



The New York Hall of Science (NYSCI) continues to support learning needs at schools by offering a variety of high-quality educational programs that can be reserved as a virtual experience for your class or in person at your school, child care center, or community-based site. With over 10 years of experience delivering STEM programs both virtual and in person, NYSCI has developed successful learning strategies and experiences that makes science come alive at your school or online!



### **IN-PERSON PROGRAMS: SCIENCE OUTREACH**

*Brought to your site.*

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 for a maximum of 30 students per 45-minute session.

*Fee: \$350 per session with a minimum booking of 2 sessions. Travel charges may apply for locations more than 20 miles away from NYSCI.*

*For more information or to book a NYSCI program, contact Fatema Khuda at 929-919-1811 or [fkhuda@nysci.org](mailto:fkhuda@nysci.org).*

*\*Pre-K Programs geared to ages 4 and older.*

## EARLY ELEMENTARY

### **Light and Shadows**

*Grades Pre-K\* – 2*

How is a shadow created? 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*



### **Goopy Matter**

*Grades Pre-K\* – 2*

Experience solids, liquids and gases as you investigate an unknown substance called Oobleck, and the differences between Newtonian and Non-Newtonian fluids. Following a storytelling session, each student will make their own Oobleck from cornstarch and water, and relate it to the Dr. Seuss story of the same name.

*GradePre 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*

Explore the trajectory of a rocket as students design and launch their own rockets. Students will investigate variables from the length of the tube to the number of fins on their rocket to create the best performing 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 will 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-LS1-1, NYS K-LS1-1*

*Grade 1: NYC Unit 3 1-LS1-1, NYS 1-LS1-1*

*Grade 2: NYS 2-LS4-1*

### Classy Classification

*Grades K – 2*

Through a series of hands-on activities, students explore the fascinating differences between insects and spiders. Become an entomologist and learn how to classify different insects based on their characteristics and anatomy. Investigate the structure and function of their different body parts. This workshop provides a solid foundation for learning the principles of classification. This workshop also includes a science story time.

*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*



### Cool Critters

*Grades 1 – 3*

What is the difference between an insect and an arachnid? Compare and contrast the physical characteristics of various live critters to determine if they are insects. Explore the life stages of a beetle up close and

investigate the physical features these cool critters have that will help them to survive in the wild.

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

*Grade 2: NYC Unit 3 2-LS2-2, NYS 2-LS2-2*

*Grade 3: NYC Unit 2 3-LS4-3, NYS 2-LS2-2*

### ELEMENTARY TO MIDDLE SCHOOL

#### Owl Pellet Dissection

*Grades 2 – 6*

Explore the relationships between predator and prey with an owl pellet dissection. Students will 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 2: NYC Unit 3 2-LS2-2, NYS 2-LS2-2*

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

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

*Grade 5: NYC Unit 2 5-PS3-1, NYS 5-PS3-1*

*Grade 6: NYC Unit 3- MS LS2-3 MS LS2-4, NYS MS LS2-3, MS LS2-4*

#### Bounce, Balance and Play

*Grades 3 – 6*

Test your balancing skills while you discover how

balance is related to sports. Observe the relationship between kinetic and potential energy. Investigate the shape and composition of various balls to see what makes them bounce or fly as far as they do. Make predictions, conduct trial experiments and collect data on the elasticity of various balls. Test your reaction time to improve your performance in sports activities.

*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*



#### The Eyes Have It

*Grades 3 – 7*

Experiment with various optical illusions and learn how the brain can deceive the eye. Conduct investigations on depth perception, use color filters to make 3D glasses, and create your own optical illusion toy.

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

*Grade 7: NYC Unit 3 MS-LS1-8, NYS MS-LS1-8*





### 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 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*

### MIDDLE SCHOOL TO HIGH SCHOOL

### Delicious DNA

Grades 5 – 9

Discover the shared chemistry that exists among living

things. Participate in an activity demonstrating how the same units of DNA lead to the diversity of living things. 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*



### Force & Motion

Grades 6 – 8

Through a series of interactive and creative hands-on challenges, students explore Newton's Laws of Motion. Students 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*

*Customization of programs or other topics to meet your learning needs may also be available upon request. Additional fees may apply.*



## STEM Live Auditorium Presentation

NYSCI Instructors will wow students with exciting experiments that bring science to life on a larger scale. During the 45-minute interactive show Instructors demonstrate various science phenomena that engage audience members in STEM. Topics include electricity, air pressure and chemical reactions. Presenters will need access to a microphone and speaker system.

*Fee: \$500 for the first show and \$400 for each additional show. Travel charges may apply for locations more than 20 miles away from NYSCI.*



### VIRTUAL SCIENCE WORKSHOPS

Looking to create a fun, engaging online experience for your class that will enrich your STEM curriculum? NYSCI's Virtual Science Workshops are designed to make it easy for educators to integrate within their remote learning platform and foster hands-on learning, critical thinking, collaboration and communication skills through group discussion. Each workshop is a live interactive experience led by a NYSCI Instructor and includes an activity material list provided prior to the workshop consisting of accessible materials that can be found in participants homes or can be easily substituted. Workshop topics are listed below.

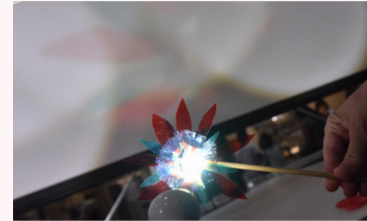
*Fee: \$150 per 1 hour session for a maximum of 32 students.*

*For more information or to book a NYSCI program, contact Fatema Khuda at 929-919-1811 or [fkhuda@nysci.org](mailto:fkhuda@nysci.org).*

### STEM Fairytales Grades Pre-K\* – 2

*Once upon a time...* students will participate in an active story time with the fairy tale of Goldilocks and the Three Bears and then apply science, technology, and math skills to solve an engineering challenge that they can do from home with simple materials.

*Grades K – 2: NYC K-2-ETS1-2, NYS K-2-ETS1-2*



### Light and Shadows Grades Pre-K\* – 2

How is a shadow created? Experiment with light sources, shapes and filters to create a variety of shadows.

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*Grade 1: NYC Unit 2 PS4-2, 1-ESS1-2, NYS PS4-2, PS4-3*



### Amazing Adaptations: Designer Ears

*Grades 1 – 3*

Students become animal investigators as they explore an amazing adaptation that enables animals to survive in the environments that they live in... their ears! Explore the relationship between predator and prey, and how different animal ear shapes influence hearing by designing and testing their own set of animal ears.

*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*

*\*Requires adult assistance for the Pre-K students*

*Customization of programs or other topics to meet your learning needs may also be available upon request. Additional fees may apply.*



### Science of Sports

Grades 3 – 6

Explore the science of sports through a series of interactive activities. Discover the relationship between kinetic and potential energy and why balls bounce as high as they do. Participate in physical activity to test your reaction time and learn how to improve your performance in sports activities.

*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*

### The Eyes Have It

Grades 3 – 7

Experiment with various optical illusions and learn how the brain can deceive the eye. Conduct investigations on depth perception and create your own optical illusion toy.

*Grade 4: NYC Unit 1 LS1-2, NYS LS1-2*  
*Grade 7: NYC Unit 3 MS-LS1-8, NYS MS-LS1-8*

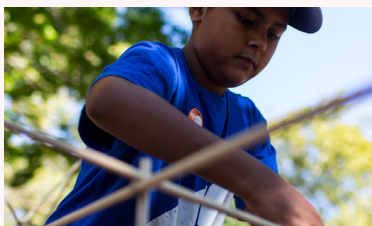
### Strong Structures

Grades 3 – 8

Using an assortment of simple materials, participate in a series of challenges to build and design strong stable structures. Test weight, durability and ability to withstand extreme environmental conditions and analyze ways to improve on your design.

*Grades 3 – 5: NYC MS-ETS1-1, MS-ETS1-2, MS-ETS1-3 MS-ETS1-4; NYS MS-ETS1-1, MS-ETS1-2, MS-ETS1-3 MS-ETS1-4*

*Middle School: NYC MS-ETS1-1, MS-ETS1-2, MS-ETS1-3 MS-ETS1-4; NYS MS-ETS1-1, MS-ETS1-2, MS-ETS1-3 MS-ETS1-4*



## Virtual WOW Science Presentation! (All Grades)

Seeking to amaze your students with extraordinary science phenomena that requires no materials on your end? Our WOW Science show consists of a range of eye popping science demonstrations that will spark interest in understanding the how and why science phenomena occurs in an hour long presentation.

*Fee: \$200 per presentation with a maximum of 40 people/logins per session.*