Animal Ambassadors. These lively Museum residents will inspire children to make observations and raise questions as they discover similarities, differences and the defining characteristics of groups of animals.

DIG INTO EARTH SCIENCE

NC: K.P.2, SC: K.P.4A, CD-1

Children will explore the world beneath their feet as they use science tools, including magnets and scales, to measure and describe the properties of earth materials. They will then determine uses for natural materials and discover living and nonliving things in the soil.

I LIKE TO MOVE IT, MOVE IT

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

Children will explore the effects of forces, including pushes, pulls, and gravity, on the motion of objects by conducting investigations and attempting unique challenges. Working together, they will test ways forces can manipulate the motion and position of objects in the classroom.

MINI METEOROLOGISTS

NC: K.E.1, SC: K.E.3, CD-10, CD-15, NGSS: K-ESS2-1

Children will become scientists as they use tools to develop skills including measuring, comparing, collecting data, and making weather predictions.

OPERATION RAINFOREST

NC: K.L.1, SC: K.L.2, CD-14, CD-15, NGSS: K-LS1-1, K-ESS3-1

Children will explore the rainforest in Discovery Place Science's World Alive to practice observation skills and compare the plants and animals that call the rainforest home. They will also discuss ways their lives are impacted by the rainforest and how they can help and protect this precious biome.

Discovery Place cares about our teachers!

Did you know that teachers receive complimentary general admission to any one of our four locations?

Take advantage of this opportunity to learn more about how Discovery Place exhibits and programs are designed to support STEM learning for students. Please call our Guest Sales team to arrange your complimentary visit.





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 hands-on, inquiry-based activities that cultivate science and engineering skills.

50 Minutes

Minimum 15 Students

Dates & Times Customizable

301 N Tryon Street,
Charlotte, NC 28202

Grades 1 – 2

CAN YOU HEAR ME?

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

Students will conduct investigations to test how vibrations create sound and then experiment with pitch and volume to explore ways to create music through science.

WEATHER WATCHERS

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

Using appropriate weather instruments, students will collect weather data to represent different weather conditions. They will then use those qualitative and quantitative measures to describe and predict weather patterns.

EVERYTHING MATTERS

NC: 2.P.2, SC: 2.P.3, NGSS: 2-PS1-1

Students will observe and experiment with different states of matter, including solids and liquids, to determine their distinct physical properties.

ENGINEERING SOLUTIONS

NC: EEE.CR.2, SC: 1.S.1B, 2.S.1A, NGSS: K-2-ETS1-1, K-2-ETS1-3

Students will follow the steps of the engineering design process by asking questions, gathering information, determining problems, and brainstorming solutions. Students will test their solutions and discuss improvements as they explore different branches of engineering.

HUNTING FOR HABITATS

NC: 1.L.1, SC: 1.L.5, 2.L.5, NGSS: 2-LS4-1

Students will explore various habitats by testing adaptations and observing specimens to determine where certain plants and animals live and how these organisms are able to survive in each unique habitat.

Grades 3 – 5

MOVE IT OR LOSE IT

NC: 3.L.1.1, 3.L.1.2, 4.L.2.2, 5.L.1.2, SC: 4.L.5B.1, NGSS: 4-LS1-1

Students will explore the structure and functions of the human skeletal and muscular systems of the human body through a variety of guided inquiry activities and the examination of real human specimens.

ANIMAL BEHAVIOR AND ADAPTATION

NC 4.L.1, SC 4.L.5B, NGSS 3-LS4-4

Observe fascinating behaviors and adaptations of animals. Students will explore a variety of living things and participate in guided-inquiry activities. Live animal encounters enhance the experience.

WHAT'S THE FORECAST?

NC 5.E.1.1, 5.E.1.2, SC 4.E.2A.2, 4.E.2B.1

Develop a sunny outlook by conducting weather experiments. Students will use data collection software to analyze wind speed and get an in-depth look at the water cycle.

ECOSYSTEM EXPLORATIONS

NC 5.L.2, SC 5.L.4A.2, 5.L.4B.4

Travel the world inside the classroom and explore characteristics of several ecosystems, including oceans, forests and grasslands. Students will meet Animal Ambassadors and discover the functions they serve within an ecosystem.

FORCE AND MOTION

NC: 5.P.1, SC: 5.P.5A,

Feel and see the forces around us. Students will experiment with Newton's Laws of Motion through a variety of activities, then try and harness those laws in a final team challenge

WHAT'S THE MATTER?

NC: 3.P.1, 5.P.3, SC: 3.S.1.A.1, 3.P.2A, 5.P.2.A.1
NGSS 5-PS1-4

Don't let the phrase fool you – it's all matter. Through a series of hands-on experiments, students will better conceptualize atomic movement in different phases and better understand how density affects objects.

EARTH, MOON, & THE GREAT BEYOND

NC: 3.E.1, 4.E.1, SC: 3.E.4B.2, 4.E.3A.1, 4.E.3B.1

How well do you know your solar neighbors? Students will create a scale map of our solar system while learning about our other planets, as well as conducting an inquiry investigation on the moon's phases

OHM MY CIRCUITS

NC: 4.P.1, 4.P.3.1, SC: 3.P.2A.4, NGSS: 4-PS3-2

Conduct hair-raising experiments with a Tesla coil while students learn the difference between static and current electricity, build a circuit, and create their own battery!

INTRO TO ROBOTICS (BASED ON ESCAPE ROOM ROBOTS)

NC: 3-5-AP-03, SC: 3/4/5.DA.2.1

Students will use robots to collect data, perform basic tasks, and navigate a maze. They will become programmers in this crash course into robotics.

MATHEMATICAL NATURE

NC: 4.G.A.3, 4.MD.C.6 (Math Standards), SC: 4.G.4 (Math)

Students will explore mathematical concepts such as symmetry and angles by creating art and observing mathematical concepts in nature.

MOTORS, CIRCUITS, & ART

NC: 3.V.2, 3.V.3, 4.V.2, 4.P.3.1, 5.V.2, 5.P.1

Go beyond conventional art by engineering a bot that can draw on its own! Discover the parts of a circuit and learn about the role of conductors and insulators. Using the design process, students will collaborate to create Drawbots that will move around and draw freely.

Grades 6 – 8

MAKE: WIND ENERGY

NGSS: 4-PS3-4, SC: 6.S.1A, 6.S.1B, 7.S.1A, 8.S.1A
NGSS: MS-ETS1

Learn about renewable energy sources by taking a closer look at wind energy. Students will use the design process to build wind turbine blades and attempt to power a light bulb.

ENERGETIC CONTRAPCTIONS

NC: 7.P.1; 7.P.2, SC: 6.S.1A, 6.P.3A.2, 7.S.1A.1, 7.S.1A.2, 8.S.1A.1, 8.S.1A.2, NGSS: MS-ETS1, MS-PS2

Brace yourself for physics in action! Discover how catapults work and what their uses are both in the past and today. Students will utilize the design process and their engineering skills as they build and test catapults.

ADVANCED ROBOTICS

NC: 68-AP-03, SC: 6/7/8.AP.4.1, NGSS: MS-ETS1

Get an introduction to programming logic and problem solving by utilizing LEGO® EV3 robots and Mindstorm software. Students will complete a series of challenges through robotic automation, including loops and sensor interactions.

CONCEPTS OF CHEMISTRY

NC: 6.P.2.1, 8.P.1, 4.55556E+57, NGSS: MS-PS1-2

Calling all future chemists! Students will mix molecules, investigate rate-altering chemical manipulations and watch as it all goes out with a bang. Lab safety skills will be reviewed.

THE HUMAN BODY

NC: 7.L.1.3, 7.L.1.4, 8.L.5.2, SC: 7.L.3B, NGSS: MS-LS1-3

Delve into the human body and discover the systems that keep it working. Students will discover the relationship between different body systems using hands-on activities and real human specimens.

DNA DETECTIVES

NC: 7.L.2, SC: 7.L.4A, NGSS: MS-LS3

Explore genotypes, phenotypes, alleles and traits. Students will gain a deeper understanding of genes and heredity through a series of guided inquiry experiments and investigations.

FETAL PIG DISSECTION

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

Students will gain a better understanding of the structure and function of the human body and the interdependency of organ systems through the completion of a fetal pig dissection.

*Additional material cost of \$10 per participant.
Call for information about other specimens available to dissect.*

TAKE A CELL-FIE

NC: 7.L.1, 8.L.2.1, SC: 7.L.3A, NGSS: MS-LS-1

Students will learn basic biotechnology skills as they delve into the human cell and its organelles. They will come to understand cells contribute to the basic functions of life and capture images of their very own cells.

MAKING WITH MINECRAFT

NEW

NC: 68-AP-04, SC: 6.AP.4.1, NGSS: MS-ETS1-2

Students will use Minecraft Education Edition to learn basic programming skills such as loops and conditional (if/then) statements in a drag and drop environment.

DRIP, DRIP, DROUGHT

NEW

NC: 8.E.1.1, 8.E.1.4, SC: 6.E.2A.3 NGSS: MS-ESS3-4

Dive into the amazing natural resource that is water and learn about the hydrosphere. Students will conduct water quality testing, discover the importance of water conservation and availability and learn about the water cycles.

ENERGIZING ECOSYSTEMS

NC: 8.L.3.1, 8.L.3.3 SC: 7.EC.5A.1, 7.EC.5B.1, 7.EC.5B.3, 7.EC.5B.4, NGSS: MS-LS2.A

Students will follow the energy through an ecosystem as they explore the interconnected relationships of food, water, and nutrients. Meeting Animal Ambassadors and interacting with hands-on stations will help students understand factors and relationships that affect populations in an ecosystem.

NEW

INTRO TO 3D MODELING

NGSS: MS-ETS1-2

Students will use 3D modeling software to learn about the design process that goes into making 3D printed objects.



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**DISCOVERY
PLACE
KIDS**

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

COMMUNITY HELPERS

NCSCOS K.E.1 (SS), K.C.&G.1

Community helpers are people whose jobs help the community be a better place. Children will explore different jobs to better understand the important role these helpers have in our community.

CREATIVE BUILDERS

NC FOUNDATIONS HPD-5, HPD-8

Grab your hard hat, gloves and safety goggles and join our construction crew. Children will discover how to use tools in a safe environment, create original blueprints and experiment with simple machines.

FORECASTING THE WEATHER

NCSCOS K.E.1

Become a mini meteorologist and use tools to gather and analyze weather data. Children will explore weather patterns and make predictions about the weather.

PASSPORT TO PLAY

NCSCOS K.C.&G.1, K.C.1

How do kids around the world play? Children will use their imaginations to travel the globe and play games from other countries. Children will then compare and contrast those games with games common in the United States.

THE SCIENCE OF SENSES

NC FOUNDATIONS CD-1

Children will use the scientific method, real tools and their own observations to better understand how the senses work together. They will make hypotheses, test their predictions and come to conclusions as the five senses guide them in scientific learning.

Grades 1 – 2

BACKYARD BIOLOGY

NCSCOS 1.L.1

Let's explore our backyards! Students will compare characteristics of plants and animals, discover what they need to survive and learn about their life cycles. They will take a close look at how humans can both negatively and positively affect the environment.

INTERNATIONAL EXPLORERS

NES: 1.C.1

Climb on board to explore countries and cultures all over the world! This hands-on class will give students a glimpse of other places and show how similar we can be even if we are miles or continents apart.

MAKE IT MOVE

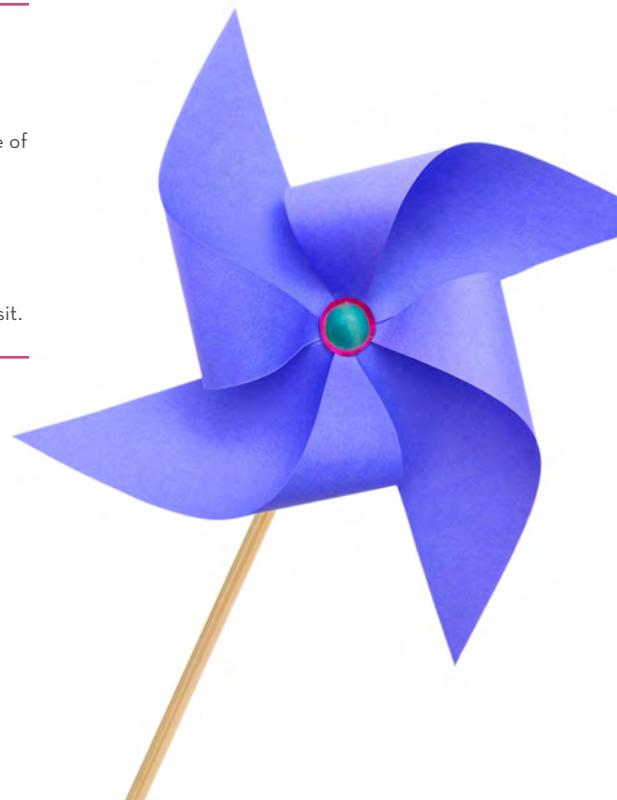
NCSCOS 1.P.1

It's all about push and pull! Explore the science behind gravity and other forces. Students will use textures to create friction, experiment with catapults and discover the strength of air in this hands-on program.

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DISCOVERY
PLACE
NATURE

Nature Classes

Discovery Place Nature classes provide an immersive learning experience for students to explore the Carolinas' native plants and animals and their role in our environment. Children will develop a sense of wonder and appreciation of the natural world through live animal encounters, fun hands-on activities, creative experiments and planetarium experiences.

⌚ 50 Minutes

👤 Minimum 15 Students

📅 Dates & Times Customizable

📍 1658 Sterling Road
Charlotte, NC 28209

Grades Pre-K – K

CAROLINA CRITTERS

APL-5, APL-9, LDC-4, CD-14, SC: K.S.1A.1, NC: K.L.1

Children will explore several groups of animals while comparing the differences and similarities between animals in each group. Using live animals and artifacts, they will investigate animals up close.

WHAT'S THE WEATHER?

NC: K.E.1, SC: K.E.3, CD-10, CD-15, NGSS: K-ESS2-1

Children will learn the ingredients needed to make weather and use real science tools to make weather predictions. They will also develop skills such as measuring, comparing, collecting data and recording observations.

Grades 1 – 2

ANIMAL LIFE CYCLES

NC: 2.L.1, 2.L.2, SC: 1.S.1A.1, 1.S.1A.8, 2.S.1A.1, 2.L.5A.3, NGSS 1-LS3-1

Students will explore animal life cycles from birth through death. Using live animals, Museum specimens and interactive stations, they will compare the life cycles of different animals while recognizing there are similarities and differences among individuals of the same species.

HABITATS OF THE CAROLINAS

NC: 1.L.1, SC: 1.S.1A.1, 2.S.1A.1, 2.L.5B.1, NGSS: 2-LS4-1

Students will take a journey through the Carolinas from the mountains to the sea – stopping along the way to explore how these habitats help meet the needs of native animals. They will examine real specimens and discover animals that call each habitat home.

BLUE SKIES AND STARRY NIGHTS

NC: 1.E.1, NGSS: 1-ESS1-1, SC: 1.E.3A.2, 1.P.2A.1

Students will immerse themselves in a planetarium experience and discover the differences between the day and night sky. Using live solar system models, students will recognize changes in the moon from day to day and even simulate a solar eclipse!

Grades 3 – 5

POWER OF POLLINATORS

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

Students will model pollination and discover why plants need pollinators to survive. Using hands-on group work, they will investigate the structures of a plant and observe pollinators up close.

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**DISCOVERY
PLACE
KIDS**

Rockingham 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 5.

50 Minutes

Maximum 25 Students

Dates & Times Customizable

Grades Pre-K – K

PUSH, PULL, GO!

NC K.P.1, CD-15, LD-7

Children will explore physics through play. They will experiment with the position and motion of a variety of objects and how forces affect them.

WHAT'S THE WEATHER?

NC K.E.1, SC K.E.3

Observe and describe weather conditions throughout the seasons. Engage in critical thinking to choose weather-appropriate clothing. Use real meteorological tools to explore how scientists utilize them to collect data.

Grades 1 – 2

MATTER MATTERS

NC 2.P.2, SC 2.P.3, NGSS 2-PS1

Observe instantaneous phase changes. Investigate the properties of solids, liquids and gases through hands-on experiments. Measure and compare different states of matter. Test for special properties in a variety of materials.

TODAY'S FORECAST

NC 2.E.1, SC 2.E.2

Become amateur meteorologists by using weather tools to collect data such as temperature, precipitation and wind. Compare and analyze the data to determine seasonal weather patterns and communicate their meteorological findings through forecast presentations.

YOU CAN BUILD IT

NC 1.P.1.3, SC 1.S.B.1, 2.S.2B.1, NGSS K-2 ETS1, 2-PS1-1

Students will explore balanced forces and use their problem-solving skills to construct, test and improve model structures such as high-rise towers, bridges, pyramids and more.

SOUND IS VIBRATION

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

Students explore what sound is, how it is created and how we perceive it. Students will experiment with a variety of vibrating materials to understand the relationships between frequency and pitch and amplitude and volume.

Grades 3 – 5

ALL THAT MATTERS

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

Conduct experiments to compare the properties of three states of matter: solids, liquids and gases. Observe rapid phase changes through demonstrations. Investigate a variety of materials by testing them for special properties such as conductivity, magnetism and opacity.

CHEMICAL CHANGES

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

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

ELECTRIFYING ATTRACTION

NC 4.P.1, 4.P.3.1, 4.P.2.1, SC 3.P.3A, 3.P.3B.1, NGSS 3-PS2-3, 4-PS2-3, 4-PS3-4

Through hands-on exploration, students will build a variety of circuits including series and parallel, investigate the properties of magnets, and explore the relationship between magnets and electricity. Experience an unforgettable visual representation of static and current electricity with a hair-raising Van De Graaff encounter!

FORCES AND MOTION

NC 3.P.1.1, 5.P.1.1, 5.P.1.4, SC 5.P.5A, NGSS 3-PS2-1

Newton's Laws of Motion come alive in this class packed with hands-on activities. Students will perform experiments for each of Newton's Laws using tools such as hover pucks, cars and more. In a grand finale that synthesizes student learning of all three laws, witness a balloon rocket car in action!





**DISCOVERY
PLACE**

In-Person Outreach Classes

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50 Minutes

Maximum 25 Students

Dates & Times Customizable

Grades Pre-K - K

PUSH, PULL, GO!

NC K.P.1, CD-15, LD-7

Children will explore physics through play. They will experiment with the position and motion of a variety of objects and how forces affect them.

SENSORY SCIENCE

NC K.P.2, SC K.L.2A.4, CD-15, LDC-3, LDC-7

Children will use their senses to make scientific observations while learning new vocabulary to describe the world around them.

LITTLE BUILDERS

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

Children will use building materials to complete a series of problem-solving challenges and test and improve their solutions.

ANIMAL ADVENTURES

NC K.L.1, SC K.L.2A.3, LDC-3, LDC-7, CD-15

Meet a variety of animal friends, including those with fur, feathers, scales, and exoskeletons. Live animal encounters will be enhanced through play with lifelike puppets.

WHAT'S THE WEATHER?

NC K.E.1 SC K.E.3

Observe and describe weather conditions throughout the seasons. Engage in critical thinking to choose weather-appropriate clothing. Use real meteorological tools to explore how scientists utilize them to collect data.

DINOSAUR DAYS

NC K.L.1, SC K.L.2A.3, HPD-4, HPD-5, APL-1, APL-2

Children will become paleontologists as they excavate a dig site, explore real fossilized specimens, and create models of imprint fossils.

Grades 1 - 2

MATTER MATTERS

NC 2.P.2, SC 2.P.3, NGSS 2-PS1

Observe instantaneous phase changes featuring liquid nitrogen! Investigate the properties of solids, liquids and gases through hands-on experiments. Measure and compare different states of matter. Test for special properties in a variety of materials.

TODAY'S FORECAST

NC 2.E.1, SC 2.E.2

Become amateur meteorologists by using weather tools to collect data such as temperature, precipitation and wind.

Compare and analyze the data to determine seasonal weather patterns and communicate their meteorological findings through forecast presentations.

ALL ABOUT ANIMALS

NC 1.L.1, 1.L.2, 2.L.1, SC 2.L.5A.1, NGSS 2-LS4-1

Get up close and personal with the animal kingdom in this tactile exploration of seven major classes of animals. Students will learn how biologists classify animals by examining real specimens for unique characteristics. Students will have a close encounter with living creatures from Discovery Place!

I'M AN ENGINEER

NC 1.P.1.1, 1.P.1.3, SC 1.S.1B.1, 2.S.2B.1, 2.S.1A, 2.P.4A.2, 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 1.S.1B.1, 2.S.2B.1, NGSS K-2 ETS1, 2-PS1-1

Students will explore balanced forces and use their problem-solving skills to construct, test and improve model structures such as high-rise towers, bridges, pyramids and more.

SOUND IS VIBRATION

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

Students explore what sound is, how it is created and how we perceive it. Students will experiment with a variety of vibrating materials, as well as an oscilloscope and their own voices, to understand the relationships between frequency and pitch and amplitude and volume.

CATAPULT CREATORS

SC 1.S.1B.1, 2.S.1B.1, NGSS K-2 ETS 1-1, K-2 ETS 1-3

Throw yourself into catapults and the Engineering Design Process. Students learn about potential and kinetic energy as they design, build, test and improve their own catapults.

DINO TIME

SC 2.L.5A.1, 2.L.5A.2, NGSS 2-LS4-1

Dig into paleontology! Students will explore real fossils, create their own imprint fossils and use tools to uncover the past.

PRICING

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.

Grades 3 - 5

THE NEED FOR SEEDS NEW

NC 3.L.2.2, 3.L.2.3, 5.L.2.3, SC 3-LS3-2, 3-LS4-2, NGSS 3-5-ETS1-1, 3-5-ETS1-2, 3-5-ETS1-3

Students will investigate the stages of a plant's life cycle, engage with real plant specimens to learn about different seed dispersal methods, and how the diversity of plants affects ecosystems. Students will apply their understanding in the 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, NGSS 3-5 ETS1-1, 3-5, ETS1-2, 3-5 ETS1-3

Students will become aerospace engineers as they confront the challenges of space travel. Participate in dynamic demonstrations about what life will be like beyond our planet as we travel to the Moon and Mars! Using their knowledge of the conditions of space, learners will design solutions to real-world challenges inspired by the upcoming Artemis missions to the Moon and beyond!

MUSCULOSKELETAL MARVELS

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

Examine 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.

WIND ENERGY ENGINEER

NC 4.P.3.1, SC 3.S.1B.1, 4.S.1B.1, 5.S.1B.1, NGSS 4-PS3-4

Students will harness the power of renewable energy by using critical thinking and problem-solving to design, build and test turbine blades to convert wind energy into electricity. Put the Engineering Design Process and your STEM skills to work to successfully complete this engineering challenge by generating the required amount of electricity.

ESCAPE ROOM ROBOTS

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

Help, my robot is trapped! Students will use critical thinking skills to analyze a given problem: their robot is trapped in a room. In order to escape, students must write code, troubleshoot, and use computational thinking. Do your students have what it takes to crack the code and help their robot escape?

ALL THAT MATTERS

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

Conduct experiments to compare the properties of three states of matter: solids, liquids and gases. Observe rapid phase changes through Liquid Nitrogen demonstrations. Investigate a variety of materials by testing them for special properties such as conductivity, magnetism and opacity.

ANIMAL EXPLORATIONS

NC 4.L.1.2, 5.L.2.1, SC 4.L.5B.3, 5.L.4A.2, 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, 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.

ELECTRIFYING ATTRACTION

NC 4.P.1, 4.P.3.1, 4.P.2.1, SC 3.P.3A, 3.P.3B.1, NGSS 3-PS2-3, 4-PS2-3, 4-PS3-4

Through hands-on exploration, students will build a variety of circuits including

series and parallel, investigate the properties of magnets, and explore the relationship between magnets and electricity. Experience an unforgettable visual representation of static and current electricity with a hair-raising Van De Graaff encounter!

CATAPULT ENGINEER

NC 3.I.P.1.1, 5.P.1.1, 5.P.1.2, 5.P.1.4, SC 3.S.1B.1, 4.S.1B.1, 5.S.1B.1, 5.P.5A, 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 5.P.5A, NGSS 3-PS2-1

Newton's Laws of Motion come alive in this class packed with hands-on activities. Students will perform experiments for each of Newton's Laws using tools such as hover pucks, fan cars and more. In a grand finale that synthesizes student learning of all three laws, witness a rocket car in action!

Discovery Place cares about our teachers!

Did you know that teachers receive complimentary general admission to any one of our four locations?

Take advantage of this opportunity to learn more about how Discovery Place exhibits and programs are designed to support STEM learning for students. Please call our Guest Sales team to arrange your complimentary visit.



Grades 6 - 8

ROBOTICS ENGINEER

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

Students will be presented with a real-world challenge that can be solved with the help of a robot. They will use the Engineering Design Process, employ computational thinking, troubleshooting, coding, and programming to achieve success.

CATAPULT ENGINEER

NC 7.P.1.2, SC 8.S.1B.1, 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.



**DISCOVERY
PLACE**

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.



3 or more one-hour sessions



Maximum 25 Students



Dates & Times Customizable

ENGINEERING IS ELEMENTARY **GRADES 1-2 AND 3-5**

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

Students will use the Engineering Design Process to design, build, and test their own solutions to real-world problems.

MINI MAKER **GRADES 1-2**

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

Students will become makers as they design, create, build, innovate and problem-solve in this hands-on workshop. Students engage in a series of make projects that highlight STEAM, allow for self-expression and foster critical thinking.

MINI CSI **GRADES 1-2**

NC 2.L.2.2

Students will become detectives during this crime-busting workshop. Apply investigative techniques including fingerprint analysis, chromatography and chemical analysis to solve a mystery.

THINK IT, PLAN IT, MAKE IT **GRADES 3-5**

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

Students will use tools and technologies to build, innovate, and problem-solve as they channel their inner scientist, engineer, and artist to create, think critically and cooperate on a series of STEAM-based makes.

CODE KIDS NEW **GRADES 3-5**

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

Students will get a boost in this in-demand skill as they explore coding basics including functions, loops, conditionals, and troubleshooting through both plugged and unplugged activities.

ROBOTICS **GRADES 3-5**

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

Students will use a variety of robots to explore coding and debugging. Can you program your robot to successfully complete a series of challenges?

FORENSICS CRIME LAB **GRADES 6-8**

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

Students will use technology to decipher evidence found at a crime scene. DNA analysis, chromatography, weapon matching, and spatter analysis are some of the tools available to student investigators to solve the crime.

BRIDGE BUILDING 101 **GRADES 6-8**

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

Student engineers will uncover the physics behind forces applied to a bridge as they design, build and test a balsa wood bridge.

DIVE INTO DISSECTION **GRADES 6-8**

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 gain an understanding of the systems of the human body and compare and contrast human systems with equivalent animal systems in this dissection-packed workshop.

ENGINEERING DESIGN THINKING **GRADES 6-8**

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

Students will use the Design Thinking Process to produce a product or solve a problem. By developing a design thinking mindset, students will focus on empathy, ideation, prototyping, and experimentation.

PRICING

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

 Dates & Times Customizable

 Minimum 25 Students

Grades K – 8

MATTER OF SCIENCE

NC 2.P.2.1, 3.P.2.2, 3.P.2.3, 6.P.2.1, 6.P.2.2

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

Grades 3 – 8

ENERGY, ENERGY, ENERGY

NC 3.P.1.3, 3.P.3.1, 3.P.3.2, 4.P.1.2, 4.P.3.1, 7.P.2.1, 7.P.2.2, 8.P.2.2

Without energy we wouldn't be able to listen to music, play sports or finish our homework. Students will identify energy and energy transformation as amazing demonstrations illuminate the science behind electrical, chemical and thermal energy.

Call for pricing

We also offer Digital Assemblies you can stream from anywhere!

Starlab Planetarium

Starlab Planetarium requires access to electricity and a minimum set-up space of 11 feet in height and clear floor area of 22x 22 feet for the small dome, and 16 feet in height and clear floor area of 28 x 28 feet for the large dome. Maximum capacity inside the small dome: 30, large dome: 50.

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.

PRICING

Small Dome: \$250, Large Dome: \$350.

*Delivery of Starlab programs is dependent on CDC guidelines for COVID safety.

Festival Booths

Festival Booth programs display exciting science topics for visitors to explore at their leisure. Each experience consists of a table staffed by a Discovery Place educator conducting hands-on experiments and demonstrations as well as self-guided learning time. Small groups of visitors will have a brief (5-10 minute) interaction at each booth. Appropriate for all ages and a great addition to festivals, family nights, school functions and community events.

 1 Hour

 Dates & Times Customizable

 Approximatley 60 Visitors

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, out-of-this-world Starlab planetarium programs and live animal encounters, we can design an unforgettable experience for the whole family. Perfect for back-to-school nights, PTA events, and community celebrations.

 90 minutes

 Dates & Times Customizable

Basic Package

UP TO 150 PARTICIPANTS

Select 1:

Starlab Planetarium (1 hr)

4 Station-based Experiments (1 hr)
requires volunteer assistance

Festival Booth (1 hr)

Premium Package

UP TO 300 PARTICIPANTS

Select 2:

Starlab Planetarium (1 hr)

4 Station-based Experiments (1 hr)
requires volunteer assistance

Festival Booth (1 hr)



**DISCOVERY
PLACE**

Digital Classes

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.

⌚ 45 Minutes

👤 Maximum 25 Students

📅 Dates & Times Customizable

All programs originate in our Digital Studio Sponsored by T-Mobile

T Mobile

MATTER MATTERS GRADES PRE-K - 2

NC 2.P.2.1, SC 2.P.3A.1, 2.P.3A.3, 2.P.3A.4, 2.S.1A.4
NGSS 2-PS1-4

Observe instantaneous phase changes featuring liquid nitrogen! Investigate the properties of matter and its different phases through at-home experiments.

ALL THAT MATTERS GRADES 3 - 8

NC 3.P.2, 3.P.2.1, 3.P.2.2, 3.P.2.3, SC 5.P.2A.1
NC 6.P.2, 6.P.2.2

Through demonstrations featuring liquid nitrogen and at-home experiments, students will gain a greater understanding of the properties of matter in its various phase, and how heat affects particle motion and density.

STARRY, STARRY NIGHT GRADES PRE K - 5

APL-1, APL-2, APL-8, LDC-1, LDC-7, NC 1.E.1.1, 1.E.1.2, SC 1.E.3A.1, 1.E.3A.2, 1.E.3A.3, NGSS 1-ESS-1-1, 1-ESS-1-2, NC 4.E.1.1, 4.E.1.2, SC 4.E.3B.1, 4.E.3B.2, 4.E.3B.3, 4.E.3B.4, NGSS 5-ESS-1-1, 5-ESS-1-2

Witness the wonders of the universe in this in-depth look at the Earth/Moon/Sun system. Learn about what causes day and night and changes in the appearance of the moon. Observe and recognize patterns in the night sky.

SOLAR SYSTEM SPECTACULAR GRADES 3 - 8

NC 3.E.1.1, 3.E.1.2, SC 4.E.3A.1, 4.E.3A.2, NC 6.E.1.2, 6.E.1.3, NGSS MS-ESS1-3

Travel through the solar system with our virtual planetarium to learn about the sun, planets, asteroids and moons that make up Earth's neighborhood. Investigate space exploration as you join Apollo astronauts on a trip to the moon and visit the red planet with the Mars rovers.

MOVING WITH ANIMALS GRADES PRE K - K

NC K.L.1.2, APL-1, APL-2, APL-8, LDC-7

In this interactive class, students will meet live animals from the Discovery Place living collection. They will become familiar with the differences between living and nonliving things, and work with an educator to demonstrate how animals move.

ANIMALS IN THEIR ENVIRONMENT GRADE 1 - 2

NC 1.L.1.1

In this interactive class, students will meet live animals from the Discovery Place Living Collection. They will become familiar with animal habitats, and work with an educator to describe the needs of different animals in their environment.

ANIMAL LIFE CYCLES GRADES 1 - 2

NC 2.L.1.1, SC 2.L.5A.2, NGSS 1-LS3-1

In this interactive class, students will meet live animals from the Discovery Place Living Collection. They will become familiar with the needs of all animals, and work with an educator to describe the life cycles of different animals while learning from home.



ANIMALS IN THEIR ENVIRONMENT GRADES 3 - 5

NC 4.L.1.2, 5.L.2.2, SC 3.L.5B.2, 5.L.4B.1, NGSS 5-PS3-1

In this interactive class, students will meet live animals from the Discovery Place Living Collection. They will become familiar with the function of different animals in their ecosystem, and work with an educator to demonstrate how animals use adaptations to meet their needs while learning from home.

ANIMAL ECOLOGY GRADES 6 - 8

NC 8.L.3.1, 8.L.3.2, SC 7.EC.5A.1, 7.EC.5A.3, NGSS MS-LS2-3

In this interactive class, students will meet live animals from Discovery Place. They will become familiar with relationships between producers, consumers, and decomposers while working with an educator to demonstrate how abiotic and biotic factors affect animal populations in an ecosystem.

PUSH, PULL GRADES PRE-K - 2

NC K.P.1, NC 1.P.1, 1.P.1.1, 1.P.1.2, 1.P.1.3

Explore how forces such as pushes, pulls, gravity, and magnets can affect the motion of an object. Make predictions and join in at-home experiments.

FORCES AND MOTION GRADES 3 - 8

NC 3.P.1.1, 5.P.1.1, 5.P.1.2, 5.P.1.4, SC 5.P.5, ANGSS 3-PS2-1, NC 7.P.1.1, 7.P.1.2, SC 8.P.2A.1, 8.P.2A.2, 8.P.2A.3, 8.P.2A.4

Newton's Laws of Motion come alive in this class with exciting demonstrations coupled with at-home experiments. 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, SC K.S.1B, NGSS K-2-ETS1-1, K-2-ETS1-3

Can your house stand up to the Big Bad Wolf? Can you build a bridge over the river? Use engineering skills to test the science behind some of your favorite stories

I'M AN ENGINEER GRADES PRE-K - 2

SC K.S.1B, NGSS K-2-ETS1-1, K-2-ETS1-3, SC 1.S.1B.1, 2.S.1B.1, 2.S.1A, NGSS: K-2-ETS 1-1

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

MUSCULOSKELETAL MARVELS GRADES 3 - 5

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

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.

BODY SYSTEMS GRADES 3 - 8

NC 5.L.1, 5.L.1.2, NC 7.L.1.3, 7.L.1.4, SC 7.L.3B.1, 7.L.3B.2

Explore the human body and discover the tissues, organs, and systems that keep you working. Observe real human specimens and join in at-home activities to analyze several body systems.

AEROSPACE ENGINEER GRADES 3 - 8

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

NASA's Artemis mission, which will put the first woman and next man on the Moon, will pave the way for the ultimate goal of sending astronauts to Mars. Engage in engineering challenges to aid Artemis astronauts in their mission.





**DISCOVERY
PLACE**

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.



30-Minutes



Unlimited Students



Dates & Times Customizable

All programs originate in our Digital Studio Sponsored by T-Mobile

T Mobile

BACKYARD BIOLOGY

GENERAL AUDIENCES

Students will have the opportunity to experience science and nature firsthand through live animals, exciting demonstrations and engaging conversations. Join our curators and resident animals as they share some tips on how to explore and discover the richness of your backyard. Plus, learn some techniques to see and hear what is hiding in plain sight all around you.

A MATTER OF SCIENCE

GENERAL AUDIENCES

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.

PHYSICAL PHENOMENA

GENERAL AUDIENCES

Follow along with our Museum educators as they demonstrate the fascinating physical phenomena and scientific principles that govern our world. Join us virtually to experience some amazing exhibits in Discovery Place's Cool Stuff exhibit along with experiments in our virtual lab.

JOURNEY TO SPACE - VIRTUAL PLANETARIUM

GENERAL AUDIENCES

Witness the wonders of the universe in our virtual planetarium as we journey into our solar system and beyond. Explore planets, moons, constellations and galaxies as well as learn about the past, present and future of space exploration.

ANIMAL CARE: BEHIND-THE-SCENES

GENERAL AUDIENCES

Our Museums are home to a wide variety of animals. Go behind-the-scenes with our curators and animal residents to discover what goes into providing proper diet, environment and enrichment for our animal ambassadors.



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	\$11
DISCOVERY PLACE NATURE	\$6
DISCOVERY PLACE KIDS-HUNTERSVILLE	\$8
DISCOVERY PLACE KIDS-ROCKINGHAM	\$6
MUSEUM CLASSES	\$6

Workshops on Your Campus

Multi-session programs that focus on a single science topic which are facilitated on your campus.

TIER 1 WORKSHOP 6 SESSIONS	\$1,800
TIER 1 WORKSHOP 12 SESSIONS	\$3,600
TIER 2 WORKSHOP 6 SESSIONS	\$2,100
TIER 2 WORKSHOP 12 SESSION	\$4,200

Outreach Options at Your School

Bring Discovery Place Educators to visit your school.

CLASS	\$250
ASSEMBLY	\$450
MOBILE STAR LAB PLANETARIUM (SMALL)	\$250
MOBILE STAR LAB PLANETARIUM (LARGE)	\$350
FESTIVAL BOOTH (2 HOURS)	\$350
FESTIVAL BOOTH (EACH ADDITIONAL HOUR)	\$100
FAMILY STEM NIGHT	\$350
FAMILY STEM NIGHT PREMIUM	\$450
IN-COUNTY MILEAGE	\$25

Virtual Outreach Options

Exciting demonstrations and at-home experiments right to your virtual classroom live-streamed from our Digital Studio sponsored by T-Mobile.

CLASS	\$200
ASSEMBLY	\$350
SCIENCE KITS	\$12



DISCOVERY PLACE
SCIENCE | KIDS | NATURE