

2021-2022 GREAT LAKES SCIENCE CENTER

Educator Guide



Welcome back!

In-Person Field Trips,
Virtual Experiences and
Outreach are Now Available!



GREAT LAKES
Science Center
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GreatScience.com | 216-621-2400

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WELCOME BACK, EDUCATORS!

We Make STEM Come Alive!

Dear Educator,

We understand that your need for quality STEM programming is stronger than ever this year. We also understand your desire for flexible options. **We are now offering a diverse selection of in-person, virtual and outreach STEM programs to meet your needs.** We look forward to challenging and entertaining your students through hands-on workshops, larger-than-life science shows and teaching through play in our exhibit areas. Thank you for choosing Great Lakes Science Center.

Book your experience

Reserve your trip by phone at 216-621-2400, or via email at edhelp@glsc.org. Book early, as many of our program dates and times fill quickly.

Pricing and Reservations

1 Field Trip Pricing

We offer multiple field trip options for groups of 10 or more people. Rates apply to schools (public, private, charter or home school) visiting during the school year. Advance reservations are required.

General admission - \$7 per student

Admission & DOME Theater - \$10 per student

DOME Theater only - \$7 per student

**A 6 percent City of Cleveland admissions fee will be added to your visit.*

2 Add on a hands-on workshop

Enhance your field trip experience with a hands-on workshop starting at just \$4 per student. All workshops are specifically designed to support Ohio's Learning Standards in science, math, literacy and social studies.

- **By phone:** Call our dedicated reservation agents at 216-621-2400 (Monday through Friday, 9 a.m. to 5 p.m.)

Hint! Book earlier in the year to avoid crowds and to ensure you are able to receive the programming you want.

Field Trip

Hands-On Workshops Pre-K-5

Pre-K-Kindergarten

20 minimum/30 maximum. Additional sessions will be scheduled for groups larger than 30. Duration: approximately 30 minutes.

Engineering Challenge: The Three Little Pigs

\$4 per student

Students will listen to this classic story and become engineers as they perform hands-on experiments exploring which materials can withstand the big, bad wolf.

Grades 1-2

20 minimum/30 maximum. Additional sessions will be scheduled for groups larger than 30. Duration: approximately 45 minutes to 1 hour.

States of Matter: Ice Cream Science

\$5 per student

Can we turn hot chocolate into ice cream? Explore the properties of solids, liquids and gases in this tasty experience. (Students with dairy/chocolate allergies will be offered an alternative treat.)

NEW!

Boat Float

\$5 per student

Students will discover density through a variety of experiments with objects that sink or float. They will create a boat and test how much weight it can hold.

Dissection: Owl Pellets

\$7 per student

Students will dissect an owl pellet with plastic tweezers. They will compare their findings with an identification chart to explore that creature's habitat and discover what was in their diet!

Grades 3-5

20 minimum/30 maximum. Additional sessions will be scheduled for groups larger than 30. Duration: approximately 45 minutes to 1 hour.

Engineering Challenge: Rescue Mission

\$5 per student

Students use the engineering and design process to construct a mini trampoline as they work in small groups to complete their mission.

Jumping Jitterbugs

\$7 per student

Students explore how circuits and electricity work together while designing and creating their own Jumping Jitterbug.

Dissection: Cow's Eye

\$8 per student

Students will examine the complex structure of an eye and how it functions by cutting into and dissecting a cow's eye. (Must be reserved at least four weeks in advance.)



Field Trip

Hands-On Workshops 6-12

Grades 6-12

20 minimum/30 maximum. Additional sessions will be scheduled for groups larger than 30. Duration: approximately 1 hour.

Introduction to Coding & Robotics

\$5 per student

Students will be introduced to the basic coding language of C++ as they learn how to navigate a robot through a series of challenges.

Electricity Investigators

\$6 per student

Students investigate circuits and electricity as they use the engineering design process to design and create their own working flashlights from common items.

Sustainable Energy: Wind Power

\$6 per student

Students will learn about alternative energy sources and their impact on our world. They will work in small groups to design and test wind turbine blades to see which materials and designs are the most effective.

Dissection: Pig Heart

\$8 per student

Students will get a tour of the body's pump with this dissection of a pig heart. They will cut into the heart to reveal the four chambers, peer into the aorta, and inspect blood vessels up close. (Must be reserved at least four weeks in advance. Each heart will be shared by two students.)

Virtual Experiences

Virtual Platforms

We plan to use Zoom for all virtual interactions and will email a link to the contact on the registration. This can be emailed out to your families with students at home. The recommended class size for all virtual programs is 30 students or fewer. There is a minimum of 20 students for virtual workshops. The Zoom call will start at the registered start time of the program. If you have technical difficulties, please contact us at 216-696-2760. If you are unable to use Zoom, please let us know at time of registration and we will try to accommodate by using a different service.

Workshop Supply Kits

You will be contacted approximately one week prior to your workshop date to make arrangements for kit drop-off. Virtual hands-on workshops include one kit per registered student that each contain all items needed to complete the workshop. One additional kit is also provided for the teacher. Kits will be picked up at the Science Center at a pre-arranged date and time. After the workshop is completed, you can drop off any materials that need to be returned to the Science Center. Delivery and pick-up to and from your school is also available for a \$50 additional fee (available for locations within 30 miles of the Science Center).

Health and Safety

We ensure that all proper protocol is followed when distributing the kits. Each element is cleaned and sanitized before packing. When materials are returned, they are thoroughly cleaned and sanitized before re-packing for future use.

***Safety information sheets will be provided in all dissection workshop kits. These will contain important information on proper tool handling, ventilation needs and disposal of hazardous items. Please ensure that these are reviewed with your class prior to the program start.*

Virtual Science Shows

\$75 per classroom. Duration: approximately 30-45 minutes.

Science becomes larger than life as we perform spectacular demonstrations just for your class! Choose from the following themes. Each show ends with time for questions and answers.

- Bubblemania
- Energize It
- Lift-Off
- Magic of Matter
- Seeing Sound

Virtual Hands-On Workshops

Pre-K–K: Engineering Challenge: The Three Little Pigs

Duration: approximately 30 minutes.

\$6 per student

Students are junior engineers as they perform hands-on experiments exploring which materials can withstand the big, bad wolf. This workshop promotes science and literacy.

1-2: Dissection: Owl Pellets

Duration: approximately 45 minutes.

\$9 per student

Students will dissect an owl pellet with plastic tweezers. They will compare their findings with an identification chart to explore that creature's habitat and discover what was in that owl's diet.

3-5: Jumping Jitterbugs

Duration: approximately 45 minutes.

\$9 per student

Students explore how circuits and electricity work together while designing and creating their own Jumping Jitterbug.

3-5: Dissection: Cow's Eye

Duration: approximately 1 hour.

\$10 per student

Students will examine the complex structure of an eye and how it functions by cutting into and dissecting a cow eye. (Must be reserved at least four weeks in advance.)

6-8: Electricity Investigators

Duration: approximately 1 hour.

\$8 per student

Students investigate circuits and electricity as they use the engineering design process to design and create their own working flashlights from common household supplies.

6-12: Dissection: Pig Heart

Duration: approximately 1 hour.

\$10 per student

Students will get a tour of the body's pump with this dissection of a pig heart. They will cut into the heart to reveal the four chambers, peer into the aorta, and inspect blood vessels up close. (Must be reserved at least four weeks in advance. Each heart will be shared by two students.)

Outreach to Your School!

Outreach Big Science Shows

We bring our larger than life science experiments to your school! Choose from the following themes. Each show ends with time for questions and answers. Please note that a space of at least 20 x 20 feet is required along with a high ceiling. Auditoriums, cafeterias and gymnasiums are usually great spaces. Space requirements will be confirmed after booking.

\$375 per show. Duration: approximately 30-45 minutes.

- Bubblemania
- Break It
- Cryoblast
- Fire and Ice
- Magic of Matter
- Math in Motion
- Seeing Sound

We can bring the “WOW” to your STEM Night!

\$150 per hour. Minimum of three hours for STEM night programming.

Let us provide a fun, hands-on STEM table activity for your family night. Students and their families will be able to engage in one of the following activities.

- Exploring Electricity
- Making Music
- Soaring Stomp Rockets

Outreach Extended Mileage Fee

Up to 30 miles from the Science Center is included in the program fee. A mileage fee of \$2 per mile will be charged for any additional mileage beyond the initial 30 miles. Max distance we can serve is 60 miles from the Science Center.



Coming Soon

THE ULTIMATE INTERACTIVE FLIGHT EXHIBITION

ABOVE AND BEYOND

PRESENTED BY  **BOEING**



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Science Center
Stay Curious.

YOUR MISSION DATES
SEP. 25 – JAN. 02

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EXPERIENCE FLIGHT LIKE NEVER BEFORE. Race your friends at the speed of sound. Soar to orbit for a spectacular 360-degree view of Earth. Climb aboard a fascinating journey to Mars. From flying cars and supersonic planes to space elevators and mega-rockets, Above and Beyond takes you faster, farther and higher for a once-in-a-lifetime experience. Produced by Evergreen Exhibitions in association with Boeing, in collaboration with NASA and the Smithsonian's National Air and Space Museum.

CALL
216.694.2888

VISIT
AboveAndBeyondExhibition.com



Coming Soon

Discounted Family Memberships for Teachers

Discounted memberships are available for teachers. You and your family can enjoy free general admission to the Science Center, NASA Glenn Visitor Center, Steamship Mather and most traveling exhibitions all year long. Get discounts on our camp programs and free general admission to 360+ reciprocal science centers and museums around the country. Call 216-696-4576 for details.

FREE Admission Every Day for Teachers

Who says kids should have all the fun? The Science Center offers free general admission to Ohio teachers every day. Just bring a copy of your teaching certificate, OEA card, union card, or school ID listing teacher/educator and preview the exhibits before your next field trip.

Virtual Educator Resource Fair

The Science Center will host a virtual Educators Resource Fair from 4:30-6:30 p.m. on Tuesday, September 21. Participating partners will include the Cleveland Museum of Natural History, the Rock and Roll Hall of Fame, the Cleveland Aquarium, the Cleveland Museum of Art, Cleveland Botanical Garden, Shaker Lakes and more. For more information on registering for this event, contact Karyn Torigoe, Senior Manager: STEM Programs & Evaluation at torigoek@glsc.org.

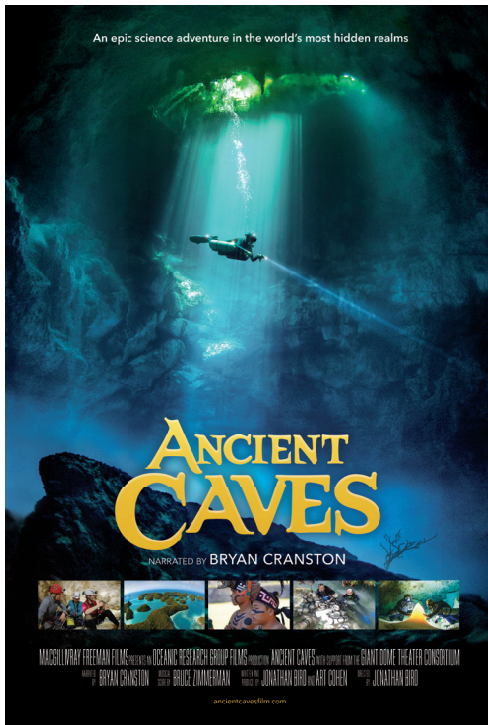


Cleveland Clinic DOME Theater

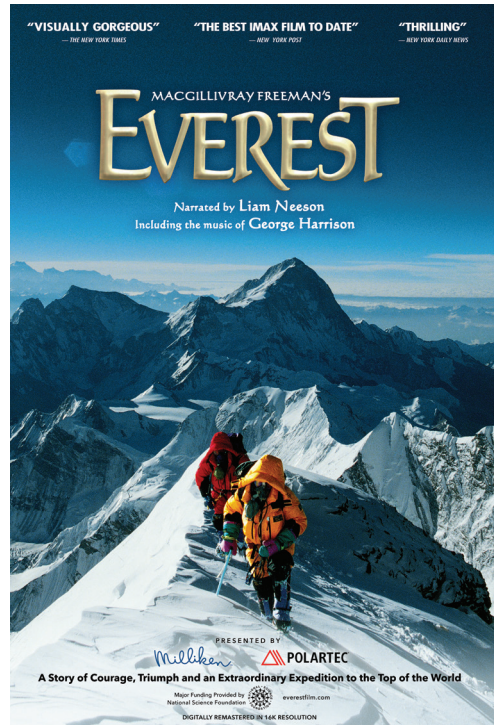
Add a movie to your field trip!

Giant-screen films can inspire STEM careers by bridging the gap between entertainment and science learning.

Enhance your students' educational experience by adding a film shown in our six-story high domed theater to your visit! Educator guides that include information on national content standards as well as pre- and post-visit activities are available for our films. Please visit GreatScience.com and click on "Educators" for more details. Pricing is also available for movie-only field trip experiences. Please see page 3 for details.



COMING IN FALL 2021



COMING IN SPRING 2022

Or choose from one of these recent favorites!

Journey to Space, Tornado Alley, Titans of the Ice Age, National Parks Adventure, Dream Big, Amazon Adventure, Superpower Dogs, Incredible Predators or Great Barrier Reef

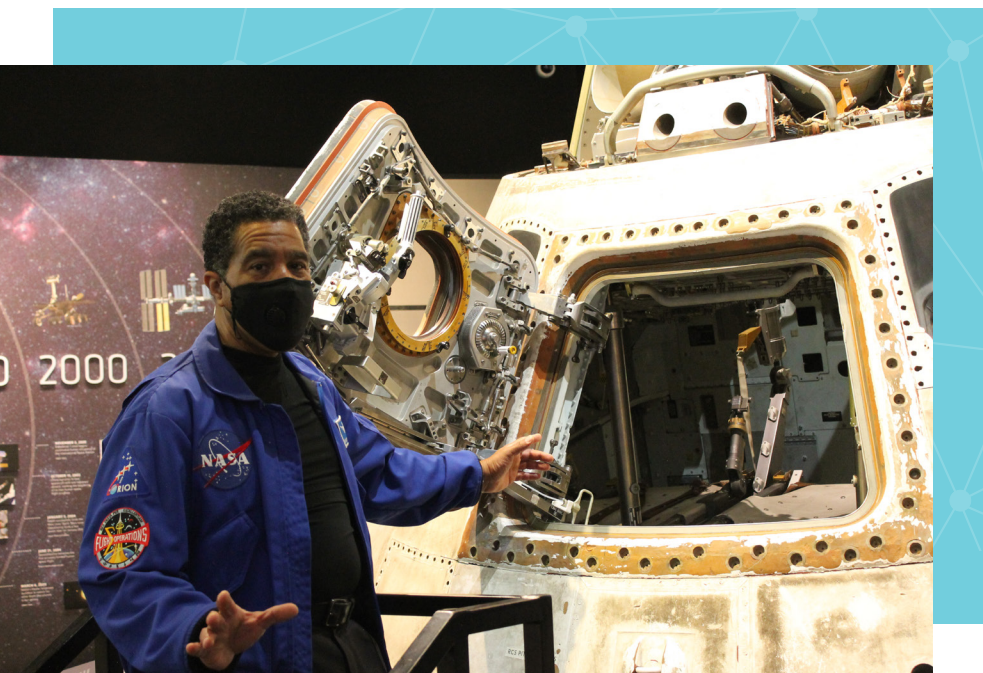
What to See and Do

NASA Glenn Visitor Center

Great Lakes Science Center is home to one of only 11 NASA Visitor Centers in the nation. Reinforce your curriculum as students take a look at the past, present and future of space travel, see a real space command module, learn how astronauts live and work on the International Space Station, and explore propulsion, power, materials science and much more!

Mission to STEM

Field trips are moving into the realm of augmented reality at the Science Center! The state-of-the-art Mission to STEM app brings our NASA Glenn Visitor Center to life with virtual and augmented reality. In this interactive digital mission, students will virtually climb into the Apollo command module, fire up a rocket, conduct International Space Station experiments and more. Your class will be provided with iPad minis or download the app and bring your own set of devices.



What to See and Do

Science Phenomena

Get hands-on with science! Our Science Phenomena Gallery encourages students to observe, investigate, predict and test the principles behind light, sound, motion, weather, electricity and magnetism.

BioMedTech: Engineering for Your Health

Enter the world of biomedical technology and engineering. Students explore interactive exhibits, videos and educational displays focusing on genomics, stem cells, prosthetics, functional electrical stimulation (FES) and medical imaging as they learn about the work being done by local researchers to develop innovative medical technologies. The BioMedTech's nano exhibit engages guests through a series of interactive experiences that make a world we cannot see come alive through real-life applications and small-scale, but powerful technologies.

Daily Science Demonstrations

Science comes to life in our spectacular demonstrations. Current demonstrations may include:

- Bubblemania
- Magic of Matter
- Force and Motion
- Energize It!
- It's Electric
- Seeing Sound

Daily science demonstrations are free with paid general admission. Seating may be limited as all demonstrations cannot be reserved and are open to the public. You will be notified of the current day's times and themes at check-in.



Important Information

Title I School Admission

Ohio schools who receive federal Title I services are entitled to free general admission to the Science Center as part of a field trip on any school day. DOME Theater films, workshops, virtual experiences, outreach and the Steamship *William G. Mather* are not included. Status is subject to confirmation. Please call 216-621-2400 for details.

Payment and Confirmation

A confirmation packet will be emailed to you following the completion of your reservation. Please review the packet thoroughly to ensure you have everything you need. Payment for all field trips is due 14 days prior to your visit date. Payment upon arrival is not permitted. Acceptable forms of payment include credit card, check, purchase orders and cash (cash payments must be made in person at the Science Center).

Admissions Fee

Please note that a 6 percent City of Cleveland admissions fee is applicable to all field trips and will be added to the cost of the visit.

Cancellation Policy

Cancellations must be made no less than 48 hours in advance for in-person field trips and no less than seven days in advance for virtual programs.. Payments are non-refundable and payments made toward a canceled visit will be held as a credit toward a future visit. Cancellations for outreach and virtual programs must be at least two weeks in advance.

Chaperones

Great Lakes Science Center recommends one adult chaperone for every five students. Chaperones within the one-to-five ratio will receive free admission. Additional adults must pay the posted student rates.

Educator Resources

We want to make it easy to prepare for your day at the Science Center. Visit GreatScience.com and click on Educators>Educator Resources>Online Resources where you'll find a wide range of materials to help prepare you and your classroom for your visit.

Lunch Options

Please let us know at the time of reservation if you plan to eat lunch at the Science Center. A reserved lunch space is included with all field trip reservations. Schools are welcome to bring brown-bag lunches to be enjoyed in our group lunch space or outdoors along the harbor (weather permitting). Pre-ordered boxed lunches are also available through the Science Center's Café. Please be sure to let our reservations specialist know if you plan to order lunch. A menu and ordering information is included in your confirmation packet. All pre-ordered lunches must be confirmed and paid for at least 72 hours before your visit. Purchasing lunch directly from the Science Center Café is not available for school groups.

The Science Store

The Science Store carries a large selection of educational items that complement our exhibits and films. Please call the Science Store at 216-696-5575 for more details.

Parking

Complimentary bus parking is available on a first-come, first-served basis. Buses will receive instructions on where and how to park upon arrival.



Great Lakes Museum of Science, Environment, and Technology
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