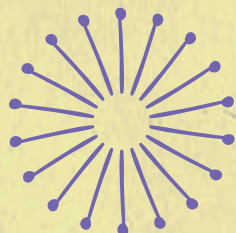


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## Staying Connected

### Email

**Camp-In** [campin@marylandsciencecenter.org](mailto:campin@marylandsciencecenter.org)

**Family Science Night** [famscinight@marylandsciencecenter.org](mailto:famscinight@marylandsciencecenter.org)


**Traveling Science Program** [outreach@marylandsciencecenter.org](mailto:outreach@marylandsciencecenter.org)


**Reservations** [reservations@marylandsciencecenter.org](mailto:reservations@marylandsciencecenter.org)

### Online

**Website** [www.marylandsciencecenter.org](http://www.marylandsciencecenter.org)

 [Facebook.com/MarylandScienceCenter](https://www.facebook.com/MarylandScienceCenter)

 [Twitter.com/MDScienceCenter](https://twitter.com/MDScienceCenter)

 [Instagram.com/MDScienceCenter](https://www.instagram.com/MDScienceCenter)

### Phone

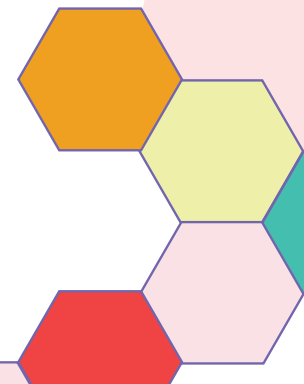
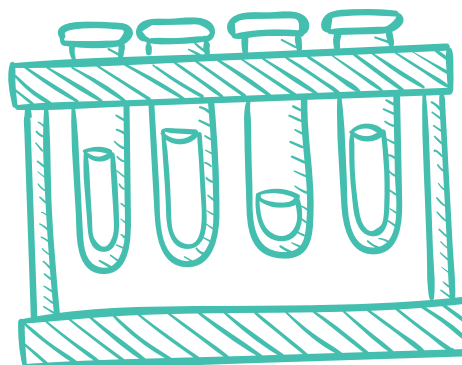
**Field Trip Reservations** 410-545-5929

**Camp-In Programs** 410-545-5958

**The Science Store** 410-545-5924

**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](http://www.marylandsciencecenter.org) and click the Email Sign up link located in the header of the homepage.



# Frequently Asked Questions

## 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 page 4.

## 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.

## 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.**



# Field Trip Pricing and Important Information

The Maryland Science Center welcomes all Maryland students and chaperones reserving as a group to its exhibit halls free of charge. Plan your visit today!

## Field Trips at the Maryland Science Center

*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, The Kahlert Foundation, Transamerica Foundation, Delaplaine Foundation, The John J. Leidy Foundation, Goldsmith Family Foundation, and our generous donors.



## Important Policies To Know

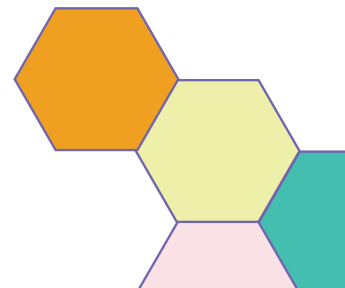
- Chaperones are required to remain with their students at all times.
- Groups of students are not permitted to visit MSC without an adult chaperone.
- Chaperones are responsible for appropriate behavior of all students in their group.
- Groups exhibiting inappropriate behavior will be asked to leave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

## Payment

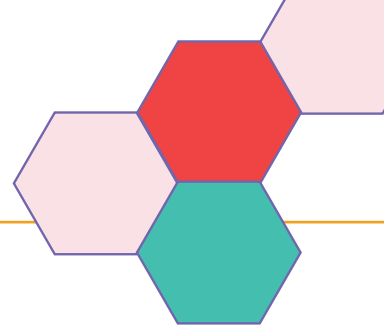
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## Cancellations

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: 410-685-2370. Following a weather emergency, call the MSC reservationist to reschedule.







## Maryland School Groups Only\*

| Basic Admission                  | <u>Students</u><br>FREE | <u>Teachers</u><br>FREE | <u>Chaperones</u><br>FREE |
|----------------------------------|-------------------------|-------------------------|---------------------------|
| Enrichment Experiences           | \$8.50                  | FREE                    | FREE                      |
| Davis Planetarium                | \$8.50                  | \$8.50                  | \$8.50                    |
| St. John Properties IMAX Theater | \$8.50                  | \$8.50                  | \$8.50                    |
| Kids Room                        | \$2.00                  | FREE                    | FREE                      |

## School Groups Outside of Maryland\*

| Basic Admission                  | <u>Students</u><br>\$8.50 | <u>Teachers</u><br>FREE | <u>Chaperones</u><br>\$5.00 |
|----------------------------------|---------------------------|-------------------------|-----------------------------|
| Enrichment Experiences           | \$8.50                    | FREE                    | FREE                        |
| Davis Planetarium                | \$8.50                    | \$8.50                  | \$8.50                      |
| St. John Properties IMAX Theater | \$8.50                    | \$8.50                  | \$8.50                      |
| Kids Room                        | \$2.00                    | FREE                    | FREE                        |

\*Prices valid weekdays only, October 5th - June 9th (excluding major holidays)

## Educator 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

Information identifying links between Next Generation Science Standards and MSC exhibits, enrichment experiences, and theater shows is available from the MSC website. This and other resources including a scavenger hunt for use during your visit and step-by-step science experiments are all available for download.

Visit [www.marylandsciencecenter.org/resources](http://www.marylandsciencecenter.org/resources) to find our online resources.



## Core Exhibits

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

### Earth Science

#### 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.

### 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.

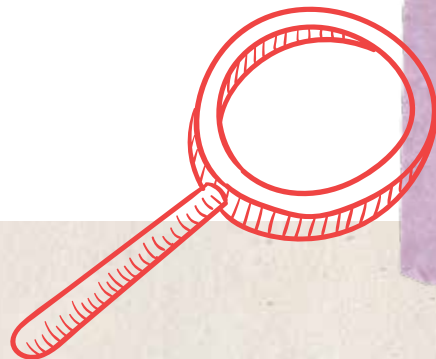
*SciLab is presented by BD Diagnostic Systems*



#### You—The Inside Story

MSC's newest exhibit and its largest at over 12,000 square feet. This new exhibit is a hands-on exploration of a remarkable machine we know as the human body. You—The Inside Story takes a look at our senses, our unique traits and features, and challenges both the mind and muscles.

*You - The Inside Story is presented by Johns Hopkins Medicine*







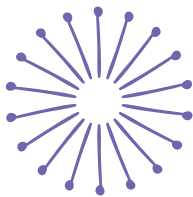
## **Early Childhood**

### **The Kids Room**

The Kids Room is a sensory adventure for our early childhood visitors, from birth to eight years of age. Dive into waterplay, 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). School Groups must have a reservation to visit the Kids Room. Please note there is an additional charge for this exhibit. See page 4.

**Capacity: 50 students / Time: 50 minutes**



# Core Exhibits, Continued

## Physics and Phenomena

### **Demonstration Stage**

Science is a chilling, electrifying, bubbling experience on the Maryland Science Center's Demonstration Stage. 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.

### **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 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 and lenses. Discover the concept of radiation as information, while exploring and experimenting with optics and the physics of light.

### **Math in Nature**

In nature, math reveals itself in patterns. Ripples on a pond, wind across marsh grasses, birds flocking—the patterns, and their purpose, come down to math. Math in Nature also explores concepts like symmetry, camouflage, tessellation, fractals and other mathematical phenomena as they appear in the natural world.

### **The Shed**

The Shed hosts drop-in activities that blend art, craft, science, engineering, and technology. Visitors might take on a problem-solving challenge, prototype an inventive object, or investigate the inner workings of a familiar item. The Shed rotates through different activity offerings throughout the year. Check our website to see what we will be doing on the day of your visit.

*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 and 11:30. Please note there is an additional charge. See page 4.

### **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. 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. Learn about the latest news from NASA, human space travel, and planetary exploration.





# St. John Properties Imax Theater

IMAX films offer an immersive, larger-than-life exploration of key topics directly related to our core programs. Films available on the half hour from 10:30am to 1:30pm.

## A Beautiful Planet 3D

*Grades:* 3-12

*Capacity:* 330

*Length:* 45 minutes

- Gaze down on the wonders of Earth from the International Space Station for a breathtaking view of the planet
- Discover how humanity and natural powers have changed the world
- Explore life on the International Space Station and how research done in space pushes the boundaries of human knowledge

## Beavers

*Grades:* PreK4-8

*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

## Backyard Wilderness

*Grades:* 1-12

*Capacity:* 330

*Length:* 45 minutes

- View up-close footage of animals and discover a picture of life in the woodlands around your home
- Follow the cycle of the seasons as animals find food and raise their young
- Be inspired to get out and explore the world for all of the life that surrounds you

## Dream Big 3D

*Grades:* 3-12

*Capacity:* 330

*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

## Expedition Chesapeake

*Grades:* 3-12

*Capacity:* 330

*Length:* 45 minutes

- Meet scientists who study the diverse species in the Chesapeake Bay watershed
- Travel from the headwaters of the Susquehanna River to the southern end of the bay and explore the human impacts on the watershed
- Learn about how the ecosystem is changing and the efforts to protect its future health

## Extreme Weather 3D

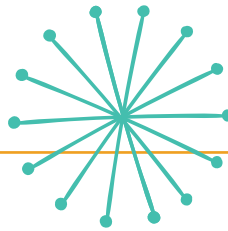
*Grades:* 3-12

*Capacity:* 330

*Length:* 40 minutes

- Explore the interconnected system of weather that causes tornadoes, collapsing glaciers, and draught-driven wildfires
- Discover some of the ways the dynamic forces of weather are shaping planet Earth
- Follow researchers as they uncover information to help us adapt to our ever-changing weather





## Flight of the Butterflies 3D

*Grades:* 2-12

*Capacity:* 330

*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

## Great Bear Rainforest

*Grades:* 3-12

*Capacity:* 330

*Length:* 45 minutes

- Explore one of the largest temperate rainforest in the world, located on Canada's Pacific coast
- Meet the rare, all-white spirit bear and learn how these animals share their home with grizzlies, wolves, sea otters, and humans
- Discover how the region's indigenous people are protecting the rainforest and passing knowledge from generation to the next

## Sea Lions: Life by a Whisker

*Grades:* 1-12

*Capacity:* 330

*Length:* 45 minutes

- Follow the journey of a sea lion pup, one of the rarest marine mammals
- Embark on a quest through the uninhabited wilderness of the Great Australian Bight and the lush kelp forests off the Californian coast
- Join a marine park ranger on a mission to find out what it takes to save a species

## Secrets of the Sea

*Grades:* 3-12

*Capacity:* 330

*Length:* 45 minutes

- Travel around the world to meet spectacular sea creatures from pygmy seahorses to giant blue whales
- Find out how marine species interact with each other and share their environment
- Learn about the importance of marine biodiversity and how humans affect the health of the ocean

Available  
starting  
this winter



# Enrichment Experiences

Enrichment Experiences are small group, classroom-style programs designed to enhance our field trips by offering in-depth content and more hands-on examples of learning by doing. Advance reservation is required. Programs available on the half hour from 10:30am to 1:30pm.

## Circuit Solutions

*Grades:* 3-5, 6-8

*Capacity:* 30 students

*Length:* 45 minutes

*Students will:*

- Assemble a working simple circuit
- Test insulators and conductors to learn about the transfer of energy (grades 3-5)
- Experiment with polarity and create a parallel circuit to study the strength of electric forces (grades 6-8)

## 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

## Engineering 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

## 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:* PreK4-1

*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

## 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

## What is That?

*Grades:* 4-8, 9-12

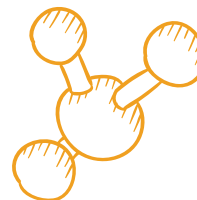
*Capacity:* 30 students

*Length:* 45 minutes

*Students will:*

- Use the scientific process to investigate mystery boxes
- Make hypotheses based on sensory perceptions and memories
- Defend their hypothesis using empirical evidence

Available  
Fall Only





## Wind and Waves

*Grades:* 2-5, 6-8

*Capacity:* 30 students

*Length:* 45 minutes

*Students will:*

- Determine what energy sources are derived from renewable and non-renewable resources and how their use affects the environment
- Create a model of an offshore wind and wave energy farm to maximize energy output then optimize your solution to tackle multiple challenges
- Create an efficient, cost effective design within a defined set of parameters (grades 6-8)



## Ziplock Chemistry

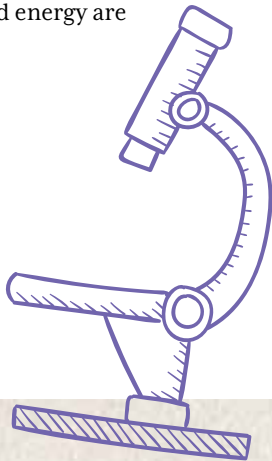
*Grades:* 3-8

*Capacity:* 30 students

*Length:* 45 minutes

*Students will:*

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



# Planetarium

Planetarium programs for school groups are by advance reservation only. Programs available at 10:30am and 11:30am.

## Live 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

### **Stories in the Stars**

*Grades:* 3-8

*Capacity:* 140

*Length:* 45 minutes

- See how different or similar the night sky looks in a tour around the world
- Find out how people from all around the world look up at the same stars and see different pictures
- Explore the night sky and hear stories that bring new pictures to life

### **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 Programs**

### **Cosmic Colors**

*Grades:* 4-12

*Capacity:* 140

*Length:* 35 minutes

- View the human eye up close and discover what structures allow us to see the visible light spectrum
- Discover the many reasons for color to find out why the sky is blue and why Mars is red
- Explore the invisible side of the electromagnetic spectrum and see how different wavelengths can be used in everyday life

### **Colors of the Solar System**

*Grades:* PreK4 - 2

*Capacity:* 140

*Length:* 15 minutes

- Tour our solar system through crayon likenesses of the Sun, Moon, and planets
- Explore the solar system's primary members and what makes them special
- Make comparisons to different places in our solar system

### **One World One Sky: Big Bird's Adventure**

*Grades:* PreK4-2

*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 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

### **We Are Aliens**

*Grades:* 4-12

*Capacity:* 140

*Length:* 35 minutes

- Explore how the understanding of life on Earth guides the search for alien life elsewhere in the universe
- See how astronomers detect planets around other stars and how to identify which might be habitable
- Consider how different science disciplines work together to answer the question "Are we alone in the universe?"

