New York Hall of Science
47-01 111th Street
Queens, NY 11368-2950
The New York Hall of Science (NYSCI) is New York City’s premiere hands-on science and technology center with over 450 interactive science exhibits and a vast array of STEM programs for students, teachers and families. Can’t come to NYSCI? We will come to you! NYSCI offers a variety of offsite educational programs for schools and community-based organizations that actively engage and inspire STEM learning.

STEM RESIDENCY SERIES

Supplement your 3rd or 4th grade Science Scope and Sequence Units of Study, NY State and Next Generation Science Standards with a STEM Residency delivered by a NYSCI instructor. Each STEM Residency consists of three sessions scheduled throughout the school year for your class that highlights concepts students are required to learn through city and statewide standards. All materials are provided. There is a maximum of 30 students per 45-minute session.

Fee: $900 per class; includes all three sessions. Travel charges may apply for locations more than 20 miles away from NYSCI.

For more information or to book a NYSCI program, contact Georgette Williams at 718-595-9114 or gwilliams@nysci.org.

INTERDEPENDENCE SERIES

Grade 3

• Owl Pellets
Students explore the relationships between predator and prey with an owl pellet dissection. They extract and classify the bones of different prey in an owl’s diet, compare results with other students, and create a class graph of findings.

Grade 3: NYC Unit 2 3-LS4-2, NYS 3-LS4-2

• Ecosystemology
Students learn about water, nitrogen and carbon cycles while creating a mini biosphere. They analyze and observe their self-sustaining environment over time utilizing an observation tool.

Grade 3: NYC Unit 2 3-LS4-3, NYS 3-LS4-3
Animal Prosthetics
Using simple materials and viewing short videos of animal injuries for inspiration, students design and build prosthetic beak or feet models for injured birds. This session connects to engineering practices by giving students opportunities to design solutions for real world problems.

Grade 3: NYC Unit 2 3-LS4-3, NYS 3-LS4-3

STRUCTURE AND FUNCTION OF ORGANISMS SERIES
Grade 4

- Gliding Animals
Students get inspired by gliding animals and use their knowledge of forces and motion to design a gliding wingsuit out of everyday materials.

Grade 4: NYC Unit 1 LS1-2, NYS LS1-2

- The Eyes Have it
In this session, students experiment with various optical illusions and learn how the brain can deceive the eye. They conduct investigations on depth perception, use color filters to make 3D glasses, and create their own optical illusion toys.

Grade 4: NYC Unit 1 LS1-2, NYS LS1-2

- Cow’s Eye Dissection
Students compare and contrast the structure and function of a human eye by dissecting a cow’s eye. They explore how the brain and eyes work together to filter light and create images for the brain to interpret.

Grade 4: NYC Unit 1 LS1-2, NYS LS1-2

SCIENCE TEST ENRICHMENT UNIT
Grade 4

Seeking hands-on activities for your 4th grade students that will reinforce science concepts on the 4th grade NYS Science test? NYSCI offers a series of five 45-minute sessions for your class throughout the year that will assist students with understanding challenging science concepts before the big day. All materials provided; maximum of 30 students per class.

Fee: $1,500 per class; includes all five sessions. Travel charges may apply for locations more than 20 miles away from NYSCI.

For more information or to book a NYSCI program, contact Georgette Williams at 718-595-9114 or gwilliams@nysci.org.

Session descriptions:

- Electricity (two sessions)
Students review principles of circuitry with wires, bulbs and batteries. In the second session, principles from the previous lesson are reinforced by creating a greeting card that lights up using LEDs and copper tape.

Grade 3: NYC Unit 4 3-PS2-1, 3-PS2-3, 3-PS2-4, NYS 4 3-PS2-1, 3-PS2-3, 3-PS2-4

Grade 4: NYC Unit 2 4-PS3-2, 4-PS3-4, NYS 4-PS3-2, 4-PS3-4

- Density (one session)
In this session, students learn about the concept of density as they compare and contrast the properties of various liquids and solids, create a density column, and explore mass and volume.

Grade 2: Unit 1: NYC 2-PS1-1, NYS 2-PS1-1

- Magnetism (two sessions)
Students explore the properties of magnets, learn what magnets are, what they are made of, and how the poles of a magnet orient themselves. By creating and playing with a magnetic maze, they also discover the properties of magnets and the magnetic quality of different materials.

Grade 3: NYC Unit 4 3-PS2-3, 3-PS2-4, NYS 3-PS2-3, 3-PS2-4
Big Science Day
(Perfect for STEM Nights!)

Bring extra excitement to your school-wide or district-wide event with a Big Science Day! NYSCI provides multiple tabletop activity stations that engage participants of all ages in designing, making, tinkering, discovering and experimenting. Students can build giant structures with wooden dowels, observe live critters, make a rollercoaster ramp with recycled materials, or create an optical illusion toy. All activity materials are provided and facilitated by NYSCI staff for rotating groups of up to 300 – 400 participants.

Fee: $5,000 for up to three hours of six ongoing activities, $7,000 for up to three hours of eight ongoing activities. Travel charges may apply for locations more than 20 miles away from NYSCI.

STEM Live! Auditorium Show

NYSCI instructors will wow students with exciting experiments that bring science to life on a large scale. During the 45-minute interactive show, instructors demonstrate various science phenomena that engage audience members in various STEM topics including electricity, air pressure and chemical reactions.

Fee: $500 for the first show and $400 for each additional show. Presenters will need access to a microphone and speaker system. Travel charges may apply for locations more than 20 miles away from NYSCI.
SCIENCE OUTREACH

Enrich your classroom and after-school programming by incorporating hands-on science activities facilitated by NYSCI instructors. Each outreach session is designed to provide an interactive age-appropriate science experience that correlates to the New York City Science Scope and Sequence, NY State and Next Generation Science Standards. All materials are provided. There is a maximum of 30 students per 45-minute session.

Fee: $300 for the first session, plus $225 for each additional session, with a minimum booking of two sessions. Travel charges may apply for locations more than 20 miles away from NYSCI.

For more information or to book a NYSCI program, contact Georgette Williams at 718-595-9114 or gwilliams@nysci.org.

EARLY ELEMENTARY

Programs geared to ages 4 and older.

Bubble, Bubble
Grades Pre-K – 2

Through creative hands-on activities, students learn the basic science behind bubbles and explore the properties of bubbles. They investigate the shapes of bubbles by making different bubble wands, and conduct experiments on whether they can create bubbles of different sizes and colors.

Grade Pre-K: NYC Unit 7 P-PS1-1, NYS P-PS1-1
Grade K: NYC Unit 1 K-PS1-1, NYS P-PS1-1
Grade 2: NYC Unit 1 2-ESS2-2, NYS 2-ESS2-2

Light and Shadows
Grades Pre-K – 2

How is a shadow created? To find out, students experiment with light sources, shapes and filters to create a variety of shadows.

Grade Pre-K: NYC Unit 6 PS3-1, NYS PS3-1
Grade 1: NYC Unit 2 PS4-2, 1-ESS1-2, NYS PS4-2, PS4-3

Make Some Noise
Grades Pre-K – K

Students investigate the science of sound and vibrations, while exploring different objects and the types of sounds they create. They make instruments with bells, shells and beads, and then create a musical piece performed with the entire class using their handmade instruments.

Grade Pre-K: NYC Unit 2-P-PS4-1, NYS P-PS4-1

Gooey Matter
Grades Pre-K – 2

While experimenting with a mysterious substance called oobleck, students experience solids, liquids and gases, and learn about the differences between Newtonian and non-Newtonian fluids. Following a storytelling session, each student makes their own oobleck from cornstarch and water, and relates it to the Dr. Seuss story of the same name.

Pre-K: NYC Unit 7 P-PS1-1
Grade K: NYC Unit 1 K-PS1-1, NYS K-PS1-1
Grade 2: NYC Unit 1 2-PS1-1, NYS 2-PS1-1
Rockets
Grades Pre-K – 2
Students explore the trajectory of a rocket as they design and launch their own rockets. To create the best performing rocket, they investigate variables from the length of the tube to the number of fins on their rocket.

Grade Pre-K: NYC Unit 5 P-PS2-1, NYS PS2-1
Grade K: NYC Unit 2 K-PS2-1, K-PS2-2, NYS K-PS2-1, K-PS2-2

Camouflage
Grades K – 2
How do animals keep themselves safe from predators? Students create an animal that will hide in its environment using camouflage. An interactive story time is included in this workshop.

Grade K: NYC Unit 3 K-ESS3-1, NYS K-ESS3-1
Grade 1: NYC Unit 3 1-LS1-1, NYS 1-LS1-1
Grade 2: NYC Unit 3 2-LS2-2, NYS 2-LS2-2

Classy Classification
Grades K – 2
Through a series of hands-on activities, participants explore the fascinating differences between insects and spiders. They learn how to classify different insects based on their characteristics and anatomy, and investigate the structure and function of different insect body parts. This workshop provides a solid foundation for learning the principles of classification. A science story time is included.

Grade K: NYC Unit 3 K-ESS3-1, NYS K-ESS3-1
Grade 1: NYC Unit 3 1-LS1-1, NYS 1-LS1-1
Grade 2: NYC Unit 3 2-LS2-2, NYS 2-LS2-2

Mixing Color
Grades K – 2
Students explore the colors of the visible spectrum through hands-on experiments and learn the differences between primary and secondary colors. They participate in an interactive story time and make a colorful collage to take home.

Stuck on Magnets
Grades K – 2
Through hands-on activities, students explore the properties of magnets, learn what magnets are, what they are made of, and how the poles of a magnet orient themselves. With an understanding of what magnetic material is made of, students make predictions about what happens when two magnets (and non-magnets) are brought together. This workshop utilizes classification and measurement.

Grade K: NYC Unit 2 K-PS2-1, NYS K-PS2-1
Grade 2: NYC Unit 3 2-PS1-2, NYS 2-PS1-2, 2-PS1-3

Sporty Nutrition
Grades K – 2
What should I eat today? Through various hands-on activities, students investigate how different foods give you the vitamins, minerals and nutrients required for good health. Students participate in different activities to explore and understand our dietary nutritional needs, and make and take home a nutrition wheel.

Grade 2: NYC Unit 3 2-LS2-2, NYS 2-LS2-2
Cool Critters
Grades 1 – 3
What is the difference between an insect and an arachnid? Students compare and contrast the physical characteristics of various live critters to determine if they are insects. They explore the life stages of a beetle up close and investigate the physical features these cool critters have that help them to survive in the wild.

Grade 1: NYC Unit 3 1-LS1-1, 1-LS1-2, NYS 1-LS1-2
Grade 2: NYC Unit 3 2-LS2-2, NYS 2-LS2-2
Grade 3: NYC Unit 2 3-LS4-3, NYS 2-LS2-2

Bounce, Balance and Play
Grades 3 – 6
Students test their balancing skills, while discovering how balance is related to sports. They observe the relationship between kinetic and potential energy, and investigate the shape and composition of various balls to see what makes them bounce or fly as far as they do. They make predictions, conduct trial experiments, and collect data on the elasticity of various balls.

Grade 3: NYC Unit 4 3-PS2-1, 3-PS2-2, NYS 3-PS2-1, 3-PS2-2
Grade 4: NYC Unit 2 4-PS3-2, 4-PS3-4, NYS 4-PS3-2, 4-PS3-4

Microscopes and Microbes
Grades 3 – 5
In this session, the fascinating world of microorganisms is explored through the use of microscopes. Students prepare slides to observe and analyze the shapes, colors and sizes of various live microbes, and how microbes move and feed. At the end of the session, they receive a magnifying lens to take home so they can conduct their own magnification investigations!

Grade 3: NYC Unit 1 3-LS1-1, 3-LS3-2, NYS 3-LS1-1, 3-LS3-2
Grade 4: NYC Unit 1 4-LS1-1, NYS 4-LS1-1
Grade 5: NYC Unit 2 5-LS1-1, NYS 5-LS1-1

All Charged Up
Grades 3 – 6
Through a series of hands-on activities, students are introduced to the concepts of static electricity, conducting and non-conducting material, and simple and parallel circuits. They discover how electricity is produced, experience the powerful electric field of an electrostatic generator, experiment with conductors and insulators, and design and build simple circuits.

Grade 3: NYC Unit 4 3-PS2-1, 3-PS2-3, 3-PS2-4, NYS 3-PS2-1, 3-PS2-3, 3-PS2-4
Grade 4: NYC Unit 2 4-PS3-2, 4-PS3-4, NYS 4-PS3-2, 4-PS3-4

Delicious DNA
Grades 5 – 9
Students discover the shared chemistry that exists among living things. They participate in an activity demonstrating how the same units of DNA lead to the diversity of living things. They also isolate and take home the DNA from a strawberry or a banana.

Grade 7: NYC Unit 3- MS-LS1-2, NYS MS-LS1-2
Grade 8: NYC Unit 3 MS LS3-1, MS LS3-2, NYS MS LS3-1, MS LS3-2
MIDDLE SCHOOL TO HIGH SCHOOL

Force & Motion
Grades 6 – 8
Through a series of interactive and creative hands-on challenges, students explore Newton’s Laws of Motion. They then use their knowledge to design, build, test and modify a balloon car racer – and race them!

Grade 8: NYC Unit 1 MS-PS3-1, MS-PS3-2, NYS MS-PS3-1, MS-PS3-2

Cool Craniums
Grades 6 – 10
Students explore how animals adapt to their environments. They study, sort and classify the form and function of a variety of mammal skulls. And they investigate how to apply these techniques to identify a mysterious skull.

Grade 8: NYC Unit 4 MS-LS4-2, NYS MS-LS4-2

STARLAB:
Our portable planetarium can travel to your school with a NYSCI instructor who will lead your students through activities from one of the topics below. The Starlab requires a space of 24 feet wide and 12 feet high. It fits perfectly in a school’s gym or on the auditorium stage. Choose one of the two experiences below.

For more information or to book a NYSCI program, contact Georgette Williams at 718-595-9114 or gwilliams@nysci.org.

The Reasons for Seasons
Grades 1 – 12
Students learn to predict the rising and setting positions of the sun at the beginning of each season, and explore factors that contribute to seasonal change. They will also learn about the seasonal changes in other places on Earth and the factors contributing to those changes.

Grade 1 – Grade 5: NYC Unit 1-ESS1-2, NYS 1-ESS1-2
Grade 8: NYC Unit 2 MS-ESS1-1, NYS MS-ESS1-1

The Night Sky
Students get immersed in the evening starry sky and learn how to read a star map and find objects in the night sky using a technique called star hopping. This Starlab experience makes connections between the constellations in the night sky and Greek and Native American mythologies.

Grade 1 – Grade 5: NYC Unit 5-ESS1-2, NYS 5-ESS1-2
Grade 8: NYC Unit 2 MS-ESS1-1, NYS MS-ESS1-1
PROFESSIONAL DEVELOPMENT FOR TEACHERS

NYSCI’s innovative professional development courses are well known and recognized for helping teachers infuse their classes with hands-on activities, scientific inquiry and strong content to strengthen, inspire and excite STEM teaching and learning. Courses can be offered at your location and customized for in-school or after-school teachers.

For more information or to book a NYSCI program, contact Georgette Williams at 718-595-9114 or gwilliams@nysci.org.

Design, Make, Play
STEM Institute
(CTLE Certified Courses)

Learn how an innovative pedagogical approach called Design, Make, Play can help you engage your students in STEM learning. The Design, Make, Play approach fosters problem solving and critical thinking skills with inquiry-based experiences that are student driven and lead to materials literacy, divergent solutions, meaningful reflection and creative collaboration. This special series reinforces science content, correlates to standards, and strengthens literacy and 21st century skills for educators who teach grades Pre-K – Grade 8. Course topics include Exploring Earth Materials, Strong Structures, It’s Electric!, Amazing Animal Adaptations, Biologically Inspired Design, Force and Motion, Seeing the Light and more. (Visit nysci.org for more courses and details.) Workshops are designed for a maximum of 20 participants.

Fees: $1,000 for a three-hour session; $2,000 for a six-hour session. All materials provided.

Maker Professional Development

Our Maker Space professional development programs are designed to foster creative problem solving through our pedagogical approach that demonstrates how materials exploration and tinkering for learners of all ages can support and develop an “I can” mentality. Select from one of our one-day workshops, mix or match them, or customize a professional development program that meets your needs. Topics include Intro to Making: Maker 101, Making With Simple Materials, Intro to Hand Tools in the Classroom, Maker Space Consultancy/Coaching.

Science Coaching

NYSCI’s Science Coach works with schools in need of science-program restructuring, transforming and improving science education through mentoring, assistance with curriculum development, science lab support and educational resources. Scope of coaching can encompass a series of selected days, weekly or monthly school visits, and can be tailored towards offering student and teacher support. Contact us for customized packages and pricing.
What Teachers are Saying

“I valued the time and attention given to us by the teacher facilitating the workshop.” — fourth grade teacher who participated in a NYSCI professional development program

“The hands-on activities made science tangible and real to students.” — science teacher who participated in a NYSCI outreach

“The instructor was amazing! The children enjoyed him. His questioning was great. We look forward to working with him again.” — pre-k Center Director whose students participated in a NYSCI outreach

“Thank you for everything. It was well done and the students learned a lot (and so did the teachers).” — middle school special ed teacher whose students participated in a NYSCI outreach

• 450 hands-on exhibits.
• New York City’s largest Science Playground.
• Rocket Park Mini Golf.
• 3D Theater.
• Design Lab.
• Daily demonstrations, workshops, camps and more.

New York Hall of Science
47-01 111th Street - Queens, NY 11368
📞 111th Street, easy on-site parking.
Call 718-699-0005 for general information, groups and birthday parties.

www.nysci.org