



Grade 9-12 Outreaches

New York State P-12 Science Learning Standards are listed at the end of each program offering, where applicable

Outreach Planetarium Shows

STARLAB Portable Planetarium Programs by Dudley Observatory at miSci in partnership with Capital Region BOCES.

Custom Program

We will work with you to design unique programs to meet your curriculum needs. 30 minutes, 30 people maximum (including chaperones)

Hands-on Science Explorations

Crime Lab Science

Learn about forensic science and how evolving technology helps scientists, detectives, and other specialists discover the truth about today's criminal cases and mysterious crimes of the past.

45 minutes, 25 students maximum

Erie Canal

Discover the Erie Canal through a hands-on, inquiry-based learning experience that explores the science, technology, and history of innovation in our area. Investigate the Canal's economic importance to New York State and the technological advancements, such as hydraulic cement, that stemmed from its construction. Through experimentation explore Pascal's Law and how it was used to design canal lock systems.

45 minutes, 25 students maximum, HS-ETS1-3

Hot Topics in Astronomy

Keep your students up to date with the latest and greatest astronomical discoveries with an interactive lesson presented by the Dudley Observatory's new professional Astronomer in one of three exciting areas of astronomy: Stellar Birth to Death; Mysteries of the Universe: Dark Matter, Dark Energy, and Black Holes; Exoplanets and Life in the Universe. These lessons are designed to fill one class period and can be customized to fit into your curriculum. Dudley Observatory Astronomer Dr. Valerie Rapson has a Ph.D. in Astrophysical Sciences and Technology and has spent 5 years conducting research and teaching the public about astronomy.

60 minutes, 25 students maximum, HS-ESS1-1, HS-ESS1-2, HS-ESS1-3, HS-ESS1-4, HS-ESS1-7

It's a Small Small Nano World

Discover more about this technical field that focuses on matter at the nanoscale dimensions of 1 to 100 nanometers ($1\text{nm} = 10^{-9}\text{m}$). Learn about how researchers have made great strides in understanding new behaviors and properties of materials at the nanoscale. Understand how this information is being put to work in medicine, electronics, robotics, and energy production.

45 minutes, 25 students maximum

Optical Illusions

Trick your eyes with a number of Optical Illusions and then discover scientifically what is happening with your eye and brain for this to occur. Learn about the parts of your eye and how it produces images for your brain to see. See how artists have used techniques to trick us for hundreds of years.

45 minutes, 25 students maximum, HS-LS1-2

Hands-on Science Explorations (continued)

Spectacular Spectroscopy

Discover how light travels and creates the colors we see. Mix colored light to see what makes white light. Investigate how prisms can be used to manipulate light and produce rainbows. Experiment with gas samples and learn how they capture and release light waves.

45 minutes, 25 students maximum MS-PS4-1, MS-PS4-2, MS-PS4-3

Interactive Science Demos

Dry Ice

Explore the states of matter and sublimation with the fun and excitement of dry ice.

30 minutes, 30 students maximum, HS-PS2-6

Electricity

What is it? And how do we make more?

30 minutes, 30 students maximum, HS-PS3-5, HS-PS1-1, HS-PS1-3

Nanotechnology

Explore the everyday applications of nanotechnology and find out just how small nano really is.

30 minutes, 30 students maximum

Physics

Find out about the motion and the “why” behind its behavior.

30 minutes, 30 students maximum, HS-PS2-1, HS-PS2-2, HS-PS2-3, HS-PS2-4, HS-PS2-5