museum of innovation and science

Grade 3 - 5 Field Trips

Planetarium Shows

Cosmic Wonders
This live program highlights the seasonal night sky, including constellations, planets, the moon and current astronomical events. Tell us what you are studying! We will emphasize specific topics such as constellation mythology or the solar system.
45 minutes, 60 people maximum (including chaperones) MST 1, 4; SS 2

NEW! **Earth's Wild Ride**
Explore the Earth as you've never done before -- as observed by a fictional family relocated on the Moon! Discover crashing asteroids, erupting volcanoes, roaring dinosaurs, electrifying lightning and booming thunder. See eclipses, the ice age, Earth's water cycle and the differences between the Earth and Moon on a roller-coaster-like ride through canyons of raging rivers and hot flowing lava. Includes a live segment about the current seasonal sky. *Produced in collaboration with Rice University, through NASA's Immersive Earth Project.*
45 minutes, 60 people maximum (including chaperones) MST 1, 4

Honey, I Shrunk the Solar System!
Students go on an in-depth exploration of the solar system during this program about Abby Phelps and her science fair project.
45 minutes, 60 people maximum (including chaperones) MST 1, 4

NEW! **IBEX: Search for the Edge of the Solar System**
Take a journey to the boundary between our Solar System and the rest of our galaxy! Get an in-depth look at NASA's Interstellar Boundary Explorer (IBEX) mission and how IBEX is collecting high-speed atoms to create a map of our Solar System's boundary. Narrated by two inquisitive teenagers, this show features the scientists and engineers who developed the IBEX mission and created the spacecraft, as well as the latest updates on the mission's discoveries. *Produced by the Adler Planetarium for the Southwest Research Institute.*
45 minutes, 60 people maximum (including chaperones) MST 1, 4

NEW! **Losing the Dark**
Learn all about light pollution and some of the important issues surrounding this problem in our environment. Explore simple actions people can take to help reduce light pollution. Discover ways we can all work together to implement responsible use of lighting. *Produced by Loch Ness Productions.*
45 minutes, 60 people maximum (including chaperones) MST 1, 4

NEW! **Saturn the Ring World**
See Saturn up-close and all-around-you! Explore the two-story Cassini-Huygens spacecraft, which began orbiting Saturn on July 1, 2004. Cassini continues to explore Saturn and its moons during its extended mission, while the Huygens probe had landed on the surface of Titan, Saturn's largest moon. Narrated by Star Trek's John Billingsley (Dr. Phlox on ENTERPRISE). *Produced by the Houston Museum of Natural Science and NASA's Jet Propulsion Laboratory.*
45 minutes, 60 people maximum (including chaperones) MST 1, 4

Secrets of the Sky
A live program geared for younger audiences and featuring a sing-along. This show highlights the seasonal night sky and astronomical happenings. Tell us what you are studying! We will emphasize specific topics such as constellation mythology or the solar system.
45 minutes, 60 people maximum (including chaperones) MST 1, 4; SS 2

Planetarium Shows (continued)

'Tis the Season Holiday Show (Nov. 28, 2014 - Jan. 4, 2015)
Light up the cold, dark winter with a bright holiday show that explores the history of holiday customs, cultural celebrations practiced during the winter solstice, and general astronomy topics like seasons and the winter night sky.
45 minutes, 60 people maximum (including chaperones) MST 1, 4; SS 2

NEW! **Two Small Pieces of Glass**
Explore the history of the telescope from the time of Galileo and discover its impact upon the science of astronomy. Narrated by two children in a star party setting, this new digital show features astrophysicists and cosmologists from the world's renowned universities and observatories explaining astronomy concepts -- from Galileo's act of revealing the cosmos with a simple telescope to the latest discoveries in space, including startling new ideas about life on other planets and dark energy. *Produced by Interstellar Studios.*
45 minutes, 60 people maximum (including chaperones) MST 1, 4

NEW! **We Choose Space!**
Discover the completed International Space Station (ISS) and the past and future moon with Astronauts Scott Parazinsky, Tom Jones and Gene Cernan, and veteran space reporter Walter Cronkite. This show is filled with real adventures for everyone who dreams of space and wonder about human spaceflight. *Produced by Loch Ness Productions. Funded by NASA to the Louisiana Art and Science Museum.*
45 minutes, 60 people maximum (including chaperones) MST 1, 4

Worlds in Motion
Two media conglomerates, the Know-It-All Network and the All-Star Channel, have set Worlds in Motion with aggressive new campaigns so fast-paced that even a couch potato won't be able to sit still. From the atoms in the air to the dance of the planets, the program addresses such topics as Ptolemy vs. Copernicus, Newton's First Law of Motion, simple celestial mechanics, and even late winter and early spring constellations.
45 minutes, 60 people maximum (including chaperones) MST 1, 4

WSKY: Radio Station of the Stars
This entertaining overview of astronomy topics is delivered in a fast-paced radio show format. Tune in to WSKY, a radio station that talks about the night sky, plays the hottest songs, and even delivers the traffic report from the asteroid belt of the solar system.
45 minutes, 60 people maximum (including chaperones) MST 1, 4; SS 1

Hands-on Science Explorations

NEW! **Amazing Arthropods**
Discover the creepy crawling phylum of arthropoda. While observing preserved specimens, discover which characteristics arthropods have in common and which ones differ to create classes such as insects, arachnids, and crustaceans.
45 minutes, 25 students maximum MST 1, 4; ELA 1; SS 1

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 MST 1, 4

Energy Science
Where does energy come from? Explore turbines, solar panels, thermoelectricity, Piezoelectricity and other methods of producing energy from both renewable and non-renewable sources. *Trip Tip: Pair with Losing the Dark Planetarium Show.*
45 minutes, 25 students maximum MST 1, 4, 6, 7

Hands-on Science Explorations (continued)

Engineering Mission
Design and build a shock-absorbing system that will protect two marshmallow "astronauts" when they land. Test, evaluate, and redesign. This program is adapted from NASA's Design Squad. *Trip Tip: Pair with Saturn the Ring World or IBEX: Search for the Edge of the Solar System Planetarium Show.*
45 minutes, 25 students maximum MST 1, 4, 5, 6, 7; SS 1

Erie Canal Science
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 MST 1, 4, 6; SS 1, 3
➡ ***Transportation & Admission Funding Available*** for 3rd, 4th 5th, 7th and 11th grade students for this program from Erie Canalway Ticket to Ride Program.

Fun with Physics
Physics is everywhere, even when we play. Through interactive demonstrations, learn how a bicycle tire can turn you into a human gyroscope. Explore the laws of gravity and discover Bernoulli's Principle.
45 minutes, 25 students maximum MST 1, 4, 6, 7

Good Vibrations: Exploring Sounds
Explore the specifics of sound waves and how they bring music to our ears. With tuning forks we investigate how vibrations create sound waves and how those waves travel through our surroundings to our ears and brain. Investigate the process of echolocation and how this natural adaptation is helpful to animals on land and in water, including ourselves.
45 minutes, 25 students maximum MST 1, 4 A 2, 3

Just A Phase
Discover answers to the questions of the Moon. Learn why our Moon is so bright, why it controls our tides here on Earth and what is happening to the Moon. Each student will walk their Moon through the phases as they discover what creates new, full, and waxing Moons.
45 minutes, 25 students maximum MST 1, 4, 6

Light It Up!
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 MST 1, 4; A 1

The Magic of Electricity
We all use it…but what IS it, and how does it work? Learn the basics of electricity through hands-on demonstrations, including the hair-raising Van de Graaf generator. Learn how electricity is generated, delivered to homes, and has changed our lives forever. *Trip Tip: Pair with Losing the Dark Planetarium Show.*
45 minutes, 25 students maximum MST 1, 4

Science Solutions
Science can be fun! In this program, students make their own bouncy, stretchy putty while learning about chemistry. Individuals mix different ratios of ingredients to make the best product.
45 minutes, 25 students maximum MST 1, 3, 4, 7

Hands-on Science Explorations (continued)

Star Time
What time is it? Students learn ancient ways to measure time using the stars and Sun. In this hands-on program, students make and learn to use astronomical clocks. *Trip Tip: Pair with Cosmic Wonders or Two Small Pieces of Glass Planetarium Show.*
45 minutes, 25 students maximum MST 1, 4, 5, 6; SS 2

Work Is A Breeze
Explore how our lives are made simpler through simple machines. Discover the six simple machines and their uses. Explore the gallery finding practical and innovative ways that simple machines have been used. In a culminating activity, experiment in groups, with a number of simple machines to complete an objective.
45 minutes, 25 students maximum MST 1, 4, 6, 7

Interactive Science Demos

NEW! **Dry Ice**
Explore the states of matter and sublimation with the fun and excitement of dry ice.
30 minutes, 30 students maximum NGSS: 5 DCI PS1.A

Electricity
What is it? And how do we make more? **Trip Tip:** *Pair with Losing the Dark Planetarium Show.*
30 minutes, 30 students maximum MST 1, 4

Hidden Power
Explore familiar and emerging ways to generate electricity. **Trip Tip:** *Pair with Losing the Dark Planetarium Show.*
30 minutes, 30 students maximum MST 1, 4, 6, 7

Nanotechnology
Explore the everyday applications of nanotechnology and find out just how small nano really is.
30 minutes, 30 students maximum MST 1,3,4,5,7

Physics
Find out about the motion and the “why” behind its behavior. **Trip Tip:** *Pair with Worlds in Motion Planetarium Show.*
30 minutes, 30 students maximum MST 1, 4, 6, 7 ELA 1, 3, 4; SS 1