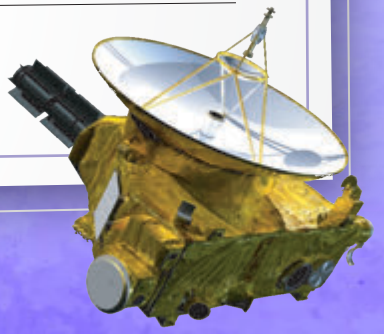
MARYLAND SCIENCE CENTER

OPPORTUNITIES

The Maryland Science Center's Field Trip and Traveling Science Program Guide

2018/2019



Frequently Asked Questions

General Questions About Visiting the Maryland Science Center

What are the costs?

ALL MARYLAND STUDENTS AND CHAPERONES VISIT THE EXHIBIT HALLS FOR FREE.
IMAX, Planetarium, Kids Room, enrichment experiences, and other programs are available as add-ons. For a full listing of additional options and pricing, including pricing for non-Maryland schools, see pg. 6.

Do you provide guided tours?

No. We encourage you to experience the museum through self-exploration. We offer structured educational programs.

How long does it usually take to go through the general exhibits?

We recommend allotting approximately two hours to visit the general exhibits. More in-depth investigation will require additional time.

What should I do upon arrival?

When you arrive, leave your students on the bus while you check in the group. You will be issued a sticker for every student, teacher, and chaperone. Once everyone is accounted for, you may enter the Maryland Science Center and enjoy your visit.

Is a deposit required? What are the accepted payment methods? Who should I make the check out to?

No deposits are needed. All payments are due on the date of arrival. Payments can be made in the form of cash, credit (Visa, MasterCard, American Express, or Discover), or a check made out to the Maryland Science Center.

Non-Maryland schools must bring payment on the day of their visit. Maryland schools who plan on using a purchase order or requesting an invoice must do so at the time of their reservation–not on the day of their visit.

What happens if my numbers decrease or increase the day of visit?

You will only need to pay for the actual attendees. If you have optional programs that are limited by capacity, we will do our best to accommodate everyone.

Can teachers preview the museum before their group visits?

Yes. All Maryland teachers are admitted to the exhibit halls free of charge, with a school ID or pay stub.

Questions About the Traveling Science Program (TSP)

Our Traveling Science Program vans begin their educational journeys in Maryland and beyond for the 2018-2019 school year starting September 24, 2018.

How do I arrange for TSP to visit my school?

Bookings are accepted on a first-come, first-served basis. Contact the TSP Reservations Department at 410-545-5968 or email outreach@marylandsciencecenter.org. A member of the TSP Reservations Department can answer questions, offer scheduling suggestions, review costs, and book the date you select for TSP to visit your school.

When can I phone the TSP Reservations Department?

Staff are on hand Monday through Friday from 11am until 5pm. Certain months fill up quickly so phone early with your desired program, date, and time.

TSP Pricing on pg. 6
TSP Programs on pg. 25

Table of Contents

The Science Store

Our store offers a wide selection of items that complement our programs and exhibits. Kits, games, teaching aids, resource books, gifts, and souvenirs are all available for purchase.

The Science Store is open during regular Maryland Science Center hours of operation. We offer educators a 10% discount with proper ID.

For groups who don't have time to shop during a visit, pre-packaged science sacks are available for advance purchase. The sacks are $3 each and can be customized according to the age of your group. Please order at least two weeks prior to your visit.

Call us at 410-545-5924.

Stay Connected

EMAIL

Camp-In campin@marylandsciencecenter.org

Family Science Night famscinight@marylandsciencecenter.org

Traveling Science Programs outreach@marylandsciencecenter.org

Observatory observatory@marylandsciencecenter.org

ONLINE

Website www.marylandsciencecenter.org

Facebook.com/MarylandScienceCenter

Youtube.com/MDScienceCenter

Twitter.com/MDScienceCenter

Pinterest.com/MDScienceCenter

Instagram.com/MDScienceCenter

PHONE

Field Trip Reservations 410-545-5929

Camp-In Programs 410-545-5955

Family Science Night 410-545-5968

The Science Store 410-545-5924

Traveling Science Program 410-545-5968

24 Hour Information Line 410-685-5225

Join the Maryland Science Center's E-Community and receive information on new exhibits and special educator resources. To sign up visit **www.MarylandScienceCenter.org** and click "Sign Up for Emails" in the top right corner of the screen.

Trip Tips for Teachers

- Provide several challenges for students to meet during their visit
- Create questions that require students to read, manipulate, observe, and interact with exhibits
- Prepare your chaperones with trip information such as agendas and schedules, as well as copies of the Chaperone Guide found below
- Include all parents of students attending in your chaperone count even if they did not accompany you on the bus
- For the safety and benefit of all our visitors, school groups without the proper number of chaperones (one adult per ten students) will not be admitted to the Maryland Science Center
- Make sure your students are easily identifiable to your chaperones and our staff. There can be hundreds of students attending MSC on the day of your visit. If possible, have them wear the same color shirts or shirts with the school logo on them

For Your Students

- Prepare a schedule of the day's activities, including when and where lunch is to be eaten, as well as any special programming that your students are scheduled to attend
- Remind your students that each is a representative of the school and needs to behave appropriately while visiting MSC
- Inform your students that each must stay with his or her chaperone at all times

Important Information

If you must cancel your field trip, please call the MSC reservationist at least one full calendar week before your scheduled visit. Those who fail to provide a week's notice will be charged a late cancellation fee of $75 or 25% of the total reservation, whichever is higher. There is no charge to reschedule due to a school closure or weather emergency.

In the event of severe weather, the Maryland Science Center may close. Watch WBAL-TV for weather-related closings. To verify we are open in case of inclement weather, please phone the 24-hour information line after 7am on the day of your visit: 410-685-5225. Following a weather emergency, call the MSC reservationist to reschedule.

Scavenger Hunt

A scavenger hunt to use during your visit can be downloaded from MSC's website.

Visit www.marylandsciencecenter.org and navigate to Learn and then select Resources. The Scavenger Hunt can be found in the Educator Resources section, along with other activities to supplement your visit!

MSC Chaperone Guide

Chaperone Tips

- Know how many students are in your group and do a head count from time-to-time, especially when moving from one level to another
- Know the name of every student in your group
- Provide students with information on where they are going and what they will see
- Be aware of any goals the teacher set for the students' visit
- As you walk through exhibits, challenge your students to think about what they are seeing by asking thoughtful questions that explore the HOW, WHAT, WHEN, WHERE, and WHY of science

Important Policies To Know

- Chaperones are required to remain with their students AT ALL TIMES
- Groups of students are not permitted to visit MSC without an adult chaperone
- Chaperones are responsible for APPROPRIATE BEHAVIOR of all students in their group
- Groups exhibiting inappropriate behavior will be asked to leave the Science Center without a refund

Information to Have Before Calling to Book Your Reservation

Programs are scheduled on a first-come, first-served basis. Please call early to ensure your activities and visit dates are available.

Tell Us About Yourself and Your School

Your Full Name (Mr/Mrs/Ms/Dr)

Name of Contact on Visit Date
(if different from above)

School Name Grade(s)

Type of School: ☐ Public ☐ Private

School Address

City/State/Zip Code

County (Maryland Only)

Contact Phone Number

Email

☐ I would like to receive emails about upcoming teacher workshops and special educator resources

We recommend that you come to visit MSC prior to your field trip in order to familiarize yourself with the exhibits and plan challenges for your students. The Maryland Science Center offers FREE ADMISSION to the exhibit halls to Maryland teachers when visiting without a school group throughout the year. Upon arrival, present your educator identification (school ID, payroll receipt, etc.) to a ticket agent.

Tell Us About Yourself and Your Group

Number of Students in Group _____

Number of Teachers _____

Number of Chaperones _____

Grade Level _____

Date of Visit _____

Time of Arrival _____

**Please have a second date in mind in the event that your first choice is not available.*

Tell Us About What You Want To Do

Enrichment Experience (Title of Program)

St. John Properties IMAX (Title of Program)

Davis Planetarium (Title of Program)

**Please have alternate program choices in mind in the event that your first choice is not available.*

Calculate the Cost of Your Trip

	Student	Teacher & Chaperone
Admission		
Enrichment Experiences		***FREE***
Planetarium		
Kids Room		***FREE***
IMAX		
Total Fee for Students		
Total Fee for Teachers/Chaperones		

Reminder: You need ONE CHAPERONE for every TEN STUDENTS

Booking Information

Phone the Maryland Science Center Reservationist
Monday-Friday: 10am-4pm
Field Trips: 410-545-5929

Timeline

Reservations are accepted by phone only and must be made at least FOUR WEEKS before your visit. The Maryland Science Center does not admit groups without reservations.

Confirmation: A confirmation will be mailed to you prior to your scheduled visit.

Payment

You will pay upon arrival with cash, check, or credit card. Checks should be made payable to the Maryland Science Center. We accept Visa, MasterCard, American Express, and Discover. We will not accept purchase orders from, nor will we invoice, out of state groups.

Other Important Information

- Group rates are valid weekdays only, October 2nd-June 14th except major holidays
- Familiarize yourself with our program grade levels and capacities
- You must have 15 people or more per program
- Please inform us of anyone with special needs or disabilities

DON'T FORGET LUNCH
See page 5

Lunch

Date of Visit _____

Total Number of People in Your Group _____

Group Leader _____

Organization/School Name

_____

Phone _____

Fax _____

Lunch times (80 max per seating, 30 min segments)

_____ _____ _____

Outside food and beverage is not permitted in Elements Cafe.

Groups can utlilize the Brown Bag Zone on a first-come, first-served basis. The Brown Bag Zone is located adjacent to the Key Highway entrance.

Allow 30 minutes per seating and keep your schedule to ensure everyone in your party eats on time.

All lunches must be pre-ordered and guaranteed 72 hours prior to your scheduled visit.

All lunch orders must be paid for upon arrival the day of your visit with cash, credit card, or certified check made out to Spectra Food Services.

Please contact our Executive Chef, Chris Parker, with any menu questions or food allergies at chris_parker@comcastspectacor.com or darrick_terry@comcastspectacor.com

To place your order, please scan and email this page to boxlunch@marylandsciencecenter.org or mail to Chris Parker, Executive Chef, Maryland Science Center, 601 Light Street Baltimore, MD 21230

Meals are $7.00/per person. All meals come with a beverage.

Hot Meals	Quantity	Cost
Classic Cheeseburger with French Fries		
Classic Burger with French Fries		
Chicken Fingers (2 ea.) with French Fries		
Hot Dog with French Fries		
Personal Cheese Pizza		

Cold Meals		
Ham & Cheese Sandwich with House Made Chips		
Turkey & Cheese Sandwich with House Made Chips		
Chicken Caesar Wrap with House Made Chips		
Peanut Butter & Jelly with House Made Chips		
Garden Salad		

Beverages		
Fountain Soda 16oz.		
Milk		
Hot Chocolate		
Juice Box		
Bottled Water 20oz.		
Coffee (Adults Only)		

Add On		
Fruit Cup +$1.00		
Granola Bar +$1.00		

Total Cost _____

Tax Exempt Number _____

Print Name _____

Sign _____

Activity Pricing

The Maryland Science Center welcomes all MARYLAND students and chaperones reserving as a group to its exhibit halls FREE of charge. Plan your visit early and make your reservation today.

Maryland School Groups Only

Prices Valid Weekdays Only, October 2 - June 14 (excluding major holidays)

	Basic Admission Exhibits Only	Enrichment Experiences and Observatory	Davis Planetarium	St. John Properties IMAX Theater	Kids Room
All MARYLAND Students, Teachers & Chaperones	FREE!	Students: $7.50 Teachers: FREE Chaperones: FREE	Students: $7.50 Teachers: $7.50 Chaperones: $7.50	Students: $7.50 Teachers: $7.50 Chaperones: $7.50	Students: $2.00 Teachers: FREE Chaperones: FREE

School Groups Outside of Maryland

Prices Valid Weekdays Only, October 2 - June 14 (excluding major holidays)

	Basic Admission Exhibits Only	Enrichment Experiences and Observatory	Davis Planetarium	St. John Properties IMAX Theater	Kids Room
All NON-MARYLAND Students, Teachers & Chaperones	Students: $8.50 Teachers: FREE Chaperones: $5.00	Students: $7.50 Teachers: FREE Chaperones: FREE	Students: $7.50 Teachers: $7.50 Chaperones: $7.50	Students: $7.50 Teachers: $7.50 Chaperones: $7.50	Students: $2.00 Teachers: FREE Chaperones: FREE

Traveling Science Program

The first day of TSP programming will be September 24, 2018

Assembly Programs 50 minutes each Maximum: 2 per day	Up to 250 participants $575 1 presentation	251 to 500 participants $1050 2 presentations, same title	251 to 500 participants $1150 2 presentations, different titles
DINOSAUR or Mixing Up Science Assembly Program 30 minutes each Maximum: 3 per day	Up to 100 participants $525 1 presentation	101 to 200 participants $675 2 presentations, same title	201 to 300 participants $825 3 presentations, same title
Classroom Programs 50 minutes each Maximum: 5 per day	Up to 90 participants $435 1-3 presentations, same title	91 to 120 participants $535 4 presentations, same title	121 to 150 participants $635 5 presentations, same title
STARLAB Programs 50 minutes each Maximum: 8 per day	Up to 120 participants $575 1-4 presentations	121 to 240 participants $1050 5-8 presentations	

All pricing is based on reservations booked for weekdays during normal operating hours. An additional $70 fee is required for weekend or night programs. A $180 overnight fee may be charged for travel to a location more than 2.5 hours away.

Educator Workshops and Resources

Free Admission For Teachers

The Maryland Science Center offers FREE ADMISSION to our exhibit halls to all credentialed Maryland teachers, when not visiting with a school group throughout the year.

Upon arrival, present your educator identification (school ID, payroll receipt, etc.) to a ticket agent.

Online Resources

A scavenger hunt to use during your visit, pre- and post-visit classroom activities, and a wide range of step by step science experiments are all available for download from the MSC website.

Visit www.marylandsciencecenter.org and navigate to Learn and select Resources. Links to the materials can be found in the Educator Resources section.

Educator Professional Development 2018-2019

Live From The Sun
Saturday, March 2, 2019

- Discover the latest news about our nearest star
- See up-to-the-minute images of the Sun with sunspots, solar flares, and prominences
- Find out how the Sun's huge explosions can endanger the technologies we all rely upon
- Find out how to operate a Sunspotter, a portable solar telescope, and how you can borrow one for your classroom
- This workshop is a repetition of workshops conducted in 2016-2018. If you attended one of these previous workshops, please share this opportunity with your colleagues.

Workshop includes:

- Demonstrations of activities for the classroom
- Presentations in the Davis Planetarium and Science on a Sphere
- Morning snacks and lunch
- $125 stipend for each participating teacher

To Register

Watch our website for registration information. https://www.mdsci.org/learn/resources/educator-workshops/

Registration opens approximately one month before the workshop.

Workshop made possible by a grant from NASA

Special Opportunities for School Groups

Camp-In

Sleepover For School Groups

Grades: 3rd-5th
Capacity: 90 children per night, plus adult chaperones
Time: Friday, March 1

Campers will:

- Participate in hands-on engineering workshops
- View a planetarium show
- View an IMAX movie
- Visit three floors of interactive exhibits
- Spend a night at the museum

Also includes:

- Snack and Breakfast
- Participation patch

Phone 410-545-5955 or email campin@marylandsciencecenter.org for more information.

Family Science Night
Family Engineering Night

Bring the Maryland Science Center to your school for an evening devoted to family fun, community-building, and learning. Family Science Night is a two-hour program designed to engage students and their families in STEM related activities.
An additional offering of Family Engineering Night is available for an evening focused exclusively on design challenges and engineering concepts.

Your reservation includes:

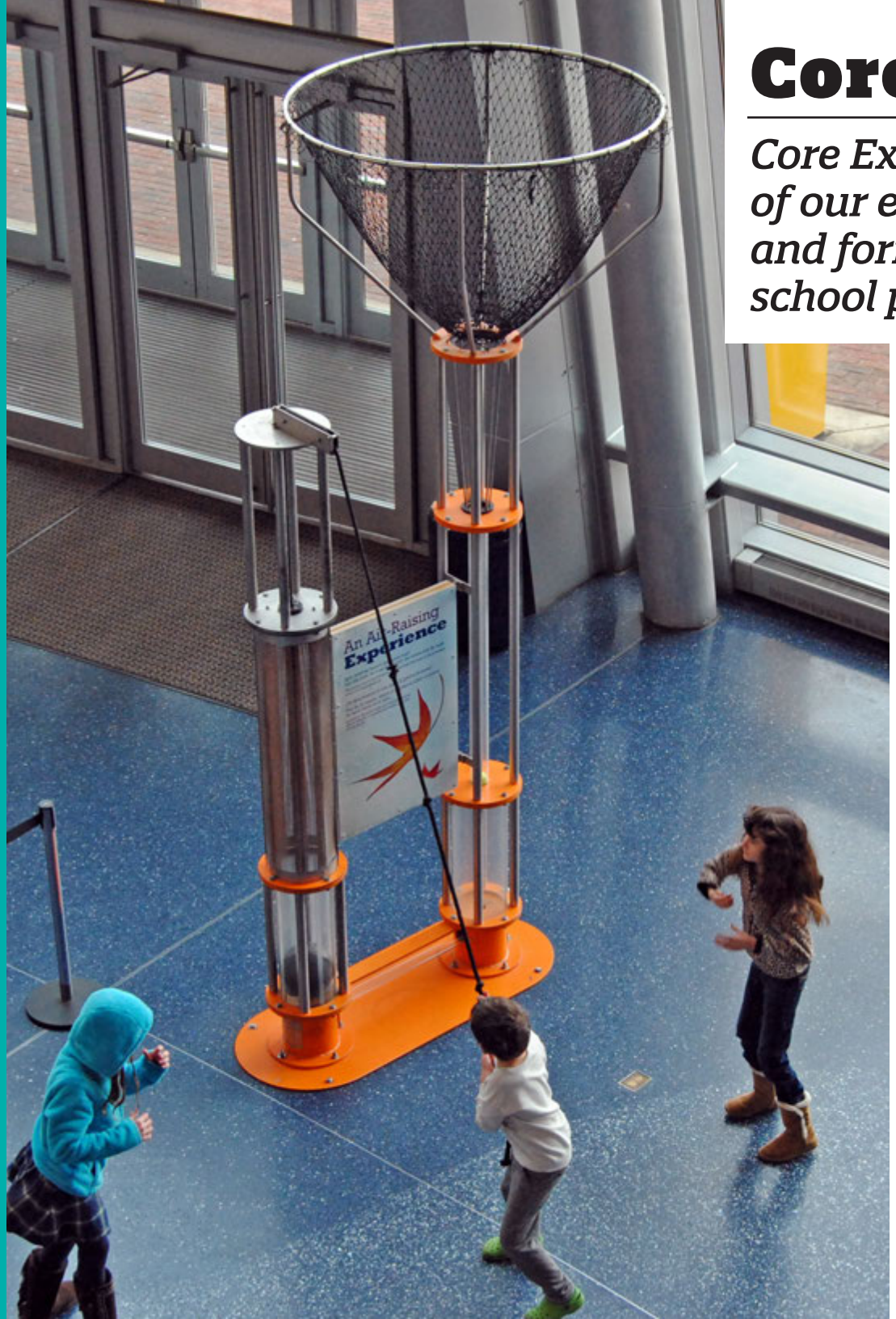
- 8 hands-on science or engineering activities
- 8 Maryland Science Center staff members, one for each activity
- Promotional flyer
- Activity passport for students
- 8 Maryland Science Center visitor vouchers for prizes

The fee for either science or engineering night is $1500. Pricing is based on schools within an hour of Baltimore City. Additional fees may apply for schools at a greater distance. This program may be eligible for Title I Parent Involvement funding.

Call 410-545-5968 or email famscinight@marylandsciencecenter.org for more information and to begin your reservation.

Core Exhibits

Core Exhibits are the centerpiece of our educational initiatives and form the foundation for our school programs.



EARTH AND NATURE

Dinosaur Mysteries

Follow the trail of dinosaurs from dig site to field laboratory and beyond. Work together to unearth dinosaur bones at the dig site. Examine a 70 million-year-old dinosaur embryo. Get up close and personal with T. rex and over a dozen other full size dinosaurs throughout 10,000 square feet of soaring exhibit space, all in a hands-on environment.

Follow The Blue Crab

Follow the path of the blue crab in its life journey through the Chesapeake Bay. Learn about crab mating, molting, and anatomy. Stop by to meet our giant mechanical blue crab in its watery home.

TerraLink

Get up-to-the-minute information from around the world about Earth science events like earthquakes, tornadoes, and hurricanes. Learn how air, water, and land affect each other and how global events are affecting the Chesapeake Bay.

HEALTH AND THE HUMAN BODY

SciLab

Scientists in 3rd grade and up get to work in a real laboratory. Use genuine lab tools and protocols to investigate chemical and biological phenomena.

BD *SciLab is presented by BD Diagnostic Systems*

Cells: The Universe Inside Us

Walk through a giant maze to find out how proteins are made. Zoom into a projected image of yourself to see brain, heart, and muscle cells. Participate in a special MSC version of Dance, Dance Revolution to find out how exercise helps your bones, brain, and heart.

Your Body: The Inside Story

Discover the extraordinarily cool (and sometimes gross) things your body does every day. Find out what's happening inside as you digest food, exercise, and fight off germs. Lie down on a bed of nails. Walk into a giant, human heart. Squeeze a large intestine and hear some interesting digestive sounds. Test your balance, chart your reaction to stress, and calculate your body's health age.

EARLY CHILDHOOD

The Kids Room

The Kids Room is a sensory adventure for our early childhood visitors, from birth to eight years of age. Dive into water-play, where hand pumps, fountains, dams, river channels, and nozzles keep hands and minds in motion. Send a message racing across the room in a pneumatic tube or create a building to withstand our earthquake table. Our youngest visitors from birth-24 months of age can explore Room to Grow, a special sensory-rich zone where the pace and activity level is scaled appropriately to infant and toddler development. In the Kids Room, children can experiment with cause and effect relationships, discover the forces of gravity and magnetism, explore the natural world, and exercise their imaginations.

The Kids Room is designed as a child-led discovery space. Adult chaperones must accompany and remain in the room with children at all times. School groups are encouraged to divide into age groups as follows, so that a safe and age appropriate experience takes place: birth to five years (Pre-K and K) and six to eight years (1st, 2nd, and 3rd grades).

"Our students loved all of it. We could have easily stayed several more hours. For some that hadn't been there, when they heard the words 'science center' they thought it would be boring and were pleasantly surprised. Favorites were the tornado booth and the dinosaur exhibit."

School Groups must have a reservation to visit the Kids Room. Please note there is an additional charge for this exhibit. See pg. 6.

Capacity: 50 students | Time: 50 minutes

PHYSICS AND PHENOMENA

Demonstration Stage

Science is an explosive, chilling, electrifying, bubbling experience on the Maryland Science Center's Demonstration Stage. Get in on the action with hands-on audience participation. Presentations are offered daily on a variety of topics.

Newton's Alley

Explore sight, sound, transfer of energy, magnetism, light, and simple machines in this hands-on physics exhibit. Pull yourself to the stars in a pulley chair, play beautiful music on a stringless laser harp, and learn about physical forces by competing in a giant lever tug-of-war.

Power Up—It's Electrifying!

From fuel to power generation to delivery–it takes a lot to make sure the light goes on when you throw that switch. Power Up looks at the people and power that make the electricity we use every

day. You are the energy behind the human-powered generator and you take on the role of city planner as you try to figure out the power distribution grid to electrify a city without overloading the system. Power Up is the Science Center's first permanent bilingual, Spanish-English exhibit.

Science & Main

Science meets Main Street at the intersection of hands-on learning. Explore how gears work at the bike shop. Learn about sound in the music store. Discover the properties of flight at the airport and lots more in this streetscape exhibit that will have you strolling through science.

Science Aglow

Science Aglow, a brand new exhibit, introduces the electromagnetic spectrum, with an emphasis on visible light and its interactions with mirrors, motion, and time. Glimpse the illusion of infinity as light bounces back and forth between mirrored surfaces. See your shadow like never before as it is temporarily captured on our glow-in-the-dark wall. Make a work of "light" art by sculpting light with prisms, mirrors, and lenses. Discover the concept of radiation as information, while exploring and experimenting with optics and the physics of light.

The Shed

The informal activities in this gallery use the design process so visitors can learn new DIY skills or new applications for old ones. Hands-on encounters with tools and materials inspire interest in STEM and related careers as you engineer solutions to a physical challenge, construct circuits, or prototype gadgets that blend art and STEM. Creativity, innovation, and collaboration are all developed through physical and digital projects.

The Shed is presented by Chesapeake Employers Insurance Company

SPACE AND AEROSPACE SCIENCE

Davis Planetarium

Under the dome, the fully digital star theater turns daytime to night. Planetarium programs immerse audiences into the night and through an adventure in space. Program-related educational resources are provided to teachers on the day of your visit. Planetarium programs for school groups are by advance reservation only. Programs are offered at 10:30, 11:30, and 1:30. Please note there is an additional charge. See pg. 6.

Life Beyond Earth

Are we alone in the universe? Is there other life on distant planets or moons? Explore new discoveries of extreme life on Earth and how they suggest where life might exist on planets and moons in our solar system. Follow the hunt for planets outside our solar system, including Earth-like worlds. Take part in surface touch table activities to find out how scientists detect distant exoplanets. Special tactile components provide accessibility to visitors with vision limitations, and Braille guides and large type guides are available for use in the exhibit.

Science On a Sphere

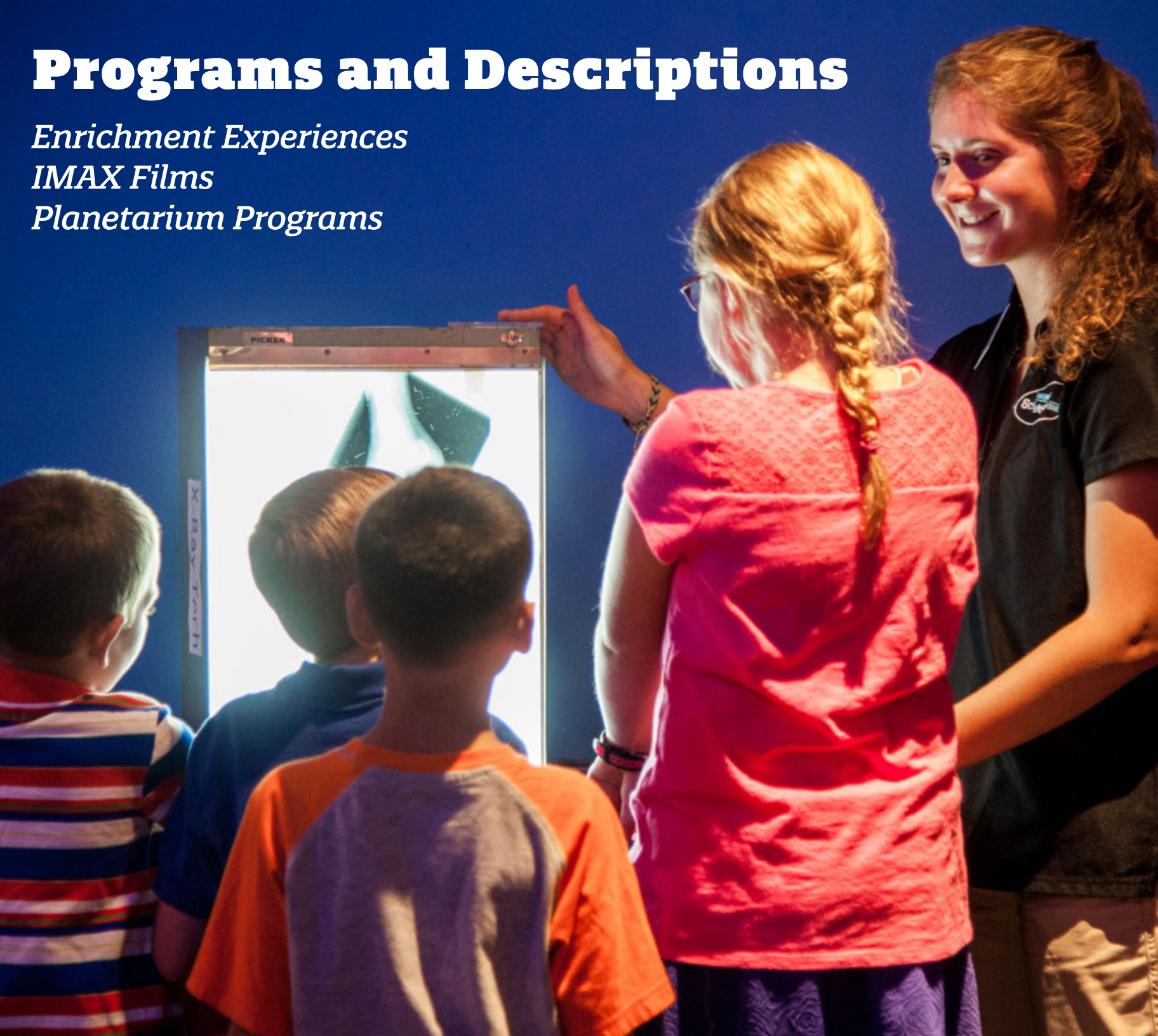
Science On a Sphere is a large visualization system that uses computers and video projectors to display scientific images and animations onto the outside of a sphere. The globe appears as if suspended in air and shows dynamic images of the atmosphere, oceans, and land of a planet.

SpaceLink

Witness the latest and greatest in space science explorations and findings in SpaceLink, a multimedia update center. Try on a flight suit. Learn about the latest news from NASA, human space travel, and planetary exploration.

Programs and Descriptions

Enrichment Experiences
IMAX Films
Planetarium Programs



Enrichment Experiences

Enrichment Experiences are small group, classroom-style programs designed to enhance our core exhibits by offering in-depth content and more hands-on examples of learning by doing.

Advance reservation is required.

Circuit Solutions

Grades: 3-7
Capacity: 30 students
Length: 45 minutes

Students will:

- Assemble a working simple circuit
- Test insulators and conductors
- Add switches to turn on electrical components

DNA Discovery

Grades: 4-8
Capacity: 30 students
Length: 45 minutes

Students will:

- Observe and analyze their personal genetic traits
- Translate genetic code into traits to make a unique creature
- Extract plant DNA to see what it looks like up close and in person

Engineered by Design

Grades: 3-8
Capacity: 30 students
Length: 45 minutes

Students will:

- Explore the engineering design process (imagine, plan, create, test, improve)
- Be challenged to follow the design process in order to design a solution for a given task

Phone a reservationist at 410-545-5929

Radical Reactions

Grades: 1-2
Capacity: 30 students
Length: 45 minutes

Students will:

- Use real science tools to run experiments
- Learn the science behind various chemical reactions
- Explore simple chemistry

Sensory Mystery

Grades: PK4-1
Capacity: 30 students
Length: 45 minutes

Students will:

- Use senses to solve a mystery
- Discover how the brain is connected to other parts of the body by nerves
- Experiment to see how eyes, ears, skin, and noses function

Soap Bubble Math

Grades: 2-3
Capacity: 30 students
Length: 45 minutes

Students will:

- Participate in a mathematical problem-based learning experience
- Gather and share data through group participation
- Design a question and procedure, guided by standards, to determine measurable information about soap bubbles

"The hands on activities were great. All of my students were fully engaged with the activities and they absolutely loved the enrichment activities in the classroom."

Stats Lab

Grades: 6-8
Capacity: 30 students
Length: 45 minutes

Students will:

- Collect and analyze statistical data generated by toys and games
- Calculate frequencies and probabilities
- Compare predicted and observed outcomes

Sudsy Science

Grades: PK4-1
Capacity: 30 students
Length: 45 minutes

Students will:

- Experiment with various bubble wands and predict bubble shapes
- Combine materials to make a better bubble solution

Synthetic Biology

Grades: 9-12
Capacity: 30 students
Length: 45 minutes

Students will:

- Survey ways that humans alter DNA to benefit themselves
- Explore the intersection of technology and society
- Discuss ethical issues related to engineered organisms

Wind Works

Grades: 2-5, 6-8
Capacity: 30 students
Length: 45 minutes

Students will:

- Build a wind powered machine using a variety of materials
- Create a cost effective wind-powered generator (grades 6–8) or an effective wind-powered lifting machine (grades 2–5)
- Measure using tools such as anemometers and multi-meters

Ziplock Chemistry

Grades: 3-8
Capacity: 30 students
Length: 45 minutes

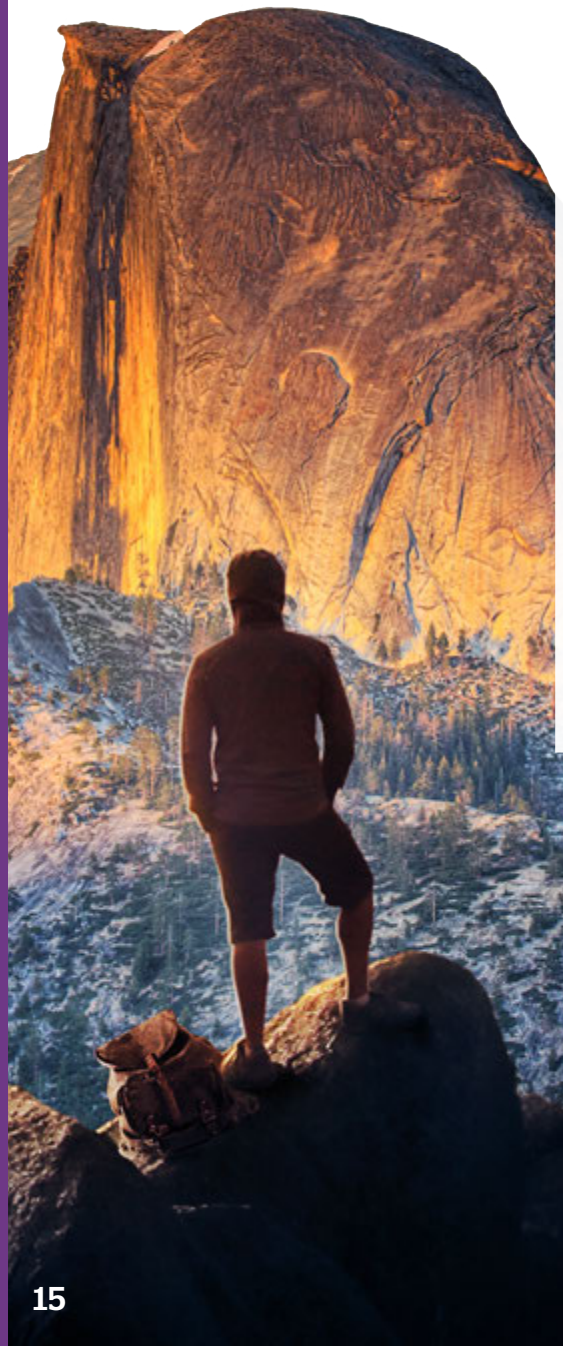
Students will:

- Conduct chemical reaction experiments inside plastic bags
- Uncover how matter and energy are transformed

Earth & Nature | Health & Human Body | Early Childhood | Physics & Phenomena | Space & Aerospace

IMAX Theater

IMAX films offer an immersive, larger-than-life exploration of key topics directly related to our core programs. Advance reservation is required.



Beavers

Grades: PreK–8
Capacity: 390
Length: 35 minutes

- Trek through the Canadian Rockies with a family of beavers, one of nature's greatest engineers
- Travel underwater and inside a beaver lodge for a rare look at these industrious creatures
- Watch them fell trees, construct their lodge, evade the forest's predators, and transform their environment

Deep Sea

Grades: 3-12
Capacity: 390
Length: 40 minutes

- The balance of Earth's ecosystems is continually changing and is most apparent in the fascinating world beneath the sea
- Swim with some of our planet's unique, dangerous and colorful creatures
- Explore the tenuous balance between predator, prey, and symbiotic relationships between creatures of the sea

Dream Big

Grades: 3-12
Capacity: 390
Length: 40 minutes

- See engineering in a new light, as an exciting, creative, heroic field
- Watch today's young engineers as they create life-saving, world-altering marvels to make the world safer, more connected and more awe-inspiring
- Inspire students of all backgrounds to become the innovators of the 21st century

Flight of the Butterflies

Grades: 2-12
Capacity: 390
Length: 45 minutes

- Follow the migration of the monarch butterfly from Mexico to Canada and a determined scientist's decades-long search to find their hidden overwintering sites
- Watch the amazing transformation from pupa to adult monarch
- See hundreds of millions of migrating monarchs in the remote mountains of central Mexico

Forces of Nature

Grades: 3-12
Capacity: 390
Length: 40 minutes

- Explore volcanoes, earthquakes, tornadoes, and the origins and effects of these natural forces
- Travel back in time to the formation of the Earth 4.5 billion years ago as an ancient Earth fills the screen, covered with erupting volcanoes and seas of molten lava
- Discover that our planet, where life flourishes today, is the result of billions of years of activity by the immense forces of nature

The Human Body

Grades: 5-12
Capacity: 390
Length: 45 minutes

- See the many hidden miracles that happen every day inside the male and female body
- Explore the biological processes that go on without our control and often without our notice
- Features remarkable inner body photography

Humpback Whales

Grades: 3-12
Capacity: 390
Length: 40 minutes

- Discover how humpback whales communicate, sing, feed, play, and take care of their young
- Found in every ocean on Earth, humpbacks were nearly driven to extinction 50 years ago but today are making a slow but remarkable recovery
- Listen to humpbacks sing their haunting songs and learn why they migrate up to 10,000 miles every year
- Set in the waters of Alaska, Hawaii, and the remote islands of Tonga

Island of Lemurs: Madagascar

Grades: K-12
Capacity: 390
Length: 40 minutes

- Travel to the remote and lush land of Madagascar
- Lemurs arrived here millions of years ago as castaways and have evolved into hundreds of various and beautiful forms
- Follow the adventure of these playful explorers, now highly endangered

Journey To Space

Grades: 3-12
Capacity: 390
Length: 40 minutes

- Examine the challenges of sending humans into deep space, including a round-trip voyage to Mars brought to life on the IMAX screen
- Learn about the important role of the International Space Station
- Discover how NASA's shuttle program has led to an exciting new era of space exploration

Lewis & Clark – Great Journey West

Grades: 3-12
Capacity: 390
Length: 40 minutes

- Follow the journey of Lewis, Clark, their guide Sacagawea, and their intrepid crew
- Experience the danger and beauty of the unknown West
- The journey at the time was the equivalent of a trip to the Moon

National Parks Adventure

NEW THIS YEAR

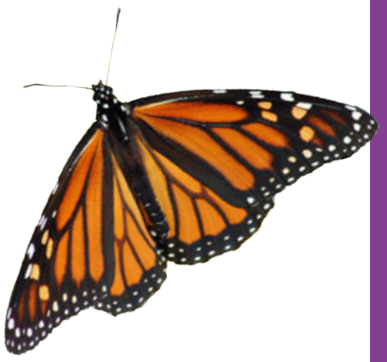
Grades: 3-12
Capacity: 390
Length: 45 minutes

- Visit spectacularly wild and beautiful parks—Yosemite, Yellowstone, the Everglades, the Redwoods, Arches, and Canyonlands
- Follow a trio of adventurers' led by mountaineer Conrad Anker through some of the country's most magnificent natural wonders
- Reenactors portray Theodore Roosevelt and John Muir's early explorations that led to the birth of the park system

Star-Spangled Banner: Anthem of Liberty

Grades: 3-12
Capacity: 390
Length: 25 minutes

- Watch the British bombardment of Fort McHenry in Baltimore and discover how it led to the writing of the Star-Spangled Banner
- See Mary Pickersgill sew one of the largest American flags ever made that signaled victory at the Fort
- Live action footage shot at the Fort, combined with computer graphics, bring the battle and its historic significance to life



Earth & Nature | Health & Human Body | Early Childhood | Physics & Phenomena | Space & Aerospace

Planetarium

Digital Davis Planetarium programs immerse audiences into the night and through an adventure in space. Program-related education resources are provided to teachers on the day of your visit.

Planetarium programs for school groups are by advance reservation only.

Live Planetarium Programs

Beyond Your Backyard Sky

Grades: 6-12
Capacity: 140
Length: 45 minutes

- Explore the current sky and compare observations of stars and planets
- Launch from a backyard view of the sky into space and through the solar system and Milky Way galaxy
- See how the stars and planets of the nighttime sky fit into the universe as a whole

Exploring Planets

Grades: 3-5
Capacity: 140
Length: 45 minutes

- Fly through the solar system to investigate features of planets and dwarf planets
- Explore characteristics of a planet
- Learn about current space missions

Seasons in the Sky

Grades: 5-7
Capacity: 140
Length: 45 minutes

- Tour seasonal constellations of the night sky
- Explore reasons for the seasons
- Learn how to use a starmap for backyard stargazing

Shapes in the Sky

Grades: 1-2
Capacity: 140
Length: 35 minutes

- Look for familiar shapes among the stars in the sky
- Imagine and create personal star patterns
- Observe patterns of the motion of stars and the Moon

The Sky Tonight

Grades: 3-5
Capacity: 140
Length: 45 minutes

- Observe current objects in the night sky
- Find and identify stars, planets, and phases of the Moon
- Learn how to use a starmap for backyard stargazing

Recorded Planetarium Program

Black Holes: Journey into the Unknown

Grades: 5-12
Capacity: 140
Length: 35 minutes

- Find out how a black hole is formed and where they can be found
- Discover what effect a black hole can have on celestial bodies in the universe
- Use a model to imagine what might happen if you got too close to a black hole

One World One Sky: Big Bird's Adventure

Grades: PreK-2
Capacity: 140
Length: 35 minutes

- Follow Sesame Street's Big Bird and Elmo as they explore the night sky
- Meet Hu Hu Zhu, a Muppet from the Chinese co-production of Sesame Street
- Take an imaginary trip to the Moon with Elmo and Hu Hu Zhu

Solar Superstorms

Grades: 5-12
Capacity: 140
Length: 35 minutes

- Discover the inner workings of the Sun
- Learn how changes in the magnetic fields that surround the Sun can result in solar flares and eruptions
- Understand how modern life technologies are vulnerable to the power of the Sun

Solar System Odyssey

Grades: 3-7
Capacity: 140
Length: 35 minutes

- Go on a futuristic journey through the solar system
- Set out on a mission to discover a new home to colonize
- Learn what makes a world an ideal habitat for life and what it would take for humans to live there

Observatory

See the Sun

Grades: 3-12
Capacity: 25 people
(includes students & chaperones)
Length: 45 minutes

- Observe the Sun through safe solar filters to reveal sunspots, flares, and prominences
- Learn the power of the Sun as a star by exploring its many wavelengths of light with special attention to ultra-violet (UV) light
- Solar viewing as weather permits - telescope views of ground-based objects substituted under cloudy conditions

Night Under the Stars

Grades: 3-12
Capacity: 25 people
(includes students & chaperones)
Length: 2 evening hours

Contact Observatory Manager for availability: 410-545-2985 or observatory@marylandsciencecenter.org

- View the Moon, planets, and stars according to the season
- Admission is $10.00 per person ($100 minimum)
- Program depends on the weather, so rain dates will be arranged

"Our students learned about space (the relationship between the sun, moon, and earth) prior to us coming to the science center—so it was really exciting for them to have more information as well as make connections to what they had learned about in class."

Earth & Nature | Health & Human Body | Early Childhood | Physics & Phenomena | Space & Aerospace

Dates and Times

October- December

SCIZONE 1, 2, 3

	Monday	Tuesday	Wednesday	Thursday	Friday
10:30am		TEACHER'S CHOICE OF Circuit Solutions, DNA Discovery, Engineered by Design, Radical Reactions, Sensory Mystery, Soap Bubble Math, Stats Lab, Sudsy Science, Wind Works, and Ziplock Chemistry			
11:30am					
12:30pm					
1:30pm					

SCIZONE 4

	Monday	Tuesday	Wednesday	Thursday	Friday
10:30am		Synthetic Biology	Synthetic Biology	Synthetic Biology	Synthetic Biology
11:30am		Synthetic Biology	Synthetic Biology	Synthetic Biology	Synthetic Biology
12:30pm		Synthetic Biology	Synthetic Biology	Synthetic Biology	Synthetic Biology

KIDS ROOM

	Monday	Tuesday	Wednesday	Thursday	Friday
10:30am		Discovery Space	Discovery Space		Discovery Space
11:30am		Discovery Space	Discovery Space	Discovery Space	Discovery Space
12:30pm		Discovery Space	Discovery Space	Discovery Space	Discovery Space
1:30pm		Discovery Space	Discovery Space	Discovery Space	Discovery Space

Phone a reservationist at 410-545-5929

October- December

IMAX

	Monday	Tuesday	Wednesday	Thursday	Friday
10:30am		Teacher's Choice	Beavers	Dream Big	Journey to Space
11:30am			Flight of the Butterflies	Forces of Nature	Dream Big
12:30pm			Humpback Whales	Journey to Space	Deep Sea
1:30pm			Forces of Nature	Deep Sea	Flight of the Butterflies

PLANETARIUM

	Monday	Tuesday	Wednesday	Thursday	Friday
10:30am		**TEACHER'S CHOICE OF**			
11:30am		Beyond Your Backyard Sky, Black Holes: Journey into the Unknown, Exploring Planets, One World One Sky: Big Bird's Adventure, Seasons in the Sky, Shapes in the Sky, The Sky Tonight, Solar Superstorms, Solar System Odyssey			
1:30pm					

OBSERVATORY

	Monday	Tuesday	Wednesday	Thursday	Friday
10:30am			See the Sun	See the Sun	
11:30am			See the Sun	See the Sun	

January-March

SCIZONE 1, 2, 3

	Monday	Tuesday	Wednesday	Thursday	Friday
10:30am		**TEACHER'S CHOICE OF** Circuit Solutions, DNA Discovery, Engineered by Design, Radical Reactions, Sensory Mystery, Soap Bubble Math, Stats Lab, Sudsy Science, Wind Works, and Ziplock Chemistry			
11:30am					
12:30pm					
1:30pm					

SCIZONE 4

	Monday	Tuesday	Wednesday	Thursday	Friday
10:30am		Synthetic Biology	Synthetic Biology	Synthetic Biology	Synthetic Biology
11:30am		Synthetic Biology	Synthetic Biology	Synthetic Biology	Synthetic Biology
12:30pm		Synthetic Biology	Synthetic Biology	Synthetic Biology	Synthetic Biology

KIDS ROOM

	Monday	Tuesday	Wednesday	Thursday	Friday
10:30am		Discovery Space	Discovery Space		Discovery Space
11:30am		Discovery Space	Discovery Space	Discovery Space	Discovery Space
12:30pm		Discovery Space	Discovery Space	Discovery Space	Discovery Space
1:30pm		Discovery Space	Discovery Space	Discovery Space	Discovery Space

Phone a reservationist at 410-545-5929

January-March

IMAX

	Monday	Tuesday	Wednesday	Thursday	Friday
10:30am		Teacher's Choice	Journey to Space	Dream Big	Journey to Space
11:30am			Beavers	Forces of Nature	Dream Big
12:30pm			Flight of the Butterflies	Journey to Space	Deep Sea
1:30pm			Forces of Nature	Deep Sea	Flight of the Butterflies

PLANETARIUM

	Monday	Tuesday	Wednesday	Thursday	Friday
10:30am			**TEACHER'S CHOICE OF**		
11:30am			Beyond Your Backyard Sky, Black Holes: Journey into the Unknown, Exploring Planets, One World One Sky: Big Bird's Adventure, Seasons in the Sky, Shapes in the Sky, The Sky Tonight, Solar Superstorms, Solar System Odyssey		
1:30pm					

OBSERVATORY

	Monday	Tuesday	Wednesday	Thursday	Friday
10:30am			See the Sun	See the Sun	
11:30am			See the Sun	See the Sun	

April - June

SCIZONE 1, 2, 3

	Monday	Tuesday	Wednesday	Thursday	Friday
10:30am	TEACHER'S CHOICE OF Circuit Solutions, DNA Discovery, Engineered by Design, Radical Reactions, Sensory Mystery, Soap Bubble Math, Stats Lab, Sudsy Science, Wind Works, and Ziplock Chemistry				
11:30am					
12:30pm					
1:30pm					

SCIZONE 4

	Monday	Tuesday	Wednesday	Thursday	Friday
10:30am	Synthetic Biology	Synthetic Biology	Synthetic Biology	Synthetic Biology	Synthetic Biology
11:30am	Synthetic Biology	Synthetic Biology	Synthetic Biology	Synthetic Biology	Synthetic Biology
12:30pm	Synthetic Biology	Synthetic Biology	Synthetic Biology	Synthetic Biology	Synthetic Biology

KIDS ROOM

	Monday	Tuesday	Wednesday	Thursday	Friday
10:30am	Discovery Space	Discovery Space	Discovery Space		Discovery Space
11:30am	Discovery Space	Discovery Space	Discovery Space	Discovery Space	Discovery Space
12:30pm	Discovery Space	Discovery Space	Discovery Space	Discovery Space	Discovery Space
1:30pm	Discovery Space	Discovery Space	Discovery Space	Discovery Space	Discovery Space

Phone a reservationist at 410-545-5929

April - June

IMAX

	Monday	Tuesday	Wednesday	Thursday	Friday
10:30am	Humpback Whales	Beavers	Journey to Space	Deep Sea	Flight of the Butterflies
11:30am	Island of Lemurs	Flight of the Butterflies	Dream Big	Flight of the Butterflies	Deep Sea
12:30pm	Lewis and Clark	Forces of Nature	Deep Sea	Journey to Space	Dream Big
1:30pm	Star Spangled Banner	Human Body	National Parks	Dream Big	Journey to Space

PLANETARIUM

	Monday	Tuesday	Wednesday	Thursday	Friday
10:30am	**TEACHER'S CHOICE OF**				
11:30am	Beyond Your Backyard Sky, Black Holes: Journey into the Unknown, Exploring Planets, One World One Sky: Big Bird's Adventure, Seasons in the Sky, Shapes in the Sky, The Sky Tonight, Solar Superstorms, Solar System Odyssey				
1:30pm					

OBSERVATORY

	Monday	Tuesday	Wednesday	Thursday	Friday
10:30am			See the Sun	See the Sun	
11:30am			See the Sun	See the Sun	

Traveling Science Program

Questions About the Traveling Science Program (TSP)

Our Traveling Science Program vans begin their educational journeys in Maryland and beyond for the 2018-2019 school year starting September 24, 2018.

How do I arrange for TSP to visit my school?

Bookings are accepted on a first-come, first-served basis. Contact the TSP Reservations Department at 410-545-5968 or email outreach@marylandsciencecenter.org. A member of the TSP Reservations Department can answer questions, offer scheduling suggestions, review costs, and book the date you selected for TSP to visit your school.

Can I bring TSP to my local library, community center, or other non-school setting?

Yes, an additional program model is available for libraries, community centers, and non-school settings. Please contact the TSP Reservations Line at 410-545-5968 for more information.

When can I phone the TSP Reservations Department?

Staff are available Monday through Friday from 11am until 5pm. Certain months fill up quickly so phone early with your desired program, date, and time.

Phone a reservationist at 410-545-5968

Assembly Programs

Dinosaur
Grades: PreK-1
Capacity: 100 students
Length: 35 minutes

- Piece together the story of the dinosaurs
- Uncover a baby Maiosaur and learn what it needs to survive
- Explore fossils as a paleontologist

Let's Get Physical
Grades: 2-5
Capacity: 250 students
Length: 50 minutes

Requires a ceiling height of twenty feet or greater

- Observe demonstrations of physical science in everyday life
- Learn the relationship between force and motion
- Explore Newton's laws of motion through interactive demonstrations and models

Mixing Up Science
Grades: PreK-1
Capacity: 100 students
Length: 30 minutes

- Exploring basic concepts of chemistry
- Learn and use vocabulary relating to chemistry and experimentation
- Experience chemical reactions with visible results

Science Unscripted
Grades: K-5
Capacity: 250 students
Length: 50 minutes

- Compose a unique science show by selecting experiments from our science topic cards
- Partake in a range of demonstrations including liquid nitrogen, chemical mixing, and combustion reactions

What's the Matter?
Grades: K-5
Capacity: 250 students
Length: 50 minutes

- Study the states of matter through demonstrations and experiments
- Define matter and energy
- Explore the difference between chemical and physical changes

Who Invented Electricity?
Grades: 3-8
Capacity: 250 students
Length: 50 minutes

- Discover the basic science behind electricity and magnetism
- Witness the intriguing discoveries of famous scientists
- Experience classic demonstrations of static electricity

Classroom Programs

Beyond Building
Grades: 3-5
Capacity: 30 students
Length: 50 minutes

- Participate in four engineering activities inspired by real-world careers
- Be introduced to engineering skills beyond building, such as sound and light manipulation
- Utilize the engineering design process

Circuit Masters
Grades: 2-3, 4-6
Capacity: 30 students
Length: 50 minutes

- Explore the basics of electricity
- Incorporate different types of switches
- Test and compare insulators and conductors

Fairy Tale Engineering
Grades: K-2
Capacity: 30 students
Length: 50 minutes

- Participate in three engineering activities inspired by fairy tale classics
- Act as heroes of a story by overcoming problems using engineering
- Be introduced to the engineering design process

It's Cool in Your School
Grades: 5-8
Capacity: 30 students
Length: 50 minutes

- Learn about the science of cryogenics using liquid nitrogen
- Find out how different materials react to extreme cold
- Witness the relationship between pressure, volume, and temperature

Solid, Liquid, Slime
Grades: K-2
Capacity: 30 students
Length: 45 minutes

- Discuss the differences between solids and liquids
- Prepare samples of chemical slime
- Conduct an investigation on slime's state of matter

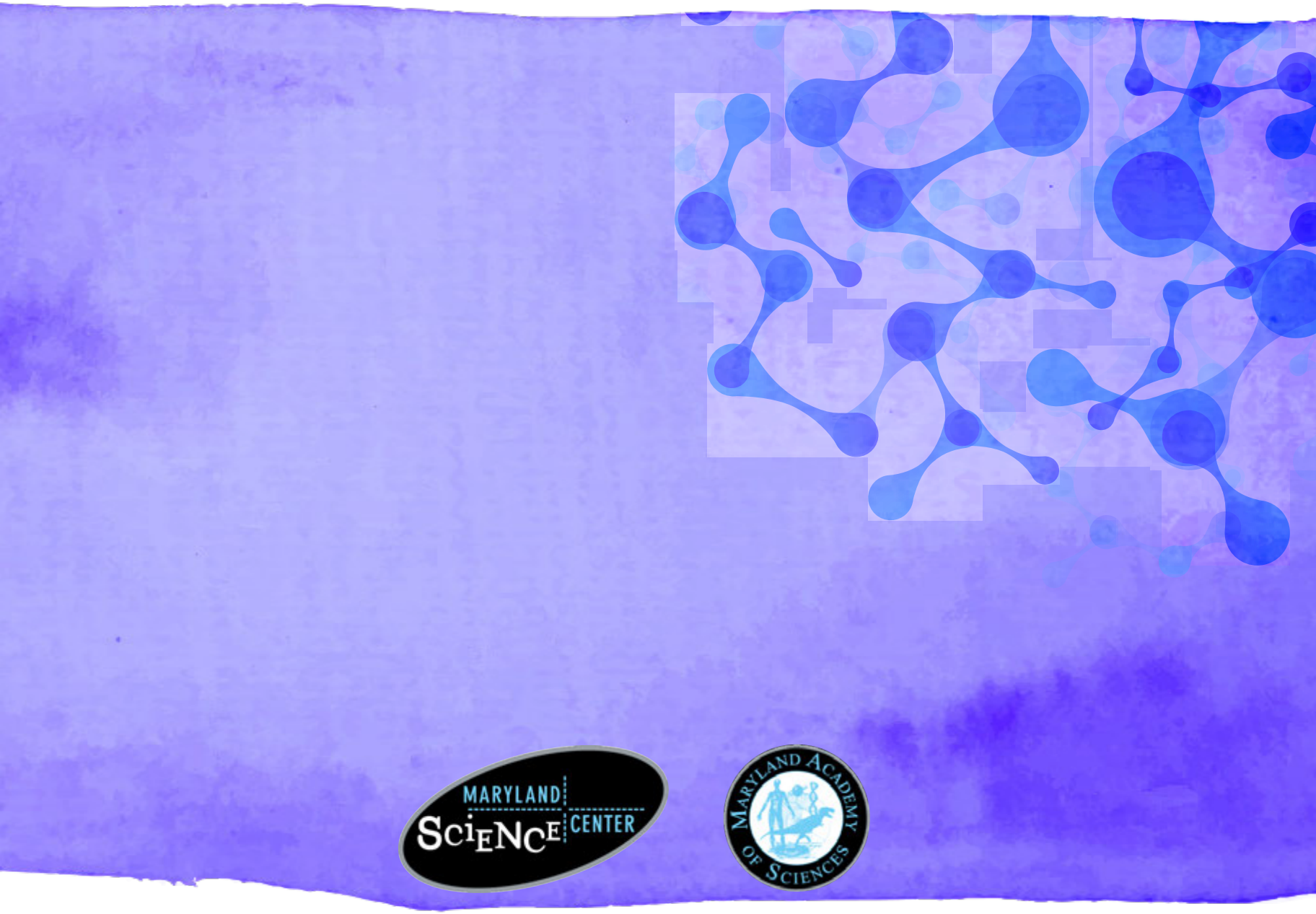
Starlab Programs

Seasonal Stars of the Mid-Atlantic
Grades: 3-6
Capacity: 30 students
Length: 50 minutes

- Explore why constellations appear at different times of the year
- Locate seasonal constellations and learn when they can be seen
- Discover the location of the Moon, stars and planets in the current night sky

Sunny Day, Starry Night
Grades: K-2
Capacity: 30 students
Length: 50 minutes

- Learn the basics of astronomy
- Identify what makes a constellation
- Observe constellations in the current night sky



601 Light Street at Baltimore's Inner Harbor | www.MarylandScienceCenter.org