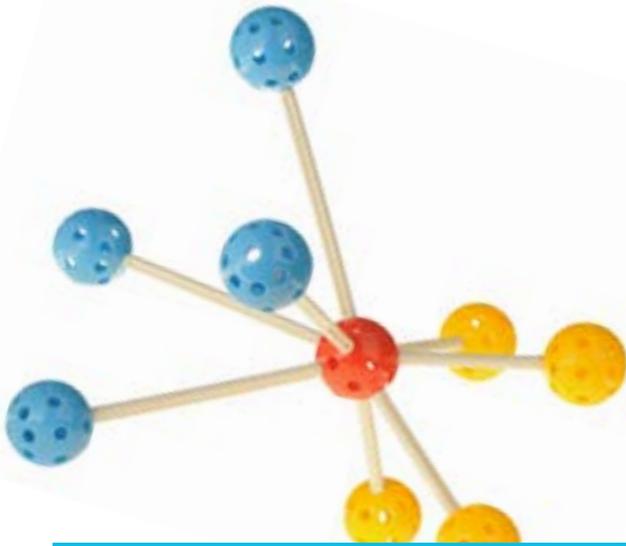


DISCOVERY PLACE
SCIENCE | KIDS | NATURE



EARLY CHILDHOOD CLASSES

Early Childhood Classes are for young learners through Grade 2. These inquiry-based classes will have students exploring topics such as sound, weather, forces and the amazing world in which we live.



50 minutes
 Dates and times are customizable

\$14 per student
 Minimum 15 students
 301 N Tryon St
Charlotte, NC 28202

CALL TO RESERVE

Register by phone
800.935.0553 or
704.372.6261 x300

Monday - Friday
8:00 a.m. - 5:00 p.m.

FIELD TRIPS

School group field trips are \$8 per student. Add an IMAX film for only \$5 more.

CHAPERONES

One adult chaperone required for every 10 students and admitted to the Museum for free. Additional chaperones will be charged per the fee schedule.

LUNCH

Space for students to eat bagged lunch is available and must be scheduled in advance. Box lunches are also available with advance purchase through the Museum's CurioCity Café. Cost is \$6.50 per student, adult box lunches are \$9.50 each. Box lunches include a sandwich, chips and a drink.

GRADE PRE K-2

AMAZING ANIMALS

Get up close to amazing creatures and learn about the habitats, life cycles and adaptations of these lively Museum residents. Learn how to classify these animals into special groups. *(K.L.1, 1.L.2, 2.L.1, 2.L.2)*

CAN YOU HEAR ME?

Explore how sound travels and how to turn vibration into sound through fun experiments. Understand how sound waves, volume and pitch affect what we hear. *(2.P.1.1, 2.P.1.2)*

DIG INTO EARTH SCIENCE NEW

Get ready to dig into earth science and discover what is living and non-living in the dirt. Test soils to determine their uses. Examine plant parts and adaptations, then follow the rock cycle to see changes over time. *(K.L.1.2, K.E.1.1, 1.L.2, 1.E.2)*

ENGINEERING 1, 2, 3

Use the engineering design process to investigate real world challenges like testing materials, building structures and completing circuits. Discover different types of engineering and find out what it takes to be an engineer. *(K.P.1.1, K.P.1.2, K.P.2.2, 1.P.1)*

EVERYTHING MATTERS

Observe and discover the properties of solids, liquids and gases. Conduct exciting experiments involving mixing and changing matter. *(K.P.1.1, K.P.1.2, K.P.2.2, 1.P.1)*

I LIKE TO MOVE IT, MOVE IT

This action-packed class is perfect for hands-on learners. Explore forces such as push, pull and gravity as you participate in a variety of exciting challenges. *(K.P.1, 1.P.1, 1.P.1.1, 1.P.1.3)*

MINI METEOROLOGY

Snow, rain, sunshine or clouds? What will the weather be like today? Use tools to develop skills including measuring, comparing, collecting data and making weather predictions. *(K.E.1.2, K.E.1.3, 2.E.1.2, 2.E.1.3, 2.E.1.4)*

OCEAN ADVENTURE

Dive in and explore the world's oceans and a vast array of sea life. Examine and test adaptations for survival in the deep. Discover amazing sea life at Discovery Place Science through a tour of *World Alive*. *(K.L.1, 1.L.1)*

OPERATION RAINFOREST

Become a rainforest researcher and study the amazing animals that live in *World Alive*. Learn about their rainforest home and what special adaptations help them survive in this unique ecosystem. *(K.L.1, 1.L.1, 1.L.1.2, 1.L.1.3)*

OUTER SPACE EXPLORATION

Look up to discover what lights up the sky. Investigate the changing faces of the moon and learn how the sun travels across the sky without ever moving. *(1.E.1, 1.E.1.1, 1.E.1.2)*



DISCOVERY PLACE SCIENCE

LAB CLASSES

Discovery Place Science labs are dedicated to the exploration of energy, biotechnology, anatomy and the maker movement. Explore the amazing world in which we live through hands-on and inquiry-based activities.

 50 minutes

 9:30, 10:30, 11:30 a.m. or 12:30 p.m.

 Monday - Friday

 \$14 per student

 Minimum 15 students

 301 N Tryon St
Charlotte, NC 28202

GRADE 3

MOVE IT OR LOSE IT

Explore the structure and functions of the human skeletal and muscular systems through a variety of guided-inquiry activities and the examination of real human specimens. (3.L.1.1, 3.L.1.2)

PLANTS & SOIL

Learn all about plants and how they survive. Find out what determines soil quality and why some plants absorb more water than others. Includes flower dissection. (3.L.2.1, 3.L.2.2, 3.L.2.3, 3.L.3.4)

STRUCTURES OF THE EARTH

Unearth our planet's unique physical features through various hands-on activities including model building, map reading and diagrams. (3.E.2.1, 3.E.2.2)

WHAT'S THE MATTER?

Don't let the phase fool you - it's all matter. Explore density and molecular motion as you investigate the phases of matter. (3.P.2.1, 3.P.2.2, 3.P.2.3)

GRADES 3-4

EARTH, MOON & THE GREAT BEYOND

Join the rotation revolution powerful enough to alter your world. Learn why the moon appears to change shape each night, why the sun rises and sets and much more. (3.E.1.1, 3.E.1.2, 4.E.1.1, 4.E.1.2)

MOLD MAKING & FOSSILS NEW

Through an interactive presentation, discuss what fossils are and how they are created. Students will learn the process of mold and cast making and will create their own mold using real fossils. (4.E.2.1, 4.E.2.2)

GRADES 3-7

ENERGETIC CONTRAPTIONS

Kinetic and potential energy are on display as students design, build and test their very own mini-catapults. Put engineering design concepts into practice. (3.P.1.1, 3.P.1.3, 5.P.1.1, 5.P.1.4, 7.P.1.1, 7.P.1.3, 7.P.2.1, 7.P.2.2, 7.P.2.4)

GRADES 3-8

MOTORS, CIRCUITS & ART

Art is more than just a paintbrush and canvas. It can be made using batteries, motors, circuits and even DrawBots®. Our Record Player Spirograph will draw attention to the close connection between math and art. (3.V.2, 3.V.3, 4.V.2, 4.V.3, 4.P.2.1, 4.P.3.1, 5.V.2, 5.V.3, 5.P.1.1, 6.V.2, 6.V.3, 6.P.3.3, 7.V.2, 7.V.3, 7.P.2.3, 7.P.2.4, 8.V.2, 8.V.3, PSc.3.3)

Additional material cost of \$3 per participant.

LAB CLASSES CONT.

GRADE 4

ANIMAL BEHAVIOR & ADAPTATION

Observe fascinating behaviors and adaptations of animals. Explore a variety of living things and participate in guided-inquiry activities. Live animal encounters enhance the experience. (4.L.1.1, 4.L.1.2, 4.L.1.4)

BUILD A CELL NEW

Learn about organelles and the difference between plant and animal cells by re-creating them from laser-cut templates. Students will use found objects and tools within *Thinker Space* to create their own unique plant or animal cell. (Bio 1.1, Bio 1.2)

OHM MY CIRCUITS

Conduct hair-raising experiments with a Tesla coil. Learn the difference between static and current electricity, build a circuit, investigate magnetism and make an electromagnet. (4.P.1.1, 4.P.1.2, 4.P.3.1)

ROCKS & FOSSILS

Uncover the differences between rocks and minerals and learn about the rock cycle. Test different mineral properties, uncover how they are formed and take a look at Museum fossils. (4.E.2.1, 4.E.2.2, 4.P.2.2, 4.P.2.3)

GRADES 4–8

BECOME A FAN OF WIND ENERGY NEW

Learn about renewable energy sources by taking a closer look at wind energy. Students will design and build wind turbine blades and compete to see who gets the most voltage. (5.P.1.1, 5.P.1.4, EEn.2.8.1)

INSIDE OUT - DISSECTION

Gain a better understanding of the human body and the interdependency of systems through dissection. (4.L.1.2, 4.L.1.4, 5.L.1.2, 7.L.1.3, 7.L.1.4)

Additional material cost of \$8 per participant.

FETAL PIG DISSECTION

Junior surgeons, join us to gain a better understanding into the anatomy of the human body and the interdependency of body systems through the completion of a fetal pig dissection. (4.L.1.2, 4.L.1.4, 5.L.1.2, 7.L.1.3, 7.L.1.4)

Additional material cost of \$10 per participant. Other organs available to dissect.

IT'S ELECTRIC NEW

Gain first-hand knowledge of the technology used to clean historical artifacts, produce aluminum and coat plastic car parts. Conductors, insulators, chemical ions, chemical reactions and electroplating will be explored. (4.P.2.1, 4.P.3.1, 5.P.2, 6.P.2, 6.P.3, 8.P.1, PSc.2.1, PSc.2.2)

CODING MEETS DOING NEW

From coding and gaming to the new field of “the internet of things,” students will use three boards that will likely become embedded in everyday gadgets of the future: Makey Makey®, Arduino® and Raspberry Pi®. (4.P.2.1, 4.P.3.1, PSc.2.1.3, PSc.3.3)

GRADE 5

ECOSYSTEM EXPLORATIONS

Put on your safari hat and get ready to travel. Discover characteristics of each biome and get up close and personal with live animals. (5.L.2.1, 5.L.2.2, 5.L.2.3)

HOT & COLD

Use your bare hands to cause color changes and see what you look like through an infrared camera. Make fascinating, hands-on discoveries about conduction, convection and radiation. (5.P.3.1, 5.P.3.2)

GRADES 5–7

DNA DETECTIVES

Explore genotypes, phenotypes, alleles and traits. Gain a better understanding of genes and heredity through experimentation. (5.L.3.1, 5.L.3.2, 7.L.2.1, 7.L.2.2, 7.L.2.3)

FORCE & MOTION

Feel and see the forces around us. Experiment with Newton's Laws of Motion through a variety of activities. (5.P.1.1, 5.P.1.2, 5.P.1.4, 7.P.1.1, 7.P.1.2, 7.P.1.4)

NEED A HAND? NEW

Learn the real life benefits of 3D printing within the context of assistive devices like prosthetics. Make an exoskeleton and assemble a basic 3D-printed finger. (5.P.1.1, 6.P.2.2, 7.P.2.1, 7.P.2.2, 6.RP.1)

THE HUMAN BODY

Delve into the human body and analyze the systems that keep you working. Identify several body systems using hands-on activities and real human specimens. (5.L.1.2, 7.L.1.3, 7.L.1.4)

WHAT'S THE FORECAST?

Develop a sunny outlook by conducting weather experiments. A variety of activities build a better understanding of weather and climate. (5.E.1.1, 5.E.1.2, 7.E.1.2, 7.E.1.4)

GRADES 5–8

ADVANCED ROBOTICS

Get an introduction to writing programs for LEGO® EV3 robots using programming software. Complete a challenge through robotic automation. (5.P.1.2, 7.P.1.1)

CONCEPTS OF CHEMISTRY

Mix molecules, investigate rate altering chemical manipulations and watch as it all goes out with a bang. Lab safety skills will be reviewed. (5.P.2.3, 6.P.2.1, 8.P.1.3)

LAB CLASSES CONT.

GRADE 6

THE SECRET LIFE OF PLANTS

Investigate the basic structure of green plants and how they adapt to both biotic and abiotic factors, as well as influence the cycles through which energy and matter flow. (6.L.1.1, 6.L.1.2, 6.L.2.1, 6.L.2.2, 6.L.2.3)

GRADE 6–8

3D PRINTING ELEMENTS NEW

Learn about elements on the periodic table through 3D modeling and printing. Students will choose an element to design and print using Tinker CAD. (Chm 1.3.1, Chm 1.3.2, Chm 1.3.3)

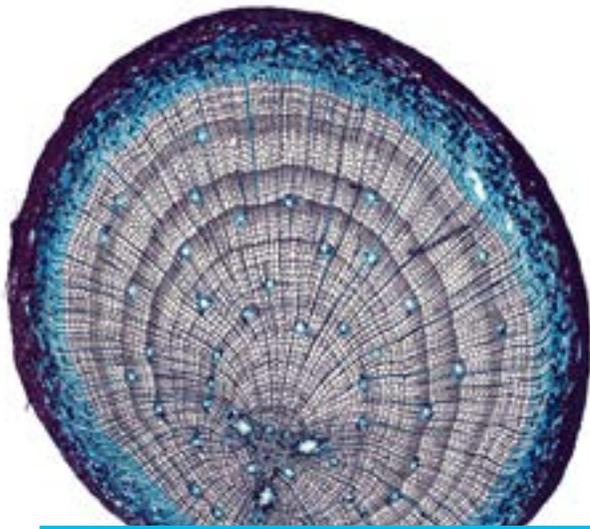
GRADE 7

SIMPLE MACHINES

Increase your knowledge of mechanics through activities using gears and levers. Determine ways to increase your efficiency and mechanical advantage. (7.P.2.2, 7.P.2.3, 7.P.2.4)

TAKE A CELL-FIE!

Delve into the human cell and explore the different organelles and how they all contribute to the basic functions of life. Understand how cells form tissues, organs and body systems. (7.L.1, 7.L.1.2, 7.L.1.3, 7.L.1.4)



DISCOVERY PLACE SCIENCE

HIGH SCHOOL LAB CLASSES

Discovery Place Science labs are dedicated to the exploration of energy, biotechnology, anatomy and the maker movement. Explore the amazing world in which we live through hands-on and inquiry-based activities.

- 90 minutes
- Call for times
- Monday - Friday

- \$18 per student
- Minimum 15 students
- 301 N Tryon St
Charlotte, NC 28202

GRADE 9

IT'S ELECTRIC

Gain first-hand knowledge of the technology used to clean historical artifacts, produce aluminum and coat plastic car parts. Conductors, insulators, chemical ions, chemical reactions and electroplating will be explored. (4.P.2.1, 4.P.3.1, 5.P.2, 6.P.2, 6.P.3, 8.P.1, PSc.2.1, PSc.2.2)

MUSICAL CIRCUITS

Learn how to create a unique musical instruments using Makey Makey™ an electronic invention tool and toy that allows students to connect everyday objects to computer programs. (4.P.2.1, 4.P.3.1, PSc.2.1.3, PSc.3.3)

GRADE 9-11

3D PRINTING ELEMENTS

Learn about elements on the periodic table through 3D modeling and printing. Students will choose an element to design and print using Tinker CAD.

GRADES 9-12

ANIMAL RELATIONSHIPS NEW

Each organism plays an important role in its ecosystem. Investigate the symbiotic relationship between mites and cockroaches. Use a compound microscope and CO2 to explore the gut bacteria of termites. (Bio.2.1.3, Bio.2.1.4, 8.L.3.2, 8.L.3.3, 8.L.3.1)

APPLIED BIOCHEMISTRY: FINDING PATIENT ZERO NEW

Use an ELISA method to identify patient zero. Explore the biochemistry behind our immune system response. (High School Bio.4.1, Next Gen HS-LS1-1, HS-LS1-6)

BEGINNER'S ZOOLOGY

Gain an introduction to differentiating taxonomic groups. What characteristics led scientists to classify each group? Live animal encounters will enhance the learning experience. (Bio.3.5.1, Bio.3.5.2, 8.L.3.1, 8.L.4.1, 8.L.4.2)

BIOTECHNOLOGY IN ACTION

Explore the concept of bacterial transformation and learn about electronics used in medical devices and pharmaceuticals. (Bio 3.3, HS-LS1-1, HS-LS2-8, HS-LS4-6)

BODIES IN SPACE: THE RELATIONSHIP BETWEEN THE SUN AND EARTH NEW

What's inside a black hole? How long does our sun live? Where are stars born? Discover what it takes to ignite a star, how they change over the course of their life and examine what happens when they die. (NC - EEn.1.1.1- EEn.1.1.4, SC - H.E.2B.3)

GENETIC FINGERPRINTING WITH PCR NEW

Delve deeper into the world of DNA by exploring the concepts behind PCR (Polymerase Chain Reaction) techniques. Perform a hands-on experiment using a PCR machine and gel electrophoresis to solve a mystery. (HS Bio.4.1, HS-LS1-1, HS-LS1-6)

OCEANOGRAPHY NEW

Gain an understanding of how important ocean processes are to the healthy functioning of our planet. Acquire skills to understand and quantify how the ocean works, as well as experience a behind-the-scenes tour of our aquarium and lab. (NC EEn.2.2.1, EEn.2.3.1)

TOOLS OF THE TRADE

Explore biotechnology careers through companies located in the Carolinas and how a multidisciplinary approach is necessary in the field. (8.L.2, 7.L.2, Bio 3.3, HS-LS1-1, HS-LS2-8, HS-LS4-6)



DISCOVERY PLACE

KIDS - HUNTERSVILLE

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

 9:30, 10:30 or 11:30 a.m.,
12:30 or 1:30 p.m.

 Tuesday - Friday

 \$12 per student

 Minimum 15 students

 105 Gilead Rd
Huntersville, NC 28078

FIELD TRIPS

School group field trips are \$6 per student. Add a class for \$6 more.

CHAPERONES

1 chaperone per 5 students is required and admitted free. Additional chaperones, booked in advance, are admitted at the \$6 school group rate. Chaperones not booked in advance must pay full Museum admission.

PARKING

Cars and vans park free in the Huntersville Town Center Parking Deck. Offsite parking for larger vehicles is also available.

LUNCH

While there are no dining facilities at the Museum, covered picnic shelters are available at nearby North Mecklenburg Park or Huntersville Athletic Park. Reservations are recommended. Please call Huntersville Parks & Recreation at 704.766.2220.

GRADES PRE K-K

COMMUNITY HELPERS

Play the parts of different community helpers in this class and discover the tools of their trades. Experience technology such as a postal worker's weight scale, a veterinarian's X-ray viewer and much more. *(K.E.1.1, K.E.1.2, K.C&G.1.1)*

GRADES PRE K-2

BACKYARD BIOLOGY NEW

Let's explore the living things are in our back-yard. We'll compare characteristics of plants and animals, discover what they need for energy and growth and learn about life cycles. We'll also gain an understanding of how human interaction effects the environment. *(K.L.1, 1.L.1, 1.L.2, 2.L.1, 2.G.2, OA.6.1)*

CREATIVE BUILDERS

Grab your hardhat, gloves and safety goggles and join our construction crew. Discover the purpose of real tools and use them in a safe environment. Trace actual Discovery Place Kids blueprints and learn important math skills through measurement. *(K.P.1.1, K.P.2.2, K.G.1, K.G.3, K.MD.1, 1.MD.2, 1.G.1, 1.G.2, 2.MD.9, 2.G.1)*

THE EARTH, MOON & STARS

Where does the sun go at night? Where does the moon go during the daytime? Learn to identify patterns in the day and night sky as we explore the phases of the moon, discover the effects of gravity and find out why objects appear to move across the sky. *(K.E.1.1.E.1, 1.E.1.1, 1.E.1.2, 2.E.1.3, OA1.1, OA1.1.1, OA1.1.2, OA1.1.3)*

THE FIVE SENSES

Discover individual differences among the five senses. Learn how smell and taste work together and play games to uncover how each sense works in this station-based class. *(K.P.2.1, K.E.1.1, K.C&G.1.2, 1.C&G.1, 2.L.2.2)*

FORECASTING THE WEATHER

Learn about the tools meteorologists use to gather information and analyze data. Compare weather patterns and try to predict what the weather will be like from season to season. *(K.E.1.2, K.E.1.3, K.G.2.1, 2.E.1.2, 2.E.1.3, 2.E.1.4)*

INTERNATIONAL PLAY

Travel the world and explore "play" in different cultures. Learn about the traditional games and play practices in Australia, Africa, Brazil, Singapore and more. *(K.C&G.1.1, K.C&G.1.2, K.C.1.1, K.G.1.2, K.C.1.2, 1.C&G.1.1, 1.C&G.1.3, 1.C.1.1)*

DISCOVERY PLACE KIDS-HUNTERSVILLE CONT.

THE JOURNEY OF A SEED

Travel through the plant life cycle and explore how seeds grow into flowers. Investigate the process through hands-on seed dissection and worm inquiry. In addition, learn the process of pollination by identifying the parts of a flower. *(K.P.2.1, 1.L.1.1, 1.L.1.2, 1.L.2.1, 2.L.2.1)*

MAKE IT MOVE

What goes up must come down. Explore the science behind the theory of gravity and other forces. Use textures to create friction and discover the strength of air in this hands-on program. *(1.P.1.1, 1.P.1.2, 1.P.1.3)*

RECYCLE ROUND-UP

Why is it important to recycle? What can you do to save energy? Dive into hands-on experiments to demonstrate small changes we all can make to ensure our earth is healthy. *(K.C&G.1.2, K.G.2.2, 1.G.2.1, 1.L.1.3, OA.6.1)*

GRADES K-2

EARTH'S MATERIALS

Learn about the physical properties of Earth's materials and how they are useful in many different ways. Make sure to wear your safety goggles as we analyze rocks, minerals, soil and water. *(K.P.2.1, K.P.2.2, 1.E.2.1, 1.E.2.2)*

THE KEY TO MAPPING

Where am I? Knowing how to draw and read a map is important for traveling to new places. Become cartographers for the day by creating maps and learning about symbols and keys. *(K.C&G.1.2, K.G.1.1, K.G.1.2, 1.G.1.2, 1.G.1.3, 1.G.1.1, 2.G.1.1)*



DISCOVERY PLACE

KIDS - ROCKINGHAM

Students can explore activities that combine imagination, education and fun. Discovery Place Kids-Rockingham promotes growth in language, art, science and mathematics while building social skills and inspiring curious thinkers.

 50 minutes

 9:30, 10:30 or 11:30 a.m.,
12:30 or 1:30 p.m.

 Tuesday - Friday

 \$11 per student

 Minimum 15 students

 233 E Washington St
Rockingham, NC 28379

FIELD TRIPS

School group field trips are \$5 per student. Add a class for \$6 more.

CHAPERONES

1 chaperone per 5 students is required and admitted free of charge. Additional chaperones, booked in advance, are admitted at the \$5 school rate. Chaperones not booked in advance must pay full Museum admission.

PARKING

Free parking is available in the lot adjacent to the Museum, and ample additional parking is available within 2 blocks.

LUNCH

Indoor dining facilities are available at Hitchcock Place, across the street from the Museum. To reserve lunch space please call 910.997.5266 x300. Picnic facilities are available at nearby Hinson Lake Park, 152 Hinson Lake Road, Rockingham. To reserve picnic space, please call 910.895.6810.

GRADES PRE K-K

COMMUNITY HELPERS

What would you like to be when you grow up? What about a police officer or maybe a veterinarian? How about an EMT or a doctor? Explore what community helpers do each day. Find out what it takes to be one of these important people in our community. (*Social Studies: K.E.1.1, K.E.1.2, K.C & G.1.1, K.C & G.1.2*)

FAIRY TALE FANTASY

Through active storytelling, mapmaking and other station-based activities, *Goldilocks and the Three Bears* comes to life. Test the temperature of porridge, learn why bears are fascinating animals and use classification to build vocabulary and math skills. (*CCSS.ELA-Literacy.RL.K.1, CCSS.ELA-Literacy.RL.K.2, CCSS.ELA-Literacy.RL.K.3, CCSS.Math.Content.K.MD.A.2, CCSS.Math.Content.K.MD.B.3*)

THE FIVE SENSES

Be prepared to spark all of your senses as you tantalize your taste buds, trick your eyes, test your finger tips, excite your ears and become a whiz with your sniffer in this fun, hands-on class. (*Science K.P.2.1*)

GRADES K-2

INTERNATIONAL PLAY

Travel the world and explore “play” in different cultures. Learn about the traditions and customs behind popular play practices in South America, Europe, Australia and more. (*K.C & G.1.1, K.C.1.2, CCSS.Math.Content.K.CC.B.4b, 1.C.1.1, 1.C.1.2, 2.C.2.1*)

NUTRITION FOR KIDS

Get ready, get set, get healthy! Learn about nutritious choices as we explore the new MyPlate program. Discover the importance of physical activity and much more. (*Healthful Living K - K.NPA.1.1, K.NPA.2.2, 1.NPA.1.1, 1.NPA.2.2, 1.NPA.3.1, 2.NPA.1.1, 2.NPA.1.2, 2.NPA.2.2*)

DISCOVERY PLACE KIDS-ROCKINGHAM CONT.

GRADE 1

EARTH'S MATERIALS

Learn about the physical properties of Earth's materials and how they are useful in many different ways. Make sure to wear your safety goggles for this meltdown on rocks, minerals, soil and water. (Science Grade 1.E.2.1)

NAME THAT FORCE

There are forces all around. Learn how forces such as air, magnets and gravity affect the motion of objects. Explore how these forces impact us daily. (Science Grade 1 - 1.P.1.1, 1.P.1.2, 1.P.1.3)

GRADE 2

SOUND OFF

Be prepared to make some noise! Learn about the science of sound while investigating the high and low pitch of vibrations. (Science Grade 2 - 2.P.1.1, 2.P.1.2)

GRADE 3

MOVE IT OR LOSE IT

Explore the structure and functions of the skeletal and muscular systems of the human body through a variety of guided-inquiry activities and the examination of real human specimens. (Science Grade 3 - 3.L.1.1, 3.L.1.2)

GRADES 2-3

DYNAMIC MATTER

Gear up to engage in solidifying observations, liquefying experiments and gaseous studies. Learn the science behind the three states of matter. (Science Grade 2 - 2.P.2.1, 2.P.2.2, 3.P.2.2, 3.P.2.3)

GRADES 3-5

FORCE & MOTION

Feel and see the forces around us. Experiment with Newton's Laws of Motion through a variety of hands-on activities. (Science Grade 3 - 3.P.1.1, 3.P.1.3, 4.P.1.1, 5.P.1.1, 5.P.1.2, 5.P.1.4)

GRADE 4

EARTH, MOON & THE GREAT BEYOND

Join a rotation revolution powerful enough to alter your world. Learn why the moon appears to change shape each night, why the sun rises and sets and much more. (Science Grade 4 - 4.E.1.1, 4.E.1.2)

GRADE 5

THE HUMAN BODY

Delve into the human body and discover the many systems that keep you moving. Engage in hands-on activities and see real human specimens. (Science Grade 5 - 5.L.1.2)



DISCOVERY PLACE NATURE

Discovery Place Nature classes provide an immersive learning experience, exploring the Carolinas' native plants and animals and their role in the environment. Young learners 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

 Call for times

 Tuesday - Friday

 \$11 per student

 Minimum 15 students

 1658 Sterling Rd
Charlotte, NC 28209

FIELD TRIPS

School group field trips are \$5 per student. Add a class for \$6 more.

CHAPERONES

1 chaperone per 5 students is required and admitted free of charge. Additional chaperones, booked in advance, are admitted at the \$5 school rate. Chaperones not booked in advance must pay full Museum admission.

PARKING

Cars and vans can park at the Museum for free. Limited parking for larger vehicles is available onsite. Additional parking is available at Freedom Park.

LUNCH

Limited outdoor space for students to eat bag lunches is available. There are no indoor dining facilities. Picnic shelters are available within walking distance at Freedom Park.

GRADE PRE K

ANIMAL ENCOUNTERS

Explore the many different classes of animals, from reptiles to mammals, by getting up close to live native animal species. Learn about each animal's basic needs for survival.

PONDS & PUDDLES IN SPRING

Ponds are very busy places in spring. Discover how animals depend on ponds and puddles not just for a drink, but also for reproduction and shelter. This program uses live animals as well as Museum specimens.

GRADE K

ANIMAL ADAPTATIONS

Explore the similarities and differences among and within animal groups. Gain an understanding of structure, growth, changes, movement and basic needs. During each presentation, observe a variety of animals to learn how each interacts with its surroundings and uses anatomy or adaptations to best function in its environment. *(K.L.1.1, K.L.2)*

SEASONAL ANIMALS

October - March

Weather changes from day to day and season to season. Examine seasonal weather patterns and explore how weather changes affect human and animal behavior. Specimens that migrate, hibernate and stay active will be examined. *(K.E.1.1, K.E.1.2, K.E.1.3)*

SEASONAL ANIMALS

April - May

Animals are very active and busy during the warm spring months. Examine how seasonal weather changes affect human and animal behavior. Animals, artifacts and exploration stations will be utilized. *(K.E.1.1, K.E.1.2, K.E.1.3)*

GRADES PRE K-2

TWINKLE, TWINKLE

In the Planetarium

Twinkle, twinkle, little star - now you can learn what they are! See a beautiful night sky and listen to star stories from around the world. Explore constellations and observe the moon in the daytime and nighttime skies. *(I.E.1)*

DISCOVERY PLACE NATURE CONT.

SUN AND MOON

In the Planetarium

What causes day and night? Watch as the sun sets and the stars come out, see the moon's different shapes and learn new ways to describe what we see in the sky. *(1.E.1.1, 1.E.1.2)*

GRADE 1

AMAZING INSECTS

Discover what makes insects unique from other arthropods. Investigate feeding mechanisms and other amazing adaptations to gain a new appreciation for creepy crawlies. *(1.L.1.1, 1.L.1.2, 1.L.2.3, 1.L.2.4)*

MOUNTAINS TO SEA

Gain an understanding of how various regions across North Carolina support the needs of different organisms. Have a close encounter with native animals and natural artifacts to understand how these environments support the basic needs of their residents. *(1.L.1.1, 1.L.1.2, 1.L.1.3)*

GRADE 2

ANIMAL LIFE CYCLES

Get introduced to animal life cycles from birth through death. Using live animals, Museum specimens and interactive stations, observe animals at different stages in their life cycles. *(2.L.1.1, 2.L.1.2)*

GRADE 3

ANALYZING ANIMAL ANATOMY

Do we have commonalities with animals in how we are put together and function? Discover features we have in common with other members of the animal kingdom as well as important differences that make each species distinct. *(3.L.1.1, 3.L.1.2)*

GRADES 3-4

EARTH'S PLACE IN SPACE

In the Planetarium

The universe is a big place and can make us feel very small. This class will help us find our celestial address and understand more about our planet, moon, sun, neighboring planets and the Milky Way galaxy. *(K.P.1, K.P.2, 1.E.1, 3.E.1.2, 4.E.1)*

CHARLOTTE STARS AND STORIES

In the Planetarium

Explore the night sky from Charlotte and learn how to find constellations. Learn about the changing phases of the moon and hear ancient stories about the sky. *(1.E.1, 3.E.1, 4.E.1)*

GRADE 4

LIVING OFF THE LAND

In our day, it's easy to go to a grocery store and pick up food for dinner but humans have not always had that luxury. Dive into the past to learn how Native American groups in North Carolina were able to use the land around them for survival through interactive stations and a hike along the Paw Paw Nature Trail to look for edible and medicinal plants. *(4.H.1.1, 4.G.1.3, 4.L.1.3, 4.L.1.1)*



DISCOVERY PLACE
SCIENCE | KIDS | NATURE

OUTREACH CLASSES

Discovery Place Outreach is a museum-on-wheels, bringing educational science programs to your neighborhood. Outreach programs are designed to meet the age and education requirements of your group and all curriculum aligns with National Science Standards and North Carolina Essential Standards.

 50 minutes

 Dates and times are customizable

 \$150 first class
\$125 each additional class
(same class, same day)

 Maximum 25 students

CONDITIONS AND INFORMATION

One designated location is required for visits with multiple programs on one day.

A mileage fee is applied to all Discovery Place Outreach programs. Mileage is charged at \$25.00 per Mecklenburg County visit (or \$25.00 per Richmond County visit for programs originating from Discovery Place Kids-Rockingham) and \$.75 per mile for all out of county visits.

R Indicates programs available to originate out of Discovery Place Kids-Rockingham, as well as Discovery Place Science.

GRADES PRE K-2

TODAY'S FORECAST **R**

Become amateur meteorologists by using weather instrumentation to gather and analyze data, compare weather patterns and make predictions. *(K.E.1.2, K.E.1.3, 2.E.1.2, 2.E.1.3, 2.E.1.4)*

ALL ABOUT ANIMALS

Through active exploration, learn how scientists classify animals. Compare characteristics of mammals, reptiles, amphibians, birds and fish. *(K.L.1.1, K.L.1.2, 2.L.1.2)*

DINO TIME

For the littlest paleontologist, rediscover dinosaur friends that lived long ago. Journey into the past and explore the time of the dinosaurs with hands-on activities and fossil investigations. *(K.L.1.1)*

SOUND IS VIBRATION **R**

Uncover various ways to create sound while learning about the physical properties of sound, including how sound waves travel, pitch and volume. *(2.P.1.1, 2.P.1.2)*

YOU CAN BUILD IT! **R**

Use the very popular Build It!® blocks to work through engineering challenges and create fascinating structures such as high-rise towers, bridges, pyramids and more. *(1.P.1.3)*

GRADES 3-8

ACTION REACTION **R**

Engage in action-packed chemical reactions such as exploding hydrogen balloons while learning about properties of materials, the difference between physical and chemical changes, and how to recognize when a chemical change has occurred. *(3.P.2.3, 4.P.2.1, 5.P.2.3, 6.P.2.1, 8.P.1.3)*

ANIMAL EXPLORATIONS

Discover the wonderful world of animals and travel across the planet to discover unique creatures and their relationship with their environment. Investigate the fascinating adaptations that help animals survive in their particular biomes. *(4.L.1.1, 4.L.1.2, 5.L.2.1; 5.L.2.3)*

DAYLIGHT IN A BOTTLE **NEW**

Millions of people in developing countries live in small houses with no windows or electricity. Experiment with recyclable materials and various liquids to design an electricity-free way to light homes during the day. *(3.G.1.3, 4.P.3.2, 4.L.1.3)*

DESIGN A MAGLEV TRAIN **NEW**

Magnetic levitation (Maglev) trains are one of the fastest and most energy-efficient forms of travel today. Using the Engineering Design Process, explore this technology by designing and testing a frictionless train model. *(4.P.1.1, 4.P.1.2, 5.P.1.1, 7.P.1.2)*

OUTREACH CLASSES CONT.

ELECTRIFYING ATTRACTION **R**

Conduct hair-raising experiments with the Van de Graaff generator. Learn how electrically charged objects produce motion. Build circuits and investigate renewable energy sources. (4.P.1.1, 4.P.1.2, 4.P.3.1, 6.P.3.3, 7.P.2.2, 7.P.2.3)

FORCES AND MOTION **R**

Newton's Laws of Motion come alive in this class packed with guided-inquiry activities. Make predictions and investigate how changes in mass, force, gravity and friction affect the motion of an object. (3.P.1.1, 5.P.1.1, 5.P.1.2, 5.P.1.4, 7.P.1.2)

HORTICULTURAL ENGINEER - HYDROPONICS **NEW**

Scientists, engineers and farmers are teaming up around the world to create hydroponic farms - farms without farmland. Design and engineer a soil-less system and learn how engineers are at the forefront of solving the world's food problem. (3.L.2, 4.L.2, 5.L.2, 6.L.1, 6.L.2, 8.P.1, 8.P.2, 8.E.1)

ILLUSIONS OF OPTICS

Explore the nature of light, perception, vision, waves and the electromagnetic spectrum. Apply what you have learned to explain how optical illusions work. (4.P.3.2, 6.P.1.1, 6.P.1.2)

KEEP IT MOVING **R**

Examine real bones, tissues and artificial joints to learn how the muscular and skeletal systems function to support and protect the human body. (3.L.1.1, 4.L.2.2, 5.L.1.2)

LIFE AT 40X

Explore the micro world and compare the structures and functions of plant and animal cells. Investigate the parts of the cell that are the basis of life. (7.L.1.2)

MATTER MATTERS **R**

Investigate the properties of solids, liquids and gases while conducting exciting experiments. Witness instantaneous phase changes featuring liquid nitrogen. (2.P.2.1, 3.P.2.1, 3.P.2.2, 3.P.2.3)

ROBOTICS ENGINEER **NEW**

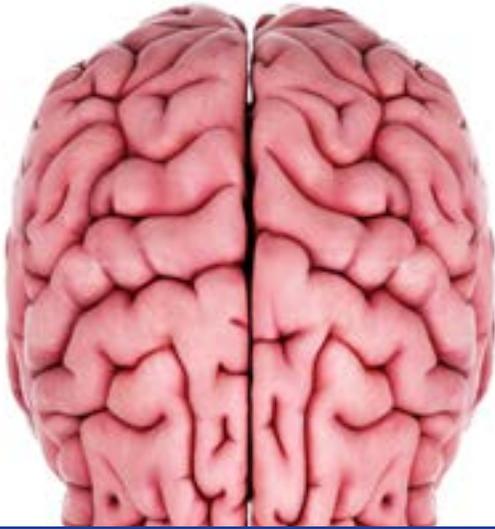
Robots undoubtedly entertain us, but what else can they do and how can they help in the real world? Work with robots to solve a unique challenge that will test, not only what a robot can do, but what a human can engineer.

YOU ARE WHAT YOU EAT

Decode nutrition labels and investigate a fast food meal to measure its energy and nutritional content. Create a plate that represents a healthy alternative to fast food. (4.L.2.1, 4.L.2.2)

WIND ENERGY ENGINEER **NEW**

Harness the power of renewable energy. Design your own turbine blades to rotate with wind power and transfer that energy into lifting power! Put your STEM skills and knowledge to the test and use your creativity to design the most efficient solution to this engineering challenge. (3.P.1.1, 3.P.1.2, 4.P.3.1, 5.P.1.2)



DISCOVERY PLACE
SCIENCE | KIDS | NATURE

6 AND 12 WEEK WORKSHOPS

Multi-session programs focusing on a single science topic. All workshops are designed to build and enhance the 21st century skills of critical thinking, creativity, collaboration and communication.

 6 or 12 one-hour sessions

 Dates and times are customizable

 Call for pricing

 Maximum 25 students

GRADES K–2

ANIMAL DETECTIVES

6 Weeks

Uncover clues and learn about the five classes of animals: mammals, reptiles, amphibians, birds and insects. Explore habitats, survival skills, life cycles and food chains. (K.L.1.1, K.L.1.2, 1.L.1.1, 1.L.2.2, 2.L.1.1, 2.L.1.2)

ENGINEERING IS ELEMENTARY

6 Weeks

Explore the Engineering Design Process. Design and build your own solution to a real-world problem. **Units include:** designing bridges, designing alarm circuits, designing windmills and more.

MINI CSI

6 Weeks

Become a detective during this crime-busting workshop. Learn techniques including fingerprint analysis, chromatography and chemical analysis to solve a mystery. (K.P.2.1, K.P.2.2, K.E.1.1, 2.L.2.2)

MINI MAKER

6 or 12 Weeks

Become a maker as you create, build, innovate, push boundaries and problem solve. A series of make projects highlight STEAM concepts, allow for self-expression and foster critical thinking.

SUPER STRUCTURES

6 Weeks

Inspire the engineer within! LEGO® cars, free-standing towers and race boats are used to explore science and math concepts like symmetry, mass, volume, buoyancy and motion. (K.P.1.1, K.P.1.2, K.P.2.1, K.P.2.2, 1.P.1.1, 1.P.1.3)

WATER WONDERS

6 Weeks

Explore water above, on and below the surface as you dive into water cycles, buoyancy, filtration and pollution, aquatic life and properties of water. (K.P.2.1, 1.E.2.1, 1.L.1.1, 1.L.1.3, 2.P.2.1, 2.E.1.1)

GRADES K–5

ENGINEERING IS ELEMENTARY

6 Weeks

Explore the Engineering Design Process and participate in hands-on inquiry activities. Design and build your own solution to a real-world problem. Units include: designing bridges, designing alarm circuits, designing windmills and more.

GRADES 3–5

CODE KIDS

6 Weeks

Give your students a boost in learning this in-demand skill. Explore coding basics, including functions, loops, conditionals and de-bugging through both plugged and unplugged activities.

GRADES 3–8

ASTRONOMY ADVENTURES

6 Weeks

Learn about stars, planets and other celestial objects during this astronomical workshop, all while experiencing the excitement of the Starlab inflatable planetarium. (3.E.1.1, 3.E.1.2, 4.P.3.2, 4.E.1.1, 4.E.1.2, 6.E.1.1, 6.E.1.2, 6.E.1.3)
Note: Requires access to electricity and set up space of 11 feet in height x 22 feet in width.

BODY SYSTEMS

6 Weeks

Discover how systems work together, react to new conditions and heal themselves. Dissections will enhance the experience. (3.L.1.1, 3.L.1.2, 4.L.1.3, 4.L.1.4, 5.L.1.2, 5.L.3.1, 5.L.3.2, 7.L.1.3, 7.L.1.4)

WORKSHOPS CONT.

BRIDGE BUILDING 101

6 Weeks

Uncover the physics behind forces applied to a bridge as well as how to calculate the strength and weight tolerance of a bridge. Design and build a bridge from balsa wood. (5.P.1.1)

FORENSICS CRIME LAB

6 Weeks

Use cutting-edge technology to decipher evidence found at a crime scene. Chromatography, spatter analysis, DNA extractions and weapon matching are just some of the scientific tools available to crime scene investigators. (3.L.1.1, 3.L.1.2, 4.E.2.1, 5.L.3.1, 5.L.3.2, 6.P.2.1, 7.L.1.3, 7.L.1.4)

OUR CHANGING CLIMATE

6 Weeks

Explore causes, effects and solutions through exciting demonstrations, data logging, hands-on activities and a final climate change solution project. (3.L.2.2, 4.L.1.1, 4.L.1.2, 4.L.1.3, 4.L.1.4, 5.L.2.3, 5.E.1.2, 6.E.2.4, 6.L.2.3, 7.E.1.6, 8.L.3.1)

H2OMG

6 Weeks

Explore water above, on and below the surface as you dive into water cycles, buoyancy, filtration and pollution, aquatic life and properties of water. (3.P.2.2, 3.E.2.1, 4.L.1.1, 4.L.1.3, 5.L.2.1, 7.E.1.2, 8.E.1.1, 8.E.1.4)

HUMAN & COMPARATIVE ANATOMY

12 Weeks

Gain an in-depth understanding of the systems of the human body, and then compare and contrast human systems with animal systems. (3.L.1.1, 3.L.1.2, 4.L.1.1, 4.L.1.24, 1.3, 4.L.1.4, 5.L.1.1, 5.L.1.2, 5.L.3.1, 5.L.3.2, 7.L.1.3, 7.L.1.4)

THINK IT, PLAN IT, MAKE IT

6 or 12 Weeks

Join the maker movement as you build, innovate, and solve problems. Embark on a series of projects that highlight STEAM concepts, allow for self-expression, teamwork and critical thinking.

GRADES 4–8

ROBOTICS

6 or 12 Weeks

Explore the many facets of robotics including, programming, de-bugging and using sensors. This workshop will provide opportunities for creative problem solving and collaboration.



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 and times are customizable

 \$450 first program
\$300 each additional program
(same class, same day)

 Up to 300 students

GRADES K–8

A MATTER OF SCIENCE

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

GRADES 3–8

ENERGY, ENERGY, ENERGY!

Without energy we wouldn't be able to listen to music, play sports or finish our homework. In this assembly, demonstrations illuminate the science behind electrical, chemical and thermal energy.



STARLAB PLANETARIUM

GRADES PRE K–2

DAY AND NIGHT **R**

Explore our ever-changing sky and learn to recognize differences in the day and night sky, including changes in the appearance of the moon. (1.E.1.1, 1.E.1.2)

GRADES 3–8

SOLAR SYSTEM **R** SPECTACULAR

Explore the solar system to learn about the sun, planets, asteroids and moons that make up Earth's neighborhood. (3.E.1.1, 3.E.1.2, 6.E.1.2)

GRADES 3–5

STARRY, STARRY NIGHT **R**

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 and night and changes in the appearance of the moon. (4.E.1.1, 4.E.1.2)

Note: Starlab Planetarium requires access to electricity and set up space of 11 feet in height x 22 feet in width. Maximum capacity inside the small dome: 30, large dome: 50. The large dome is an additional \$25 per program.



EARLY CHILDHOOD CLASS ON A CART

Interactive cart-based programs that move from classroom to classroom.

\$ \$100 per class

🕒 30 minutes each class

👥 Maximum 15 students

GRADE PRE K

ANIMAL MANIA

Meet a variety of animal friends, such as reptiles, arthropods and amphibians. Live encounters will be enhanced through play with lifelike puppets.

SENSORY SCIENCE

Use your senses to experience the wonders of the world. Play with various sensory materials and watch liquid nitrogen freeze objects, just like one of our favorite princesses.

BUBBLES, BALLS AND BUOYANCY

Explore buoyancy, motion and gravity through bubbles and hands-on activities with spherical objects.



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

👥 Approximately 60 visitors

\$ \$200 per booth
\$150 each additional hour
(same day)

or

\$ \$750 all day booth set up
(six hours maximum)