

The Element of ...

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Wonder!	

What's *YOUR*
Element?



GROUP GUIDE

FALL / WINTER 2015

- New GLCE Guide
- Exciting New Programs and Shows
- Teacher Opportunities

www.Mi-Sci.org • Group Reservations: 313.577.8400, Option 5
The Michigan Science Center is a 501(c)(3) nonprofit organization.



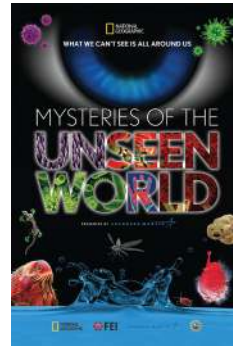
Showing films that entertain, educate and inspire, Michigan's only domed IMAX® Theatre surrounds audiences with an experience that thrills students and adults alike.



Journey to Space

Recommended Ages:
Grade 3 – Adult

In the past half century, humans have punched through the stratosphere, walked on the moon, and lived continuously in orbit. Strap in for the next giant leap. Next stop...Mars! Narrated by Patrick Stewart. **NOW SHOWING!**



Mysteries of the Unseen World

Recommended Ages:
Grade 2 – Adult

Mysteries of the Unseen World transports audiences to places they have never been before to see things that are beyond their normal vision, yet are literally right in front of their eyes. **OPENS OCTOBER 17!**



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. Groups can choose their show time from one of the following programs on a first-come, first-served basis.

Stories in the Sky

Recommended Ages: PreK – Grade 1

This interactive show is meant for our youngest guests. Learn about the rotation of the Earth, light pollution, our animal friends in the night sky and the stories that go with them.

Junior Astronomer

Recommended Ages: Grades 2 – 5

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

Our Place in Space

Recommended Ages: Grade 4 – Adult

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

What's Up? Your Guide to the Night Sky

Recommended Ages: Grades 2 – Adult

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

The Hitchhiker's Guide to the Solar System

Recommended Ages: Grade 6 – Adult

Hitch a ride through the Milky Way as you explore our Solar System and learn about its size, scale and much more. Discover the most up-to-date scientific finds from current space missions, such as New Horizons.

Sunstruck

Recommended Ages: Grade 4 – Adult

Discover the wonders of our sun. Its energy has supported life for millennia, but is now threatening our technology and way of life. Travel to the distant future to discover our sun's connection to the cosmic cycle of life and death.

SHOWS, PROGRAMS AND LIVE DEMOS



Our educators and presenters make learning fun with demonstrations and shows that bring science to life! With the exception of our Labs, a space reservation is required for groups. *All demonstration and stage show areas are subject to availability.*

Chrysler Science Stage

Recommended Ages: PreK – Adult

Enjoy our current live show, *Put it to the Test*, as we investigate how temperature relates to the movement of atoms and molecules. Utilizing liquid nitrogen we'll see some "cool" effects on solids, liquids and gases! *Shows last approximately 20 minutes.*

DTE Energy Sparks Theater

Recommended Ages: Grade 1 – Adult

Enter our amazing Faraday cage and witness the incredible *Sparks Electricity Show!* as performers demonstrate how electricity affects the world in all forms through electromagnets, static electricity, plasma and different states of matter. Behold our shocking Tesla coil and the incredible exploding wire! *Shows last approximately 30 minutes.*

Toyota Engineering 4D Theater

Recommended Ages: Grade 3 – Adult

Enter the exciting world of engineering with an interactive journey into the world of real-life engineers. Our current show, *Adrenaline*, features the work of an Olympic kayaker, a NASA Jet Propulsion Lab engineer, and a Toyota engineer. Audiences will be rocked in their seats as wind blows and water spritzes throughout this one-of-a-kind show.

Centennial Lab

Meet our educators and docents and enjoy hands-on activities in our Centennial Lab. Discover a variety of science topics with themed activities in chemistry, physics, engineering, life science and technology. *Activity times vary depending on topic.*

CENTENNIAL LAB THEMED MONTHS:

OCTOBER

Colors and Chemistry

Learn about color changing magic in this exciting month celebrating National Chemistry Week.

NOVEMBER

Toytopia

Discover basic science concepts and the value of learning through play with interactive, larger-than-life toys!

DECEMBER

Winter Celebration

Explore the wonders of winter as the weather gets colder.

JANUARY

Indoor Adventures/ State Testing Prep

Gear up for state testing with our special inquiry based learning activities during one of our M-Step Days!

HANDS-ON INTERACTIVE PROGRAMS

Add a Hands-on Interactive Program (HIP) to your visit and take students on an in-depth exploration of STEM principles.

Grades PreK-2

What's the Property? - Test your five senses in order to sort, classify, and measure objects according to their similar and observable properties.

From Seed to Flower - Explore the life cycle of plants and their basic needs as you plant a seed to take home.

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

Grades 3-5

Survival of the Fittest - Learn how favorable traits add to an organism's ability to survive and thrive in its environment.

Gravity Games - Discover the patterns within our solar system and the relationship between the sun, earth, and moon.

Laser Mazes - Reflect and redirect light as you focus in on a mirror maze challenge!

Grades 6-8

The Human Element - Discover how humans affect the environment and alter populations through the use of land.

Surprising Circuits - Build circuits and discover the relationship between electricity and magnetism.

Grossology - Get grossed out as you explore body systems and the way they help us stay healthy!

Grades 9-12

Translating the Message - Explore DNA extraction and learn how DNA transcription determines heredity and genetic traits.

Drawn to the Center - Discover how figure skaters can control the speed of their spins and why people don't fall off spinning rides.

The Element Family - Conduct chemistry experiments and learn why the elements on the periodic table are arranged by groups and periods.

HOMESCHOOL HIP DAYS

We offer HIP sessions for homeschool students every first Wednesday of the month. Visit our website to learn more.



HANDS-ON EXHIBITS



The Michigan Science Center features more than 250 hands-on exhibits that explore space, health, physical science, engineering and more. As Michigan's STEM Hub, we inspire curious minds of all ages.

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.

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 how 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.

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



A gallery for children ages 5 and under, Kids Town features engaging activity areas organized into a child-scaled “town” where young scientists can develop their social and motor skills while exploring basic science concepts. In keeping with the guidelines of the Michigan Board of Education Early Childhood Standards of Quality for Prekindergarten, our gallery uses active, hands-on experiences to foster positive attitudes toward science and build a foundation for later and more sophisticated learning.

Seasonal Programs:

Seasonal programs allow visitors to examine seasonal changes and include a themed make-n-take project. Check out our Tiny Tots group package to learn about young child show perks for little ones when visiting as a group.

• Fall Fun

(September – November)

Pick an apple, bake a pie at the diner, or simply discover wonderful colors as the leaves change around us.

• Winter Wonderland

(December – February)

Bundle up and boogie your way into warmer days at Kids Town Center Stage. Around town, observe animals burrowing in for the season, count the sides of a falling snowflake and stay warm in our gallery.

TOYTOPIA

Toytopia is a new, interactive exhibit that focuses on learning through play. At 9,700 square feet, the exhibit features life-sized toys, vintage games and more. With fun and educational content, Toytopia helps curious minds of all ages learn and grow through elements of wonder, curiosity, discovery, and surprise.



Discover our prehistoric past as you engage in thrilling educational activities in our new **temporary** exhibit, *A T. rex Named Sue!*

At 42 feet long and 12 feet high at the hips, Sue is the largest, most complete, and best-preserved Tyrannosaurus rex ever discovered! A dramatic, life-sized skeleton cast of Sue is the centerpiece of this blockbuster exhibition held in our ITC Gallery.



Our Traveling Science team can bring science workshops and group programs to your school or event that will inspire learners of all ages. Our workshops and programs support Michigan GLCEs and Next Generation Science Standards. We reached more than 65,000 people all over Michigan with our outreach efforts in 2014!



Hands-on Workshops

MiSci educators visit your classroom to introduce or reinforce topics in your curriculum. We cover physics, DNA and everything between! Workshops are designed for classes of 30 students and last 45 minutes.

Group Presentations

Assemblies are a great way to engage and educate groups of up to 250 students. Large scale science demonstrations from combustion to liquid nitrogen will wow the crowd and leave them wanting more!

Science Festivals

Host a science festival during the day for the entire school or in the evening for a fun family event! We'll supply all the materials for engaging hands-on activities, and you supply the volunteers.

Contact our Outreach Coordinator at Outreach@Mi-Sci.org or call 313.577.8400, ext. 238, for additional information and reservations.

EDUCATOR RESOURCES

Join us for our exciting Educator Open House events! Receive up-to-date information about exciting new programming, enjoy special open house only offers, and attend a free hands-on educator workshops! Receive general admission and experience one of our live shows, free with an educator ID.

Upcoming dates: September 12 and December 12!

Professional Development

Our team of educators can customize any of the themes listed below to fit your grade level! All workshops focus on inquiry-based learning processes and the development of critical thinking skills!

Themes:

- Engineering
- Amazing Animal Adaptations
- Forces in Motion
- Health and the Human Body
- Light, Color, and Sound

These hands-on experiences can be held at MiSci or at your school! For more information, please contact our STEM Resource Coordinator at 313.577.8400, ext. 482.

Resource Lending Program

- Classroom Robotics Kits (must attend training session prior to rental)
- Sunstruck Kits – Solar viewing and telescope classroom kits
- For more information, email Education@Mi-Sci.org

Join our Educator Extra mailing list and learn more about special professional development opportunities throughout the school year! To join, email Jennifer.Kanyo@Mi-Sci.org with your name, school, and grade level interests.



TIPS FOR YOUR VISIT

- Teachers receive **free general admission** with an educator ID when preparing for a field trip. Visit us to plan your trip before you bring your class.
- Students **must stay with chaperones** during their visit. MiSci will provide each adult with a map and field trip itinerary.
- Chaperones should **be attentive listeners** during the programs. We ask that cell phones not be used in program spaces.
- Please arrive at program locations at least **10 minutes before the program is scheduled to begin**. Late arrivals will not be admitted to programs.
- **No food or beverages are allowed** in any theater or stage or on the museum floor. Please eat and drink only in designated areas.
- The Kids Town Gallery is designed for **preschool and kindergarten children only** and is limited to 30 people during a reserved program.
- Lunch periods are **30 minutes ONLY**. Please adhere to your scheduled lunchtime to make sure the space is clean and ready for the next group. Paper lunch sacks are encouraged.
- As unlikely as it may be, **we reserve the right to ask your group to leave** the Science Center if your group displays inappropriate behavior or disrespect for the Science Center or other guests.
- If you have **guests that will be using wheelchairs**, or have other mobility requirements, please let us know when making your reservation so we may better accommodate your group's needs.
- With advance notice, MiSci will provide accommodations for **deaf or hard of hearing visitors**.
- **Complimentary coat racks are available**. MiSci is not responsible for lost or stolen items. Please ask students and chaperones to leave their valuables behind when they visit the Science Center, or use a rented locker for 50 cents in our Atrium on the lower level to store personal items.
- Student **backpacks are not allowed** in the Science Center. Purses may be subject to search. No weapons allowed.
- The Michigan Science Center is a **NO SMOKING** and **NO GUM CHEWING** facility.
- Visit **www.Mi-Sci.org** for further field trip ideas, educator guides, scavenger hunts and more.



RESERVATION PROCEDURES



To make a reservation, call **313.577.8400, Option 5**, weekdays from 9 a.m. – 4:30 p.m. and weekends – Saturday from 10 a.m. – 4 p.m. and Sunday from 1 p.m. – 4 p.m. Reservations should be made at least three weeks prior to your visit. Please have the following information ready when calling:

- Group name
- Group contact
- Group address
- Telephone/fax/e-mail
- Date and arrival time (select three dates)
- Number of students
- Number of chaperones
- Number of additional adults
- Package choice
- Payment method

Deposit Policy

- A 50 percent non-refundable deposit is due two weeks in advance of your trip. Your balance is due before or on arrival.
- All shows are subject to availability.
- Groups not submitting their deposit will lose their reservation and their chaperone-ratio discount rate.
- Groups arriving with more than their final reserved count will be charged for each person over the reserved amount. Should the arrival date attendance fall lower than the confirmed amount, NO REFUND WILL BE ISSUED. Instead, a credit will be given that can be used toward a future group visit made within one year.
- MasterCard, Visa, American Express and organization checks are accepted. No personal checks or purchase orders.

Confirmation Packet

Once your reservation has been made, you will receive a confirmation letter that will include the day's schedule. Please review this information with your students, chaperones and bus driver before arriving.

Chaperones

- Groups are required to provide one chaperone for every 10 students.
- Special needs groups and preschool/kindergarten groups are encouraged to provide one chaperone for every five students.
- All chaperones meeting the above ratio receive free general admission.
- Adults exceeding the ratios listed above will be charged for admission at the group rate.

Lunch Options

Brown bag it or order a hot or cold entrée from our Cosmic Café. Lunch space reservations are required when making your field trip reservation. Please allow 30 minutes for lunch. Due to space availability, lunch areas are on a first-come, first-served basis.

GROUP PACKAGES



Designed for 1st-12th grade groups, ages 6 – 18

BEST VALUE!

Ultimate Discovery

- 2 Live Special Experiences
- Premium Special Experience
- Hands-On Exhibit Exploration Time

\$14 per student

Wonder Plus

- Live Special Experience
- Premium Special Experience
- Hands-On Exhibit Exploration Time

\$12 per student

Curiosity Basic

- Live Special Experience
- Hands-On Exhibit Exploration Time

\$9 per student

Live Special Experiences:

Hands-On Interactive Programs
Chrysler Science Stage
DTE Energy Sparks Theater
Toyota Engineering 4D Theater

Premium Special Experiences:

Toytopia: The Science of Play
Chrysler IMAX® Dome Theatre Film
Dassault Systèmes Planetarium Show

TINY TOT GROUP PACKAGES

Designed for preschool-kindergarten groups, ages 3 – 5

BEST VALUE!

Tiny Tots Ultimate

- Live Special Experience
- Premium Special Experience
- Kids Town Gallery Program
- Hands-On Exhibit Exploration Time

\$12 per student

Tiny Tots Plus

- Premium Special Experience
- Kids Town Gallery Program
- Hands-On Exhibit Exploration Time

\$9 per student

Tiny Tots Basic

- Kids Town Gallery Program
- Hands-On Exhibit Exploration Time

\$5 per student

MiSci general admission group rates start at \$6 per student. Call for further information regarding having your group trip sponsored.

GLCE GUIDE

The following Grade Level Content Expectations are introduced in the following films and programs. To further your students' educational exploration, we recommend booking programs with related GLCEs.

IMAX®

Mysteries of the Unseen World

P.EN.03.11, P.PM.03.02, P.EN.0731, P.EN.07.62, P.4.6A, L.EV.03.11, L.OL.04.15, L.EC.04.11, L.EC.06.21, L.EC.06.22, L.EV.03.12, L.EV.04.22, L.EV.05.12, L.OL.06.52, L.OL.02.14, S.RS.03-.07.19, P.PM.07.21, B2.2A, B4.2C, B4.2D

Journey To Space

S.IP.(01-M).11, S.RS.E.1, P.FM.E.2, P.FM.E.3, P.FM.E.4, P.EN.E.1, P.EN.E.4, E.ST.E.1, E.STE.E.2, E.ST.M.1, E.ST.M.2, L.EC.M.4, P.EN.M.6, E.ES.M.1, E1.1, E1.2, E1.3, E2.2, E5.2, P2.2, P3.1, P3.4, P3.6

Humpback Whales

L.OL.01.13, L.HE.01.12, L.OL.03.32, L.OL.03.42, L.EV.03.12, L.EV.04.21, L.EV.04.22, L.HE.05.11, L.EV.05.11, L.EV.05.12

Dolphins

L.OL.02.17, L.OL.02.3, L.OL.02.4, L.OL.03.2, L.OL.03.3, E.ES.03.41, E.ES.03.42, E.ES.02.1, E.ES.02.3, L.OI.04.1, L.OL.06.6, L.OL.07.3, L.OL.07.5, L.EC.06.1, L.EC.06.2, L.EC.04.1, L.EC.06.3, L.EC.06.4, E.ES.06.42, E.ES.06.43, E.ES.06.5, E.ES.06.6

Mysteries of the Great Lakes

S.IR.01.1, S.IR.06.1, L.OL.00.1, L.OL.03.32, L.OL.03.2, L.OL.03.33, L.OL.03.35, L.EV.02.1, L.EV.02.23, E.ES.03.42, E.EF.01.19, E.ES.03.3, L.OL.04.1, L.OL.05.4, L.EV.04.1, L.EV.04.2, L.EC.04.1, L.EC.04.2, L.EV.05.2, L.EV.05.1, L.HE.07.2, L.EC.06.1, L.EC.06.2, L.EC.06.3

Titans of the Ice Age

L.OL.00.1, L.EV.02.1, L.OL.03.4, L.OL.03.3, L.EV.02.23, E.ES.02.31, E.ES.01.1, E.FE.02.34, E.ES.03.1, E.ST.03.3, L.EV.04.1, L.EV.04.2, L.EC.04.2, L.EV.05.1, L.EV.05.25, L.EV.05.26, E.ST.05.3, E.ST.05.45, E.ST.05.46, E.ST.05.4

Animalopolis

L.OL.E.1, L.OL.E.2, L.HE.E.1, S.IP.02.11, S.IP.00.11, S.IP.01.11

Planetarium

Hitchhiker's Guide

E.ST.M.1 E5.1 ES.3A

What's Up

E.ST.E1, E.ST.E2, E.ST.M1, E.ST.M2

Junior Astronomer

E.ST.E.2 E.ST.E.1 E.ES.M.6 E.ST.M.2

Our Place in Space

E.ST.M.1 E5.1 ES.3A

Stories in the Sky

E.ES.E.1 E.ST.E.1

Sunstruck

E.SE.M.6 E.ES.M.1 E5.2 P4.6A

Live Shows

Toyota Engineering 4D Theater

P.PM.01.1, P.PM.01.3, P.MO.05.2, P.MO.05.3, P.MO.05.4, P.EN.07.1

DTE Energy Sparks Theater

P.MO.00.3, P.PM.04.5, P.PM.04.18, P.EN.04.1, P.EN.04.29

Chrysler Science Stage

S.IP.00-05.11, S.IP.00-05.12, S.RS.00-.07.11, P.PM.01.21, P.PM.01.22, P.PM.02.12, P.PM.04.23, P.CM.04.11, P.CM.06.12, P.PM.07.24, C2.2A, C2.2B, C4.3A, C4.3B

Hands-On Interactive Programs

What's the Property?

S.IP.00.11, S.IP.00.12, S.IP.00.13, S.IP.00.14, S.IP.00.15, S.IA.00.12, S.IA.00.13, S.IP.01.11, S.IP.01.12, S.IP.01.13, S.IP.01.14, S.IP.01.15, S.IA.01.12, S.IA.01.13, S.IP.02.11, S.IP.02.12, S.IP.02.13, S.IP.02.14, S.IP.02.15, S.IA.02.12, S.IA.02.13, P.PM.01.11, P.PM.02.12, P.PM.02.13

From Seed to Flower

S.IP.00.11, S.IP.00.13, S.IP.01.11, S.IP.01.12, S.IP.01.13, S.IP.02.11, S.IP.02.12, S.IP.02.13, L.OL.00.11, L.OL.02.14, L.OL.02.22

Wondrous Weather

S.IP.00.11, S.IP.01.11, S.IP.02.11, S.IP.00.12, S.IP.01.12, S.IP.02.12, S.IP.00.14, S.IP.01.14, S.IP.02.14, E.ES.01.21, E.ES.01.22, E.ES.01.31E.FE.02.21

Survival of the Fittest

S.IP.03.11, S.IP.04.11, S.IP.05.11, S.IP.03.12, S.IP.04.12, S.IP.05.12, S.RS.03.18, S.RS.04.18, L.EV.03.12, L.EV.04.21, L.EV.04.22, S.RS.05.18, L.EV.05.11, L.EV.05.12

Gravity Games

S.IP.03.11, S.IP.04.11, S.IP.05.11, S.IP.03.12, S.IP.04.12, S.IP.05.12, S.IP.03.13, S.IP.04.13, S.IP.05.13, S.RS.03.11, S.RS.04.11, S.RS.05.11, P.FM.03.22, E.ST.04.11, E.ST.04.12, E.ST.04.21, E.ST.05.22, E.ST.04.22, E.ST.04.23, E.ST.04.24, E.ST.04.25

Laser Mazes

S.IP.03.11, S.IP.04.11, S.IP.05.11, S.IP.03.12, S.IP.04.12, S.IP.05.12, S.IP.03.13, S.IP.04.13, S.IP.05.13, S.RS.03.11, S.RS.04.11, S.RS.05.11, P.EN.03.11, P.EN.03.21, P.EN.03.22, P.PM.03.52

The Human Element

S.IP.06.12, S.IP.07.12, S.RS.06.17, S.RS.07.17, L.EC.06.41, L.EC.06.42, E.ES.07.41, E.ES.07.42, E1.1A, E1.1E, E2.2D, E2.4A, E2.4B,

Surprising Circuits

S.IP.04.11, S.IP.04.12, S.IP.06.12, S.IP.07.12, P.EN.04.12, P.EN.04.51, P.EN.04.52, P3.7.A, P3.7BP4.10C, P4.10D

Grossology

S.RS.06.15, S.RS.07.15, L.OL.07.21, L.OL.07.22, B2.4C, B2.5B

Translating the Message

B4.1B, B4.2B, B4.2C

Drawn to the Center

P1.1A, P1.1C, P2.1F, P2.2A, P2.2D, PP3.4D3.2A

The Element Family

C1.1A, C1.1C, C4.8A, C4.8B, C4.8C, C4.9A, C5.2B, C5.2C



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The Michigan Science Center is a 501(c)(3) nonprofit organization.

explore STORE



The Explore Store is your resource for STEM education at home and in the classroom. Pick up an experiment, a science kit, or an educational toy. We also feature old favorites such as stuffed animals and Michigan Science Center merchandise!

For questions about our merchandise, or to place an order for pickup, please call 313.577.8400, ext. 422.

SCOUTS



The Michigan Science Center offers a full array of scouting programs and overnight adventures for both boys and girls. Check our website for new Scout programs for the 2015-2016 school year!

