



MICHIGAN

Science

CENTER

GROUP GUIDE

Fall 2017

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In the Museum

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During a trip to the Michigan Science Center, interact with 250+ hands-on exhibits that explore Space, Health, Physical Science, Engineering and more. All are included in group admission!

Must Sees

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With live stage shows, an IMAX® Dome Theatre, and a planetarium, there's always something new to discover and learn at MiSci.

In the Classroom

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Bring the Michigan Science Center to you with our Traveling Science program featuring engaging science workshops and presentations, or with our new ECHO distance learning program, bringing quality content to students across the state.

Educator Resources

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At MiSci, we aim to inspire educators as well as students! That's why we provide you with the tools you need to successfully engage your students on a field trip and in the classroom.

EDUCATION PROGRAMS

MiSci offers educational programming for students grades PreK–12. See pages 3–5 for details.

Offerings by Grade Level		PreK - K	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Highschool
Learning Labs	Wondrous Weather	●									
	Sounds All Around - NEW!		●	●							
	Laser Mazes				●	●	●				
	Gravity Games							●	●	●	
	Translating the Message										●
	Engineering Design Lab – Eggpollo 11				●	●	●	●	●	●	●
Planetarium	Stories in the Sky	●									
	What's Up? Your Guide to the Night Sky		●	●							
	Junior Astronomer				●	●	●				
	Our Place in Space							●	●	●	
	Sunstruck										●
Theaters	Chrysler Science Stage Show	●	●	●	●	●	●	●	●	●	●
	DTE Sparks Theater		●	●	●	●	●	●	●	●	●
	Toyota Engineering 4D Theater		●	●	●	●	●	●	●	●	●
	Chrysler IMAX® Dome Theatre	●	●	●	●	●	●	●	●	●	●
	Kids Town Experience	●									

Grade level recommendations are based upon current Michigan Science Standards.

OUR VISION

To empower and enrich all children and all communities with STEM.

OUR MISSION

To inspire curious minds of all ages to discover, explore and appreciate science, technology, engineering and math in a creative, dynamic learning environment.

NGSS Connections

Physical Science

Life Science

Earth & Space Science

Engineering

STEM Playground **NEW!**

Our new STEM Playground lets you tinker, build, fly, and play! Exercise your STEM skills to create and test paper airplanes, build with blocks, learn about angles and wind direction on a sail car table, and discover through play.

Spark!Lab

Spark!Lab, from the Smithsonian Institute, helps curious minds of all ages engage in the process of invention. Enjoy self-led invention challenges in an interactive space designed to support creative and collaborative thinking.

Health and Wellness

Discover the importance of good nutrition and fitness, uncover the hidden factors that affect your health both now and in the future, and learn to make smart choices to improve your health.

Motion

Explore the fundamental properties of matter and energy with circuits, electrical loads, magnetic fields, simple machines, light and more.

Light and Sound

From the Illuminarium to the Seashell Pipes to the walk-in kaleidoscope, this is the gallery to experiment with sounds, colors, reflection, waves, and more.

Space

Marvel at the wonders of the Universe as you explore the history of human space travel, learn about rocket technology, tour the galaxy, travel to the Sun and more.

Engineering

Become an engineer as you walk our 80-foot-long Mini Mac Bridge, travel our roundabout, work the U.S. Steel Fun Factory, and more.

Kids Town

Kids Town features engaging activity areas in a child-scaled "town" just for guests ages 2 – 5, allowing them to develop social and motor skills while exploring basic science concepts.

LEARNING LABS & PLANETARIUM SHOWS

These grade-level appropriate experiences provide a great way to connect a day at MiSci to your curriculum. Add a Learning Lab or Planetarium show and take students on an in-depth exploration of STEM principles.

Lab Length: Approx. 45 minutes (Booking minimum of 15 students and per session maximum of 25 students. Learning Labs are only available for reservations of 125 or fewer students).

Planetarium Length: Approx. 1 hour.

Grades PreK – K

Learning Lab: Wondrous Weather

Put on your meteorologist hat as you learn about weather patterns and the tools used to predict them.

Planetarium: Stories in the Sky

Learn about the rotation of the Earth, light pollution, our animal friends in the night sky, and the stories that go with them.

Grades 1-2

Learning Lab: Sounds All Around NEW!

Students will explore the science of sound – how it's created, what makes sound move, and how we can change sound – before creating their own sound-effects recording.

Planetarium: What's Up? Your Guide to the Night Sky

Discover constellations, stars, and planets in the current season along with the latest news on astronomy and space.

Grades 3-5

Learning Lab: Laser Mazes

Reflect and redirect light as you focus in on a mirror maze challenge! Students will learn about concepts such as reflection, refraction, and energy transfer.

Planetarium: Junior Astronomer

Explore the patterns in the cosmos including the phases of the Moon, reason for the seasons, and current constellations in the night sky.

Grades 6-8

Learning Lab: Gravity Games

Discover patterns within our Solar System as you help demonstrate the relationship between the Sun, Earth and Moon.

Planetarium: Our Place in Space

This show begins with a look at the state of Michigan and gradually zooms out to reveal the size of the planets, the Sun, the Milky Way, and finally the Universe. Join us for a humbling look at the true size of our planet.

Grades 9-12

Learning Lab: Translating the Message

Try your hand at DNA extraction and learn how DNA transcription determines heredity and genetic traits.

Planetarium: Sunstruck

Its energy has supported life on Earth for millennia, but may threaten our way of life. Travel to the future to discover our Sun's connection to the Universe's life cycle.

Grades 3-12

Learning Lab: Eggpollo11

Put your engineering skills to the test as you design a carrier to safely land an egg on the moon!

Theater Experiences

Toyota Engineering 4D Theater

Grades 1–12 ■

Put on some 3D glasses and join us in our newly renovated theater for an incredible sensory experience! MiSci features the world's only 4D version of National Geographic's Extreme Weather film and transports viewers from the base of glaciers to the treetops.

Shows last approximately 30 minutes.

DTE Energy Sparks Theater

Grades 1–12 ■

Enter our amazing Faraday cage and witness the incredible "hair-raising" Sparks Electricity Show as performers demonstrate how electricity affects the world in all forms through electromagnets, static electricity, plasma, and exploring different states of matter.

Shows last approximately 30 minutes.

Chrysler Science Stage Show

Grades PreK–12 ■ ■

Join our performers as they conduct thrilling live science demos for all ages. You'll explore STEM concepts in action ... and reaction!

Shows last approximately 30 minutes.

Dassault Systèmes Planetarium

Grades PreK–12 ■

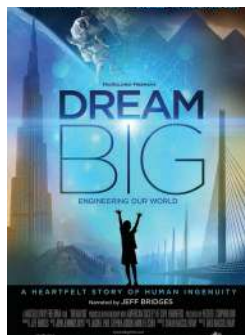
Go inside a virtual universe as you fly past 9,000 stars, planets, galaxies and more. Our shows are led by a live presenter and are followed by question and answer sessions.

Shows last approximately 50 minutes.

Chrysler IMAX® Dome Theatre

Showing films that entertain, educate, and inspire, Michigan's only domed IMAX® theatre surrounds audiences with an experience that thrills students and adults alike.

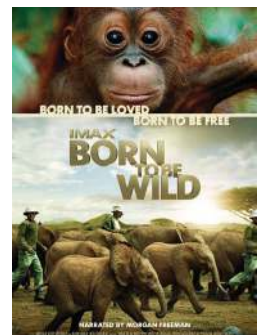
Shows last approximately 1 hour.



Dream Big

Recommended grades 3–12

Dream Big travels from the world's tallest building to a bridge higher than the clouds to a solar car race. Discover how today's engineers are shaping the world of tomorrow.

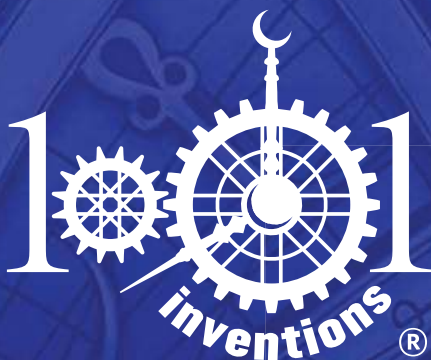


Born to be Wild

Recommended grades PreK–12

This film documents orphaned orangutans and elephants and the extraordinary people who rescue and raise them—saving endangered species one life at a time.

SPECIAL EXHIBITS



October 7, 2017–January 7, 2018

1001 Inventions takes visitors on an inspirational journey through a colorful and creative period of a golden age of civilization that stretched from Spain to China beginning in the 7th century. Through the inspiring scientific and cultural achievements of pioneering men and women of various faiths and cultures during the golden age of Arabic science in Muslim Civilization and their contributions to our modern world, *1001 Inventions* promotes intercultural dialogue, diversity and social cohesion.

This exhibit is recommended for grade 3 – 12 students.

Free exhibit admission sponsored by:
Friends of 1001 Inventions Michigan



Host Partner

Michigan Science Center



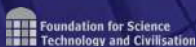
Publishing Partner

National Geographic



Academic Partner

FSTC (UK)



Construction Partner

Community Jameel



Creator & Producer

1001 Inventions (UK)



Year of Light Partner

UNESCO



Launching Venue

Science Museum London



Michigan Community Partners

Local Support

**Friends of
1001 Inventions
Michigan**

Group Reservations: 313.577.8400, Option 5

Traveling Science Program

Programs start at \$300.



Science Festivals

Host a science festival during the day for the entire school or in the evening for a fun family engagement event.



Group Presentations

Assemblies are a great way to engage and educate groups of up to 250 students. All programs feature large scale science demonstrations such as: liquid nitrogen, fire tornadoes, Tesla coils and more!



Hands-on Workshops

MiSci educators visit classrooms to introduce or reinforce topics in your curriculum. Programs can accommodate up to 30 students and typically last 45 minutes.



Custom Programs

Custom Traveling Science Programs are available upon request. Contact our Outreach Team at Outreach@Mi-Sci.org or call 313.577.8400, ext. 238 for additional information and Traveling Science reservations.

DISTANCE LEARNING NEW!



What is ECHO?

Visit the Michigan Science Center and engage in hands-on learning without leaving your classroom! Our new ECHO program allows groups to interact and engage with educators while participating in three dimensional, NGSS-aligned lessons.

Why ECHO?

Our videoconferencing programs allow you to interact and engage with an educator in real time with only the click of a link. No special hardware is required. All our lessons are NGSS aligned and truly take on the three dimensional learning approach. We embed science and engineering practices, disciplinary core ideas and cross cutting concepts in every lesson.

ECHO

MiSci's **DISTANCE LEARNING PROGRAM**

Virtual visits include:

- 45-minute interactive program
- Hands-on materials shipped to your school or library
- Complimentary tech check prior to program

Virtual Visit Topics

3rd grade: Know Where it Grows - Environmental conditions, such as weather, determine where and when plants can grow. We can design solutions to reduce the impacts of weather-related hazards on plants grown for food in a community garden.

4th grade: Burn Boss Training - Engineers use controlled fires for ecological reasons, including restoring diverse habitats for specially adapted plants and animals. Work together to develop a solution for a habitat to protect an endangered animal or plant.

5th grade: Journey Without a Map - Stars can be used for navigation because they have predictable patterns and unique properties. Investigate our sun and design a navigation strategy to get to your destination!

To reserve a program for your students, contact our Distance Learning Coordinator at 313.577.8400, ext. 433 or by emailing outreach@Mi-Sci.org. Reservations should be made at least four weeks in advance to ensure materials can be shipped to your location.

ECHO is supported by



Group Reservations: 313.577.8400, Option 5

Professional Development

MiSci hosts fun, interactive professional development sessions focused on inquiry-based learning and the new Michigan Science Standards. Custom programs are available by request. Dates are subject to change – please check our website for up-to-date program information.

Membership

Educators receive 20 percent off MiSci memberships! Enjoy free or discounted shows and special exhibits, invites to members-only events, free or discounted admission to 300+ science centers around the world and more. Contact Membership@Mi-Sci.org to learn more.

Explore Store

Educators receive 10 percent off purchases in the Michigan Science Center Explore Store. Stock up on great STEM gadgets and gear for your classroom.

Educator Extra

Subscribe to our monthly Educator Extra e-newsletter for MiSci news and special offers! Visit Mi-Sci.org/educators to sign up.

Teacher PD Dates

August	19
October	11
November	16
January	18
March	15
April	19
June	21

Virtual Tour

Did you know that MiSci has a Virtual Tour? Check out our exhibits from the comfort of your classroom to plan your field trip! Visit Mi-Sci.org/visit/family-groups/venue-rental.

Educator Guides

Our website is the place for Educator Guides, standards alignment information, lesson plans, chaperone guides, scavenger hunts and other STEM resources. If you can't find what you're looking for, give us a call!

Sponsors of Science

The Sponsors of Science program supports nearly 15,000 students each year for subsidized field trips for schools where over half of all students receive free or reduced lunch. Visit Mi-Sci.org/SponsorsOfScience for more information.

Super Sparks: All Access

Second Tuesday of every month, Sept. 2017–June 2018

Join us for a special sounds-down, lights-up sensory friendly experience once a month. Learn more about programming, partners, events, social stories and accessibility for Super Sparks on our website. Mi-Sci.org/Accessibility.

GROUP PACKAGES

Discovery

Designed for grades 1–12, ages 6–18

Explore 1 - \$9

250+ Hands-On Exhibits
1001 Inventions Experience
+ **Pick 1 Add-On Experience**

Explore 2 - \$12

3+ hour visit suggested

250+ Hands-On Exhibits
1001 Inventions Experience
+ **Pick 2 Add-On Experiences**

Tiny Tots

Designed for Pre-K–K, ages 4–6

Explore 1 - \$6

250+ Hands-On Exhibits
Kidstown Experience

Explore 2 - \$9

2+ hour visit suggested

250+ Hands-On Exhibits
Kidstown Experience
+ **Pick 1 Add-On Experience**

Add-On Options

Toyota Engineering 4D Theater
Sparks Theater
IMAX® Dome Theatre

Live Chrysler Science Stage Show
Planetarium Show
Learning Lab

*MiSci's Sponsors of Science program supports student admission costs for a limited number of school groups each year.
Visit our website for more information at Mi-Sci.org/SponsorsofScience.*

Test Prep Days at MiSci

Select Dates in March and April 2018

Test Prep Days help students internalize concepts learned in the classroom using engaging shows, demos and hands-on experiences at MiSci. Students will rotate through sessions on Physical, Earth and Life Sciences; discuss testing tips and leave feeling energized and confident for their next science test! This program sold out last year, so book early for Test Prep 2018! Call 313.577.8400, Option 5.

Group Rate Guidelines

- Group rates apply to groups of 12 or more people.
- All PreK – K groups must maintain a 5:1 student to adult ratio.
- All grade 1 – 12 groups must maintain a 10:1 student to adult ratio.
- Adult chaperones (includes teachers) within a 10:1 ratio for grades 1-12 and a 5:1 ratio for grades PreK-K receive \$6 off group admission rates.
- Make reservations no later than two weeks in advance and secure your 50 percent deposit.
- Please note, MiSci does not issue refunds. To view our full refund policy, please visit our website.
- All add-on programs have limited availability and are subject to change – book early to confirm your special programs.

Group Reservations: 313.577.8400, Option 5

PRE-VISIT CHECKLIST

Ready to Book Your Visit?

- Select Experience.** Our programs are designed to support Michigan's Science Standards. Visit the website for standards alignment information and educator guides or contact MiSci Reservations for recommendations!
- Make Reservation.** Complete the online Field Trip Reservation form on our website at Mi-Sci.org/FieldTrips. Make the process faster by pre-selecting a group package type, add-on(s), and trip date. Need suggestions? Give us a call!
- Recruit Chaperones.** Recruit chaperones and provide each with a copy of the Chaperone Guide found on our website. Remember, all grade 1-12 groups must provide one adult chaperone for every 10 students and all grade PreK-K groups must provide one chaperone for every 5 students.
- Secure Deposit.** Confirmation of trip date and invoice are sent via email. A 50 percent field trip deposit is due two weeks prior to your visit.
- Prep Students.** MiSci will provide copies of your group itinerary upon arrival. Please ensure all chaperones and students have a clear understanding of MiSci expectations. Remind your students to leave backpacks at school, as they are not permitted in the building.
- Pack Lunch.** Remind students to bring a sack lunch or money to purchase items at the Cosmic Café.
- Call MiSci.** If your reservation date, arrival time, or other details change, you are responsible for contacting MiSci at least 48 hours prior to your scheduled visit. Still have questions? See FAQs on the website or give us a call – we're happy to chat!
- Arrive Smoothly.** For ease of check-in, arrive with an accurate headcount of students and adult chaperones (includes teachers). Your group will be provided a complimentary lunch storage bin and coatrack for use during the day.

