A visit to BNL’s Science Learning Center will excite and engage students. Young scientists can enjoy discovery-based, hands-on learning experiences centered on a variety of scientific principles.

**Students can:**
- Build circuits and generate electricity
- Become an engineer and create unique structures
- Experience sound waves traveling through different states of matter
- Investigate properties of light through reflection and refraction
- Experiment with a prototype MagLev car

**Discoveries in Science**

- Grades 1-6
- 30 minutes per activity
- Choose three activities
- Maximum three classes with 30 students per class

**Animal Tracking** – Every species of animal has its own tracks. Discover their unique characteristics. Emphasis will be placed on wildlife at BNL.

**Blocks and Marbles** – Find a solution to an engineering problem.

**Current Electricity** – How is electricity generated? Create simple circuits and test materials for conductivity.

**Designing “Attractive” Structures** – Students use magnetic materials, geometry, and their own creativity to design and construct a structure that meets specific engineering criteria.

**Magnetic Levitation (MagLev)** – Discover the history and science behind MagLev vehicles. Assemble and test a prototype car. Collect and analyze data.

**Measurement:**
- **Standard Measurement** – Measure various materials using scientific tools. Evaluate the need for a standard unit of measure.

**The Tools We Use for Measurement** – Determine which scientific measurement tools are needed to complete the challenge.

**Mini-Magnets** – Determine which materials are magnetic. Explore invisible magnetic fields with a variety of natural and manufactured materials.

**Potential and Kinetic Energy** – Develop an understanding of these two states of energy using a vehicle and ramp to overcome inertia. Collect, graph, and analyze data.

**Seeing the Light** – How is a rainbow made? Explore the basic principles of light.

**Series and Parallel Circuits** – Construct series and parallel circuits to determine which is used in your home.
**Sounds Around** – Discover how sound is produced and how it travels. Analyze how different pitches are produced. Experience sound waves as they pass through different types of matter.

**Spectroscopy** – Observe the diffraction process with different light sources. Understand how scientists identify elements by the light waves they produce.

**Static Electricity 101** – This program is an introduction to the structure of the atom and how static electricity occurs. Enjoy a hair-raising experience!

### Inquiries in Science
- Grades 5-6
- 60 minutes per activity
- Choose two activities
- Maximum two classes with 30 students per class

**Designing “Attractive” Structures** – Students use magnetic materials, geometry, and their own creativity to design and construct a structure that meets specific engineering criteria.

**Magnetic Levitation (MagLev)** – Discover the history and science behind MagLev vehicles. Assemble and test a prototype car. Collect and analyze data.

**Spectroscopy** – Observe the diffraction process with different light sources. Understand how scientists identify elements by the light waves they produce.

### School Outreach Program
- Fee-based
- Grades 4-6
- 60 minute program
- Maximum 30 students per class
- Available to Suffolk County schools

**Magnets to Go** – This interactive program focuses on the discovery of magnetic properties and electromagnetism.

### Summer Science Explorations at the Science Learning Center
- Fee-based
- Grades 4-6
- Open to individuals and student groups enrolled in educational summer programs
- Minimum group size 15, maximum 30 students
- Inquiry-based environmental and physical science activities

### Grade Level

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### Further Information
- Open by appointment, Monday through Friday
- Minimum group size 15, maximum 30, up to three groups at a time
- Discoveries in Science program length is 90 minutes (three activity choices)
- Inquiries in Science program length is two hours (two activity choices)
- Uses the inquiry method of teaching
- Exploration time with exhibits included
- Aligns with New York State and national standards
- Visit our website for detailed program information: [www.bnl.gov/education](http://www.bnl.gov/education)

Contact the Office of Educational Programs to schedule your visit: (631) 344-4495

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**Long Island STEM Hub Partner**

[www.listemhub.org](http://www.listemhub.org)