



# Community Engagement and Programs



*The Maryland Science Center's mission is to inspire, empower, and engage through informal STEM education. We work to build a community that shares our love of science through*



*innovative programs and authentic experiences. To be a valuable resource to the entire State of Maryland and the Mid-Atlantic region, we recognize that our program offerings should be accessible, diverse, and inclusive. We encourage visitors to explore science at our Baltimore Inner Harbor location or to participate in one of our educational programs in their local community. Let's science!*

To learn more about these programs and others, visit [www.marylandsciencecenter.org](http://www.marylandsciencecenter.org).

## **SCIENCE IN THE COMMUNITY**

All of the science expertise, hands-on activities, and STEM knowledge the Maryland Science Center (MSC) has to offer - right in your local community!

### **Traveling Science Program**

The Maryland Science Center's *Traveling Science Program* is our flagship outreach program. It has been visiting schools since the 1980's and this program brings hands-on, engaging science fun to schools and other venues. From large-scale assemblies to hands-on lab classes, the *Traveling Science Program* can be scaled to meet individual school needs. Through this program our educators visit all 24 Maryland school districts, as well as other Mid-Atlantic states. The *Traveling Science Program* reaches more than 50,000 students and teachers and travels more than 25,000 miles in an average year. Through the *Traveling Science Program*, students may have the opportunity to participate in engineering challenges, learn about the science of cryogenics using liquid nitrogen, or witness explosive chemical reactions. All programs, regardless of topic, educate as well as stimulate interest and enthusiasm for science!



## Family Science Night / Family Engineering Night

*Family Science Night (FSN)* is a mission-driven program which offers students and their families the opportunity to explore a variety of STEM subjects through hands-on activities during a two-hour program in a communal setting at their local school. FSN is a well-established, well-received program with new activities introduced each year. We also offer *Family Engineering Night* for an evening focused exclusively on design challenges and engineering concepts. These events are comprised of activity stations, facilitated by MSC educators, which demonstrate different STEM concepts. Activities are designed to facilitate intergenerational, cooperative, and active learning. FSN participants are invited to learn by doing, as they explore real-life applications of science. Past activities have included building, testing, and modifying an airplane of their own design; or learning about resonance and seeing how sound waves can interact with the world around them.

## Ready, Set, Go Science

*Ready, Set, Go Science* is a partnership between the Maryland Science Center and Baltimore City Head Start. This multi-faceted program is designed to help early learners advance their school readiness by exploring basic scientific concepts through interactive STEM activities, while simultaneously offering professional development opportunities to Head Start educators. This collaboration has been on-going for over a decade. MSC's *Ready, Set, Go Science* program is designed to help children in Baltimore City Head Start programs develop skills and learn about the world around them in ways that will prepare them to succeed in school.

## Early Childhood Professional Development

We offer professional development opportunities for teachers and resources for educators on a variety of subjects. MSC's educator workshops offer teachers a chance to learn new tips and techniques for teaching science and get lessons to take back to their classrooms. All workshops are Maryland State Department of Education certified to support continuing education. They are designed for teachers of 3-5 year olds as hands-on, minds-on experiences. Past workshops have included *Early Learning Engineering* and *Teaching through Tinkering*.

## Virtual Programming

MSC offers an array of virtual in-classroom or distance learning programs for teachers and homeschool groups. Planetarium programs are presented live via Zoom, with topics ranging from *Exploring Planets* to *The Sky Tonight*. Pre-recorded programs include *Dinosaurs Mysteries Virtual Tour* – led by our very own paleontologist - and *Newton's Alley Virtual Tour*.



## ONSITE PROGRAMS AT THE MARYLAND SCIENCE CENTER

Groups that visit the Maryland Science Center can share in a collective exploration of science as they engage with innovative exhibits designed to encourage active participation. Visitors can join our educators for on-floor experiments, pop-up science, or live science demonstrations. Our interactive learning spaces include the Davis Planetarium, Crosby Ramsey Memorial Observatory, and St. John Properties IMAX Theater. Our Next Generation Science Standards (NGSS) guide outlines how educators can use MSC resources, programs, and exhibits to assist their students in reaching NGSS performance expectations. Field trip resources including pre- and post-visit lessons, science at home experiments, and our NGSS guide can be found at [www.mdsci.org/resources](http://www.mdsci.org/resources).

### *Science Beyond the Classroom, Powered by Constellation* Field Trips at the Maryland Science Center

Advancements in STEM learning require a full range of opportunities and experiences, including those that occur outside the classroom, and a visit to our exhibit halls expose students to many activities their teachers simply cannot replicate in school. At the Maryland Science Center, we believe all children should have access to quality STEM education and that early access to science builds a foundation of lifelong learning. Students from households or schools with limited financial resources should be afforded the same opportunities as their peers.

*Science Beyond the Classroom, Powered by Constellation* provides free admission to all Maryland students, teachers and chaperones who visit the Science Center on field trips. Free admission support is also provided by the Maryland Department of Education, private funders, and our generous donors.

In a typical year, the Maryland Science Center welcomes over 90,000 Marylanders through this program. We do not cap the number of free admissions we provide - in fact, we actively work to increase our reach. Through a combination of public and private funding, we have been able to maintain free admission for *all* Maryland school groups.



### Enrichment Experiences

The Maryland Science Center welcomes educators and their classes to its Inner Harbor location throughout the school year with a variety of options for exploration and enrichment. MSC's *Enrichment Experiences* are small-group, classroom-style programs designed to enhance our core exhibits by offering in-depth content and more examples of learning by doing. *Enrichment Experiences* take place in MSC's SciZone classrooms and include hands-on, minds-on activities for groups from pre-K to 12th grade. Led by MSC educators, students explore various STEM topics from circuits to DNA and energy to chemistry. All of our *Enrichment Experiences* are matched to grade levels based on the current Next Generation Science Standards.

## Homeschool Programs

The Maryland Science Center offers programming exclusively for homeschool families twice per year in September and January. Homeschool programs are offered on weekdays and include classroom enrichment experiences, IMAX films, and planetarium programs. Basic admission to the exhibit halls is free for all participating in programs that day. Enrichment experiences are age specific, covering a variety of topics using varied teaching methods. Past homeschool programs have included *Art and the Cosmic Connection*, *Handy Hydraulics*, and *Radical Reactions*.

## Badge Workshops

Girls Scouts, Cub Scouts, and Scouts BSA can participate in hands-on workshops to complete all the requirements for age specific badges. Workshops are day long or half day experiences held at Maryland Science Center and led by our educators. Thus far, Scout workshops have hosted scouts from 15 states and the District of Columbia. Workshops include *Automotive Engineering* for Daisies and Brownies, *Digging in the Past* for Cub Scouts, and *Robotics* for Girl Scouts from Daisy to Senior.

## Camp MSC

It's science in the summer! The Maryland Science Center's *Camp MSC* is a co-ed summer camp program for children ages 4-13. Programs are week-long, full day, or half day. Camp sessions change yearly, and activities take full advantage of the unique exhibits and learning spaces available at the Maryland Science Center. Campers may be able to complete astronaut training camp, construct catapults, or learn about what it takes to design a Maryland Science Center exhibit from scratch. *Camp MSC* offers new programs each summer and many participants return year after year!



## Camp-In

*Camp-In* is a one-night overnight program that combines an indoor, overnight adventure with exciting, interactive science education. *Camp-In* events include IMAX and planetarium shows, hands-on engineering workshops, a live science demonstration, and time to explore many of the museum's interactive exhibits. An evening snack, a light breakfast, and a participation patch for each child are also included. *Camp-In* is also an excellent opportunity for Girl Scouts and Scouts BSA to complete merit badge requirements. Scouts and youth/school groups from first to sixth grade can join us to explore topics such as space science, robotics and engineering, or forensics.

## Super Science Sleepovers

*Super Science Sleepovers* are theme based overnight programs designed for families to spend the night at the Maryland Science Center and find out what really happens after the sun goes down. Past *Super Science Sleepovers* themes have included *May the Fourth Be with You* and *Academy of Wizardry*. Each event is unique to the theme, combining activities and theater experiences with on-floor exploration of exhibits. The Shed, our DIY space, and SciLab, our real laboratory environment, are also both open with special hands-on activities. Then, when it's ready for lights out - say goodnight to the dinosaurs and sleep in the exhibit halls.

## Adult Programs

Who said science learning and fun were only for kids? Certainly not us! During the Maryland Science Center's *Adult Programs*, we infuse science into each event we host through hands-on activities, demonstrations, and an engaging staff that equals a recipe for an amazing night. Guests also get to enjoy our exhibits child-free, while sipping on beverages by some local brewers, distillers, and vintners at events like *Grown Up Field Trip*, *Let's Science Happy Hour* and *Wine & Dinosaurs*. *Music Under the Dome* sends guests on a journey through space with the help of a carefully curated soundtrack in our planetarium. You're never too old to explore. Cheers to staying curious.



## PARTNERSHIPS

Developing partnerships with other institutions has been extremely beneficial to the Maryland Science Center and has led to the production of many educational programs, enrichment activities, special events, planetarium programs, and even IMAX films.

### WeGo

For over five years, the excitement of the Maryland Science Center has offered relief from the anxiety and isolation of pediatric hospitalization. Thanks to our partnership with the WeGo Foundation, an onsite telepresence robot gives young patients in Maryland hospitals and beyond the opportunity to take live, virtual tours of our exhibits. Driving the robot remotely through the building, they can enjoy the museum experience as if they were here in person (including interacting with staff and fellow guests!). We are pleased to offer these children some respite from their circumstance and isolation while our visitors gain insight into technology applied to increase access to the educational resource that is the Maryland Science Center.

### Living Lab

Johns Hopkins Laboratory for Child Development researchers from Johns Hopkins University conduct child development research in the Kids Room exhibit. MSC educators train undergraduate researchers in science communication methods. In return, MSC visitors can be active participants in scientific research, learn about the scientific process, and parents and caregivers have the opportunity to hear about current advancements in child development research.

## Maryland Institute College of Art

MICA and the Maryland Science Center have partnered for several years to assist MICA animation students in creating artistic projects with scientific themes. This partnership is supported by NASA-Goddard scientists. These animated short films are formatted for unique screens, including domes and spheres, and MSC's planetarium is the ideal space for students to test their creations. In addition to providing the appropriate space to pilot images and animations, MSC staff and NASA-Goddard scientists are helping these MICA students learn how to make scientifically complex concepts accessible for all ages.

## AWARDS AND SCHOLARSHIPS

Each year the Maryland Science Center recognizes outstanding achievement in the sciences through its various awards.

### Outstanding Young Scientist & Outstanding Young Engineer

The *Outstanding Young Scientist* award program was established in 1959 to recognize and celebrate extraordinary contributions of young Maryland scientists. In 1988 the *Outstanding Young Engineer* award was established to recognize contributions in engineering. Both awards are sponsored by the Maryland Academy of Sciences and conferred by the Maryland Science Center to recognize and encourage the important work of young professional scientists and engineers residing in the State of Maryland and increase public awareness of their accomplishments.

### Maryland Outstanding STEM Educator

The *Maryland Outstanding STEM Educator* award is presented to an elementary or middle school Maryland educator in a STEM field that demonstrates a focus on a hands-on, inquiry-driven teaching technique that engages students to develop creativity, teamwork, and problem-solving skills. The recipient is awarded a cash prize, funds for classroom supplies, a free MSC education program, and a MSC family membership.



### Dr. H. Bentley Glass Scholarship

The *Dr. H. Bentley Glass Scholarship* is awarded to a Baltimore City public high school student who intends to pursue post-secondary STEM studies at a four-year college or university or two-year college. This non-renewable scholarship is intended to support the recipient's education-related expenses. The scholarship recipient also receives a paid summer internship at the Maryland Science Center.

## MISSION

***We are the Maryland Science Center.  
We inspire. We empower. We engage.  
Let's science!***

## A HISTORY AS RICH AS THE SCIENCE IT SHARES

The Maryland Science Center has been sharing its love of science since its inception as the Maryland Academy of Sciences in 1797.

As Maryland's oldest scientific institution and one of the oldest such institutions in the entire nation, the Academy was an amateur scientific society whose members met to discuss papers and to advance understanding of "natural sciences." With the opening of the Maryland Science Center at Baltimore's Inner Harbor in 1976, the Academy fulfilled its vision of establishing a permanent location dedicated to engaging, interactive science.

From astronomy to paleontology, the human body to physics and phenomena, the Maryland Science Center is packed with innovative exhibits that demonstrate the wonders of scientific discovery with a focus on open-ended exploration.

The Science Center provides interactive science experiences for families, students, educators, and learners of all ages. We offer a variety of exhibits, live science demonstrations and activities, as well as the St. John Properties IMAX Theater, Davis Planetarium, and Crosby Ramsey Memorial Observatory. These exhibits provide the backdrop for an audience-driven experience that is enhanced through staff interaction.

For over 45 years, the Maryland Science Center has provided valuable educational experiences at our location in Baltimore City and through outreach programming across the mid-Atlantic region. No other Maryland institution dedicated to informal science education reaches more students and teachers.



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The Maryland Science Center is a 501(c)(3) non-profit organization.

Federal Tax ID# 52-0668166