

SCIENCE MUSEUM OF VIRGINIA

Curiosity Guide



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MINDS OF ALL KINDS

Welcome to an experiential overview of the Science Museum of Virginia – for inquiring minds only!

Plan your next adventure to the Museum using this resource as your guide. This guide provides a detailed walkthrough of our experiences, including descriptions of activities and the sensory-related factors associated with each area.


Throughout the guide, the following icons will represent environmental and sensory factors associated with our experiences:



Scents / Smells




Flashing Lights



Loud Noises



Periods of Darkness



Textures




Fast Action



Wet



Heat



Element of Surprise

The Museum is committed to being an accessible and inclusive community resource, providing quality learning experiences and using science to inspire all of our guests – from any background or circumstance. We invite you to explore at your own pace, whether you are looking for an afternoon adventure or a full day of fun.

Curiosity piqued? Discover the wonder that inspires learning at the Science Museum of Virginia!

www.smv.org

Exhibits & Galleries

To start your journey, enter through the Rotunda doors and stop by our Guest Services desk for admission tickets and general information. Our Guest Services team will provide you with a map and tips to enhance your visit. A schedule of daily events can be found on digital screens throughout the building or you can plan your ideal visit by checking our online calendar prior to your arrival. The Museum has a limited number of wheelchairs and resources available upon request. Please notify our team of any assistance we can provide to ensure that you have a positive and fulfilling experience.

Boost!



Scents / Smells



Flashing Lights



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Heat



Element of Surprise

A new approach to wellness and self-improvement, **Boost!** presents interactive physical and mental challenges. Featuring unique architectural elements, dramatic purple lighting and natural wood accents this gallery includes stations that encourage guests to reflect on goals while completing specific activities. This space is flanked by doors that give you outdoor access to our vintage trains and also provides additional seating for rest and personal reflection.

BENCH PRESS

Test your strength on a vertical bench press.

VERTICAL LEAP

Jump from a standing position to find out how many inches you can get off the ground.

BALANCING ACT

Walk along a suspended tight rope!

REACTION TIME

Test your reflexes by measuring how fast you can react to lights in a random sequence.

YOGA STRENGTH

Try out a variety of yoga poses with a virtual guide to challenge your strength and flexibility.

SHRINK TO FIT

Bend, fold or contort yourself to become as compact as possible.

TIME MACHINE

Unlock the power of time in pedaling to reach your personal destination or weight loss goal.

FOOD FOR THOUGHT

Uncover the truth and myths about what we eat in this interactive trivia game.

KITCHEN STADIUM

Step into our kitchen and help us create something delicious and nutritious.

RECIPE REMIX

Build your own recipe to try at home.

ENDLESS BUFFET

Tackle a conveyor belt challenge. Grab friends and assemble the trays before time runs out!

HAPPINESS

Find out what makes you happiest by process of elimination.

TOTAL RECALL

Challenge your short-term memory with a timed matching game.

PATTERN PLAY

Test your memory by replicating visual spatial patterns that increase in difficulty as you level up.

CONTROL YOURSELF

Learn to use biofeedback to alter your pulse rate.

WHERE ARE YOU LOOKING?

Track your eye movement – the results may surprise you!

WHAT'S YOUR PASSION?

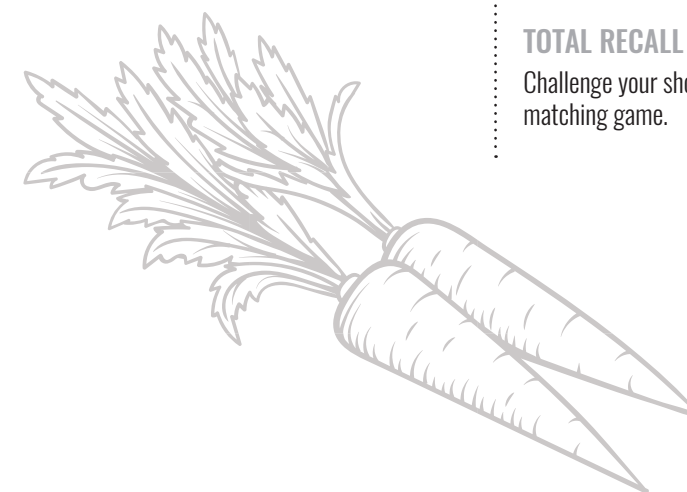
Discover the passions of hundreds of celebrities and iconic people.

MORE COWBELL

Compose new music using animatronic acoustic instruments.

HIT THAT NOTE

Hear a tone and see how closely you can match and hold it.



LightPlace



Flashing Lights



Loud Noises



Textures



Fast Action



Element of Surprise

LightPlace is a multi-faceted exploratory experience for infants to 5-year olds with age appropriate light-themed learning activities. With one entry point, this space provides a safe and active environment for our youngest scientists with constant on-site support from trained Gallery Educators and staff. Featuring a large, glass wall this area provides a natural light source and cozy atmosphere for families that includes a semi-private nursing station.



BRIGHT CLIMBER

Crawl through a tube, climb platforms and reach new heights in this interactive experience.

EVERBRIGHT LIGHT WALL

Rotate circular dials to adjust the hue of hundreds of lights and make a dazzling display.

LITEBRITE

Place colored pegs into a giant peg board to create large scale art with light.

BUILDING WITH MAGNETS

Use your imagination to build various shapes and structures with colorful magnetic tiles.

PATTERN PLAY

Match stars, hearts, triangles and other basic shapes in pattern-based puzzle activities.

RAINBOWS AND REFLECTIONS

Arrange brilliantly colored arches to make rainbows reflect on a mirrored-tabletop.



BUILDING BLOCKS

Assemble assorted blocks to construct a castle, build a tower and more.

COUNTING AND SORTING

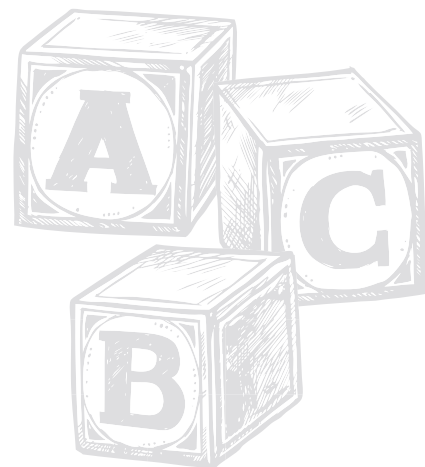
Practice counting with puzzles and broaden skills by learning how to sort items based on color and shape.

TEXTURE DOMINOES

Play with large-scale dominoes! Flip the pieces over to reveal textured animal silhouettes and challenge your knowledge of animal names and sounds.

INFANT ZONE

Crawl, sit or cruise in a padded play area for infants. Interact with soft toys and shake a set of tubes filled with different objects for a fun sensory experience.



Trains & Rotunda



Loud Noises



Textures



Fast Action



Wet



Heat



Element of Surprise

Learn how the Earth rotates, see 29 tons float effortlessly on water and explore the trains that traveled the tracks in the former Broad Street Station. Many experiences (**Kugel Grand Earth**, **Kugel Moon** and our train cars) are located outside, so guests will be subject to weather conditions the day of their visit. While our train cars are only available for tours during specific parts of the year, guests boarding the train cars can expect to experience small, narrow passageways with minimal standing room.



FOUCAULT PENDULUM

Watch our 235-pound pendulum show how the Earth rotates on its axis as you wait for one of 79 pegs to fall!

KUGEL GRAND EARTH

Can you move the Museum's 29-ton granite globe?

KUGEL MOON

Calculate the distance of the Moon from Earth with this 1,100-pound granite planet.

CAR ONE

See the luxurious Car ONE, built in 1919 by the American Car and Foundry Company.

DICKENSON CABOOSE

This bay window caboose was made in the 1970s.



MAIL CAR

See the train car used by the American Express Agency to move meat, fruits and vegetables across the country!

KITCHEN CAR

Built in the 1920s, this train car served as the onboard kitchen for both rail passengers and crews alike.

STEAM LOCOMOTIVE

This C&O Kanawha class steam engine pulled freight through the mountains of Virginia, West Virginia and Kentucky and traveled 300,000 miles before its retirement.



Speed



Flashing Lights



Loud Noises



Periods of Darkness



Textures



Fast Action



Element of Surprise

Featuring the SR-71 Blackbird, **Speed** unveils the mind-blowing intersection of motion and time – displaying demonstrations of the superfast to the incredibly slow. This gallery is located in the historic main concourse which is an open, three-story hall that features dramatic blue lighting for a self-lit, sensory experience. Blue lights race across the ceiling and flash throughout the gallery and guests are able to access outside spaces via ramps that lead directly to our collection of vintage trains.

SCIENCE THEATER

See a presentation on our six-foot suspended Science on a Sphere® globe or watch a live theater performance from our Carpenter Science Theatre Company.

GEOLOGIC TIME

Discover the speed at which the Earth's geography has changed.

EVOLUTION IN VIRGINIA

Listen, watch and discover how life in Virginia has been affected by evolution.

FOSSIL EVIDENCE

Unearth the speed of Virginia's geological change by examining pre-historic fossils.

SECRETARIAT

Learn about the speed and power of the greatest racehorse of all time.

SLOWETT DOWNS

Choose your competitor and discover which slow-moving object will win the race.

WORLD'S SLOWEST DEVICE

Don't hold your breath while you watch the world's slowest device in 'motion.'

FAST ROBOT

Compete against an air hockey playing robot and see who comes out on top.

ROTATIONAL SPEED

Try your hand at building your own fast or slow turning devices.

BIKE SAFETY TECHNOLOGY

Find out how high-speed cyclists use technology to protect themselves.

RACING BIKE

Experience the lightweight technology developed for high-speed racing.

EXTREME TIMES

Think you know fast? Explore a variety of surprising machine speeds.

AGE OF WIRELESS

Check out a collection of cell phones through the decades.

COMMUNICATIONS RACE

Compete against friends and a telegraph operator to see who has the fastest fingers.

FACE OF TECHNOLOGY

Scan your face and see how computers from different eras would render your image.

TRADING SPEED

See how stock market trading has evolved from slips of papers and "tickers" to battling to shave microseconds off of each transaction.

EXTREME WEATHER: HUMAN WIND TUNNEL

Want to feel the wind in your hair? Experience what it's like to move at a variety of high speeds.

FLOW CHAMBER

Position objects in a fluid flow to create disturbances.

SR-71 FLIGHT GEAR

Learn about the personal technology used to protect the lives of SR-71 pilots.

SPEED OF SOUND DISH

Use your own voice to experience and compare the speed of sound.

LASER RANGE FINDER

Use the speed of light to instantly measure distances with amazing accuracy.

MERCURY 7 CAPSULE

Climb inside and discover what it was like to travel in a space capsule that flew faster than the speed of sound.

MOON ROCK

See a real specimen from the Moon.

METEORITE

Touch and lift a portion of a meteorite that experienced a fiery trip though the Earth's atmosphere.



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RELATIVITY QUIZ

Test your knowledge of freaky, but true, relativistic speeds.

RELATIVITY BOOTH

What is so special about special relativity? Sit back, relax and find out!

SPEED HERO HELMET

Uncover man's journey to the Moon and beyond.

PITCHING CAGE

Pitch a ball and measure your performance.

SPRINT TRACK

Put on your running shoes and test your sprinting skills against a friend, an Olympic athlete or an animal.

BATTER UP

Test your batting reaction time to a 90 mph baseball pitch. Keep your eye on the ball!

YOU MAKE THE CALL

Use your referee and umpire skills to make split second decisions. Did you make the right call?

SPORTS BALLS

Analyze a display of various sporting equipment – from curling stones to shuttlecocks.

SPORTS ARTIFACTS

See Michael Phelps' swim cap, Arthur Ashe's tennis racket and Jeff Burton's NASCAR helmet.

WATER CAMERA

Watch falling water's hidden pattern revealed using modern camera technology.

WATER STROBE

See how dripping water is seemingly frozen in time by the fast repeated flashes of a strobe light.

SIGHT OF SOUND

Slow down the wave pattern of a vibrating string instrument and watch sound waves in action.

COSMIC RAY DETECTOR

Take a glimpse into the hidden world around you – see the tracks left by fast-moving, invisible particles.

HIGH SPEED CAMERA STUDIO



Watch your own speedy movements as they are displayed in slow motion images.

PRAXINOSCOPE

Experiment with the speed of changing images. Can you identify the point at which human vision stops 'seeing' individual pictures and begins to see a continuous moving image?

HIGH SPEED VIDEO BROWSER

Use a high speed video browser to reveal the almost invisible details of really fast things.

OUTBREAK! SPREAD OF CONTAGION

Explore the speed with which a contagion can spread and the factors that affect its speed.

RINGS OF TIME

How old do you think a tree is? Learn how to calculate the speed and rate of growth for trees and explore factors that influence their growth.

GROWTH POD

Witness the speed of plant and animal growth in real-time.

CHANGE OVER TIME

Compare relative speeds of change over long periods of time.

EXTREME GROWTHS

Explore a variety of surprising growth rates and speeds.

SPEED OF EROSION

Observe how the appearances of two identical objects change over time when one is exposed to the elements and the other is not.

TIME LAPSE CAMERA STUDIO

Watch really slow movements on a live-feed HD video monitor and compare for yourself.

EARTH TIMELINE

Check out this 'eons in inches' timeline to uncover significant milestones in Earth's history.

HUMAN TIMELINE

Are your parents so old they rode dinosaurs? Get some perspective on time and human history.



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Green Science



Scents / Smells



Flashing Lights



Loud Noises



Textures



Fast Action



Wet



Heat



Element of Surprise

Spark your sense of wonder by exploring several forms of energy. Many experiences (**Bayscapes Garden**, **Porous Pavers**, **Green Roof**, **Reynolds Aluminaut** and **Bioretention Wells**) are located outside, so guests will be subject to weather conditions the day of their visit. **Rainkeepers** is an indoor exhibition that features text panels, captioned video components and interactive stations situated within an open space with low ceilings and low lighting. While these exhibits are situated alongside areas that see high traffic during peak hours, at certain times it is often a quiet space with extra seating perfect for rest and reflection.

OUTDOORS

BAYSCAPES GARDEN

Explore a garden of plants native to Virginia to learn how it benefits the environment.

BIORETENTION WELLS

Get an up-close look at how shrubs, trees and grass are used to reduce stormwater runoff.

POROUS PAVERS

Step outside to see permeable pavement. Find out how rainwater passes through it and discover the ecological benefits of using porous material.

B – TRACK LEVEL

REYNOLDS ALUMINAUT

See the world's first aluminum submarine, The Aluminaut. Created by Reynold's Metals Company in 1964, The Aluminaut set a record for the deepest dive by a submarine.

WATT WALL

Track the world's energy consumption in real-time. Learn about alternative energy sources and new developments in energy that will fuel our future.

LEVEL 2

GREEN ROOF

Take a look at a green roof to learn how it prevents stormwater runoff and reduces energy costs.

RAINKEEPERS: EXTREME RAIN

Watch a video overview of flooding and learn more about the impact of this catastrophic event.

RAINKEEPERS: PRESS TO VOTE

Use our digital polls to lock in your vote and compare your views to others.

RAINKEEPERS: RAIN GAUGE

See a giant rain gauge that tracks rainfall accumulation in Richmond and learn how environmental factors impact rain water collection.

RAINKEEPERS: SHAPE OF RAIN

Watch a slow motion video of a water droplet falling and see how it changes shape as it descends.

RAINKEEPERS: POROUS PAVERS

Dig into the layers of pervious concrete and discover how many gallons of water are filtered by our porous pavement each year.

RAINKEEPERS: BIORETENTION

Discover how plants, soil, rocks and sand work to absorb and filter stormwater.

RAINKEEPERS: BAYSCAPES

Learn about a garden that uses native plants to reduce pollution and creates a habitat for insects.

RAINKEEPERS: TREE WELLS

Check out a model tree well and see how rainwater is collected, filtered and returned to the ground.

RAINKEEPERS: GREEN ROOF

Peel back the layers of a green roof – from the vegetation to the insulation to the substrate.

RAINKEEPERS: RAIN BARREL

Take a look at a rain barrel and learn how to collect up to 2,500 gallons of water from just one barrel.

RAINKEEPERS: IRRIGATION

Discover how you can use solar energy and rain barrels to irrigate a farm.

RAINKEEPERS: OCEAN OF PLASTICS

Watch a video overview of pollution in our oceans and learn about the impact of this issue.



Idea Factory



Mix science and art in the Museum's creative spaces! **Art Lab** and **Challenge Lab** are classroom-style areas that offer informal learning experiences with seating provided and room for individuals using wheelchairs. The Museum provides materials and encourages guests to experiment using suggested guidelines set by our Science Conductors.

The MiX is a teen-only maker space housed within a moderately-sized, modern workroom featuring worktables, a comfortable lounge area and the latest technology. The space includes a production studio featuring a green screen and audio/visual equipment. **The MiX** requires teens to apply for a free guardian-approved MiX Membership and is supervised by MiX Mentors and university volunteers.



B – TRACK LEVEL

IMAGINATION PLAYGROUND

Children construct their surroundings using giant foam blocks and shapes.

LITEBRITE

Place colored pegs into a giant peg board to create large scale art with light.

CHALLENGE LAB

Use innovation and ingenuity to tackle our challenges using select resources.

THE MIX

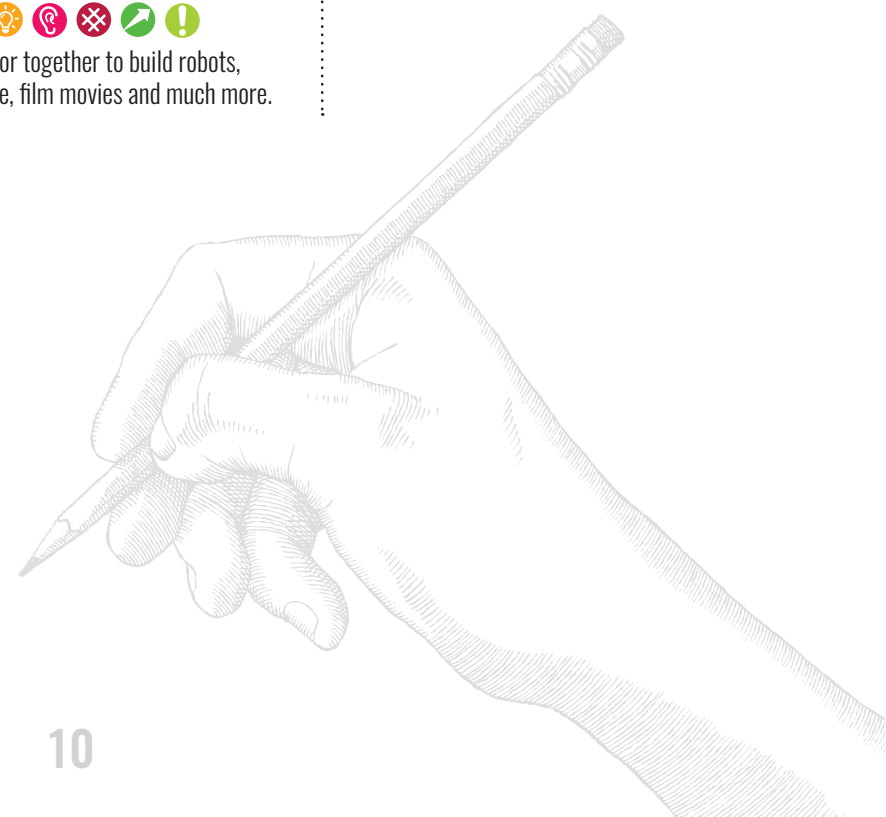
Teens work solo or together to build robots, learn how to code, film movies and much more.



LEVEL 2

ART LAB

Get inspired by the world around you and create your own science-themed art.



Creatures



Explore different ecosystems and animal adaptations – from finding the queen of a bee colony to seeing a snake shed its skin, these biological exhibitions will get you itching to explore the natural world. **Animal Lab** contains habitats situated within a small space featuring specialty lighting - interactive elements available for touching and holding are conducted exclusively with our Gallery Educators.

Our **Observational Honeybee Hive** is located within **Eco Lab**, a space filled with hands-on, small-scale projects that is always manned by staff and volunteers. **Rat Basketball** is typically performed within our third floor theater space and guests will often be encouraged to cheer and interact which may create excessive noise. Guests may have the optional opportunity to pet rats after a show. For information on how to secure handicap or disability seating, please visit our Guest Services desk.



LEVEL 2

ANIMAL LAB

Come face-to-face with scorpions, snakes and other reptiles and amphibians in Virginia ecosystems.

OBSERVATIONAL HONEYBEE HIVE

Search for the queen in our honeybee hive while learning how honey is produced and about the life cycle of bees.

ECO LAB

Take a closer look at some of the insects in our ecosystems.

LEVEL 3

RAT BASKETBALL

Learn about operant and classical conditioning as you watch two rats play basketball.



The Dome Theater

From learning how the night sky has inspired Earth's ancient wonders to trekking the African Savanna with a herd of elephants, our full dome theater allows guests to see the most fascinating and elusive places on Earth and beyond. **The Dome** features live astronomy content, **Cosmic Expeditions** and **Giant Screen Movies** that explore the far reaches of different worlds in stunning clarity – all from the comfort of your seat.

The Dome has 240 seats with additional seating areas at the top of the theater for wheelchairs and stand-alone chairs. Prior to a movie in the theater, soft lighting is provided for safe seating underneath our 76-foot screen showcasing slowly transitioning lights or astronomical scenery. Features begin after our Dome Operator announces where exits are located – our Dome Operator is present for the entirety of the feature in the case of an emergency or if a guest needs assistance exiting **The Dome**.

Complement your Dome Feature with resources meant to bring you the best possible experience. The Museum provides Rear Window Captioning Technology featuring closed captions which are available upon request. Glow-in-the-dark gloves are on hand for interpreters and families. Guests who use wheelchairs or have low-mobility may enter **The Dome** from the first floor by visiting the Guest Services desk prior to your feature.

Giant Screen Movies are 45-minute features with no live content. **Cosmic Expeditions** are 25-minute features with a 20-minute live presentation from our astronomer immediately following. While the theater will have periods of darkness during presentations, guests are welcome to leave at any time as the stairs will be lit for safety throughout the movie. To re-enter the theater, a member of our Guest Services team will gladly help you enter through the bottom entrance of **The Dome**.

The Museum is happy to help you schedule an American Sign Language interpreter for your visit with 24-48 hours' notice. If you have a special request or would like to receive a copy of our Dome Feature scripts prior to or during your visit, please email info@smv.org or visit our Guest Services desk upon arrival.



Giant Screen Movies



Flashing Lights



Loud Noises



Periods of Darkness



Fast Action



Element of Surprise

Embark on an epic journey that will transport you to some of the most beautiful and elusive places on Earth. Once a feature begins, **The Dome** experiences frequent periods of extreme darkness – guests who may need to leave the theater mid-feature are encouraged to sit close to the exit (located at the rear of the theater) and alongside the stairwell which is lit to aid guests heading up the stairs. **The Dome** is manned by an operator at all times and is available in case of an emergency at the back of the theater. **Giant Screen Movies** are immersive programs that aim to make guests feel as if they are experiencing the wonders they're seeing alongside the stars of the movie, so guests may experience some dizziness or motion sickness during shows. All **Giant Screen Movies** are approximately 45 minutes.



DREAM BIG

Follow the inspirational stories of people who dared to dream, making the impossible possible with STEM!

FLIGHT OF THE BUTTERFLIES

Experience firsthand the beauty of the migration cycle of butterflies!

FORCES OF NATURE

Unearth the elemental power of earthquakes, tornadoes and volcanoes.

GRAND CANYON ADVENTURE:

RIVER AT RISK

Twist and turn in an epic rafting adventure down the Colorado River.

GREAT WHITE SHARK

Take the plunge into the realm of Earth's most fearsome predator.



Cosmic Expeditions



Flashing Lights



Loud Noises

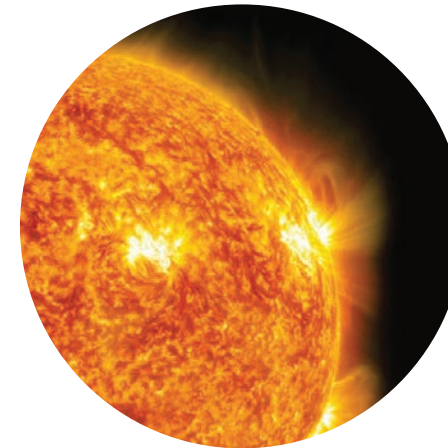


Periods of Darkness



Fast Action

Cosmic Expeditions have you traveling the cosmos in the most technologically advanced digital full dome theater in the world. Once a feature begins, **The Dome** experiences frequent periods of extreme darkness – guests who may need to leave the theater mid-feature are encouraged to sit close to the exit (located at the rear of the theater) and alongside the stairwell which is lit to aid guests heading up the stairs. **The Dome** is manned by an operator at all times and is available in case of an emergency at the back of the theater. **Cosmic Expeditions** are immersive programs that feature live components – as guests are encouraged to ask questions and interact with the program, there may be periods of excessive noise or interruptions from audience members throughout the live portion of shows. All **Cosmic Expeditions** are approximately 45 minutes and feature a live presentation from an astronomer.



BACK TO THE MOON FOR GOOD

Watch 30 teams across the world compete in the Google Lunar XPRIZE challenge.

EXPERIENCE THE AURORA

See nature's most stunning light show come to life.

LAMPS OF ATLANTIS

Explore how the stars influenced history's most inspiring civilizations.

LIVE UNIVERSE EXPLORATION

Take a custom all-live adventure through the universe!

PLANET NINE

Join astronomers in the search for a new ninth planet!

ROBOT EXPLORERS

Watch as robots boldly go where no man has gone before!

SECRET LIVES OF STARS

View stars like never before as you peer into their secret lives!



SECRETS OF THE SUN

Examine the pivotal role the Sun plays in the life of our solar system.

SEVEN WONDERS

Glimpse some of the universe's greatest wonders!

STARS OF THE PHAROHS

Search the skies of the past and uncover knowledge hidden in the sands of time.

SUNSTRUCK

Travel back to the beginning of time and learn about this special star that supports life.

VIOLENT UNIVERSE

Take look at the most enigmatic forces in the cosmos.

WE ARE STARS

Journey 13.8 billion years through time and space to discover our explosive origins!

WONDERS OF THE UNIVERSE

Embark on a journey through space and time for a spectacular tour of the universe.

Live Science Programs



From tinkering in our labs to generating ideas for your next invention, we experiment with the science all around us. Our Gallery Educators provide high quality learning experiences with hands-on labs and astounding demonstrations meant to make future scientists question their world.

Live Science Demonstrations



Scents / Smells



Flashing Lights



Loud Noises



Periods of Darkness



Textures



Fast Action



Wet



Heat



Element of Surprise

Be amazed and engaged with demonstrations conducted by our Gallery Educators. From foam fountains to experiments with liquid Nitrogen, these experiences are often included in our daily schedule and are attended by large groups. Demonstrations typically use materials and equipment that may result in loud noises, strong smells, unexpected explosions and flashing lights. Guests who may need to leave a demonstration early are encouraged to sit near exits in the spaces they are being performed. A staff member will be present at all times, during a demonstration.

Demonstrations are featured regularly in our daily programming and are largely conducted by our Gallery Education staff. These programs have guests answering questions, making hypotheses, observing chemical reactions and experiments with liquid Nitrogen and static electricity. Demonstrations are approximately 20-30 minutes long, and guests are welcome to exit the demonstration at any time. The Museum also features Carpenter Science Theatre Company performances by professional actors on a daily basis.

Our daily demonstrations are featured throughout the Museum on digital screens – you can also find this information on smv.org and our mobile app, The Muse. Since demonstrations are conducted by our staff, many will frequently feature explosions, surprising chemical reactions and other spectacles that may exude create a slight or noticeable smell and be accompanied by bright or flashing lights.

AMAZING ANIMALS

Find out what different animals need to survive in their environment and have an up-close encounter with snakes, cockroaches and rats.

BULL'S EYE! COW EYE DISSECTION

Learn about the eye-brain system as an educator dissects a cow's eye.

FOOD MAKES CENTS

Visit our state-of-the-art kitchen to delve into the science behind the everyday foods that we love to eat in a demonstration sponsored by SunTrust.

RADICAL REACTIONS

Witness four different types of chemical reactions and learn the difference between exothermic and endothermic reactions.

SCIENCE ON A SPHERE®: EARTH SCIENCE

Track natural disasters from the past before taking a closer look at more recent occurrences that have affected the world.

SCIENCE ON A SPHERE®: WEATHER JUNIOR

Get wind of the basics of weather and seasonal changes and learn how these processes affect living things.

SCIENCE ON A SPHERE®: WEATHER VS. CLIMATE

Follow the distribution of heat around the planet, learn why storms spin in one direction and see recent hurricanes, typhoons and cyclones.

SCIENTIFIC METHOD

Put your observation and prediction skills to the test as we go step by step through an exciting science experiment – what can we learn, and what could we do different next time?


SIMPLE MACHINES

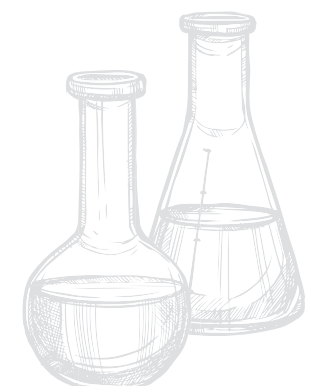
Explore how simple machines require less force to move an object. Identify everyday objects as a simple machine.

STATIC ELECTRICITY

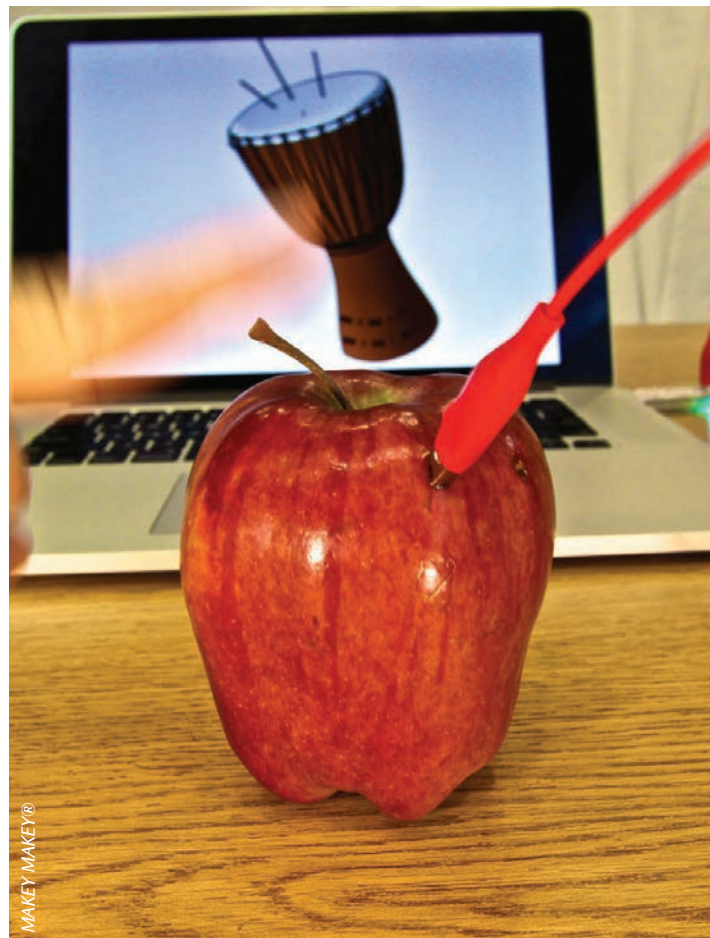
Experience 100,000 volts of electricity from the Van de Graaff generator and explore the force between charges.

SUPERCOOL: LIQUID NITROGEN

    Learn how solids, liquids and gases react to extremely cold temperatures and observe matter change state right in front of you!



Locations
Vary



Live Science Labs



Scents / Smells



Flashing Lights



Loud Noises



Textures



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Wet



Element of Surprise

Get hands-on with science activities that provide many ways of meeting the Scientific Investigation, Reasoning and Logic strands in the Virginia Standards of Learning. During lab sessions, guests are encouraged to get hands-on with specific activities which may have them touching, moving or controlling materials or equipment that may exude specific smells, have rough or sleek textures or make loud and unexpected noise. Guests who may need to leave a lab early are encouraged to sit near exits in the spaces they are being performed. A staff member will be present at all times during labs.

Labs are typically held for groups of 10 or more and are also conducted for general admission guests in our **Challenge Lab**.

In order to schedule a custom Live Science Lab for your group, we need two weeks' notice prior to the date of your visit. Live Science Labs are approximately 45 minutes long and guests are welcome to exit the lab at any time. Labs will be held in several spaces throughout the Museum.

The Museum is happy to offer additional space for learning aids or allow additional chaperones that are helping facilitate live science experiences for guests. If you need more information or have special requests, please call 804.864.1400.

BOAT CHALLENGE

Discover how you can use solar energy and rain barrels to irrigate a farm.

EGG DROP CHALLENGE

Design a structure that can protect an egg from a two-story drop while exploring kinetic and potential energy and energy transfer.

MAGNETS

Explore characteristics of magnets and investigate some of their everyday uses!

MASS AND MOTION

Work in groups to build a bobsled and time how long it takes to travel down a track.

OWL PELLET

Become a wildlife biologist and discover 'hoo' was for dinner as you dissect an owl pellet!

RENEWABLE RESOURCES CHALLENGE

Investigate the advantages and disadvantages of renewable and non-renewable resources as you design and construct your own ecofriendly creation.

ROBOTS GALORE!

Collaborate to create robots using Hummingbird Robotics Boards and build and design your own robot.

SOUND SCIENCE

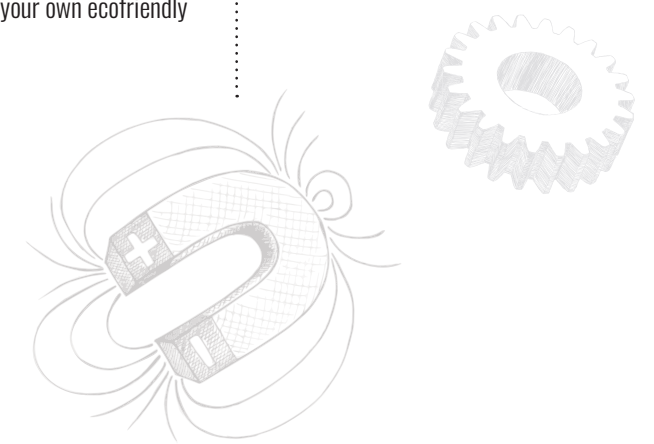
Construct a "musical" instrument and learn about resonance, vibration, frequency and pitch.

VIDEO GAME CONTROLLERS FOR HUMANITY!

Learn about circuitry and the design process through the creation of video game controllers.

WONDERPLACE

Through a variety of hands-on stations, travel back in time and uncover ancient inventions like kites, pyramids, compasses, silk and papyrus from Egypt and China.



Museum Map

3

Level

The third level is home to the Ms. Barbara Thalhimer Theater, a traditional presentation space. Housing daily Rat Basketball games and weekly Lunch Break Science lectures, this venue seats up to 119 guests.

2

Level

The **Inger Rice Learning Center** on the second level features labs and activity spaces, including the **Science Lab** and **Art Lab**. Guests will get an up-close look at creatures inside of the **Animal Lab** and see an observational bee hive inside of the **Eco Lab**. Other areas include the eco-friendly **Rainkeepers** gallery and the installation of the Museum's next permanent exhibition, **The Forge**.

1

Level

The main level houses the Museum's newest exhibition, **Speed**, as well as the Foucault pendulum, featured traveling exhibitions and the exit doors for **The Dome** theater. Other areas include the **RF&P Forum** showcasing historic photos of the building and the **Discovery Room** providing a geological overview of Virginia. Guests will also be able to enjoy several amenities including our full-service café and gift shop, alongside access to lockers and a vending area for snacks.

B

Track
Level

The bottom level, or track level, features both indoor and outdoor experiences. This level houses the dynamic **Boost!** gallery and the main entrance to **The Dome** theater, as well as areas designated specifically for teens and children under five. Guests can also test their ingenuity in the **Challenge Lab** or step outside to view vintage train cars.

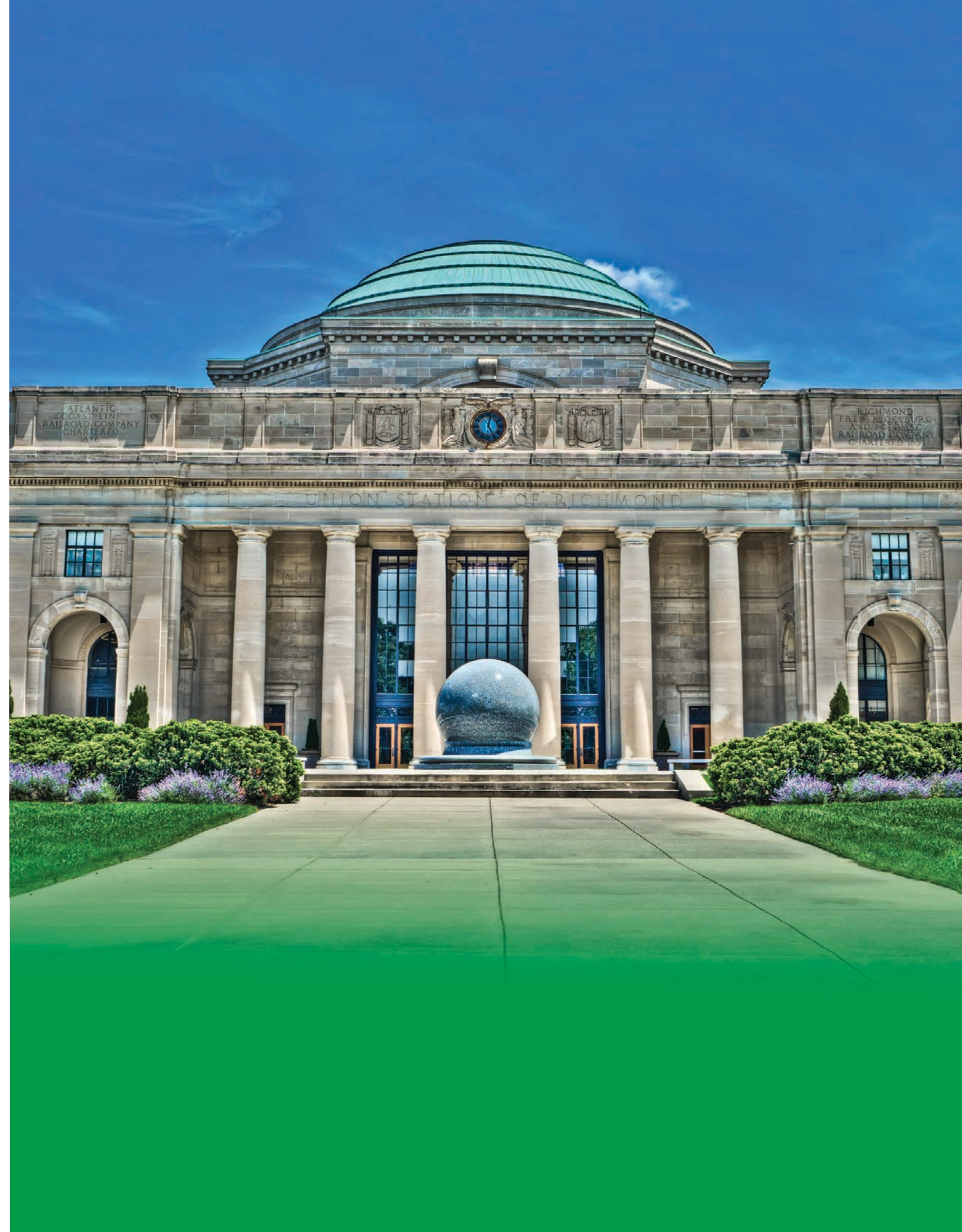


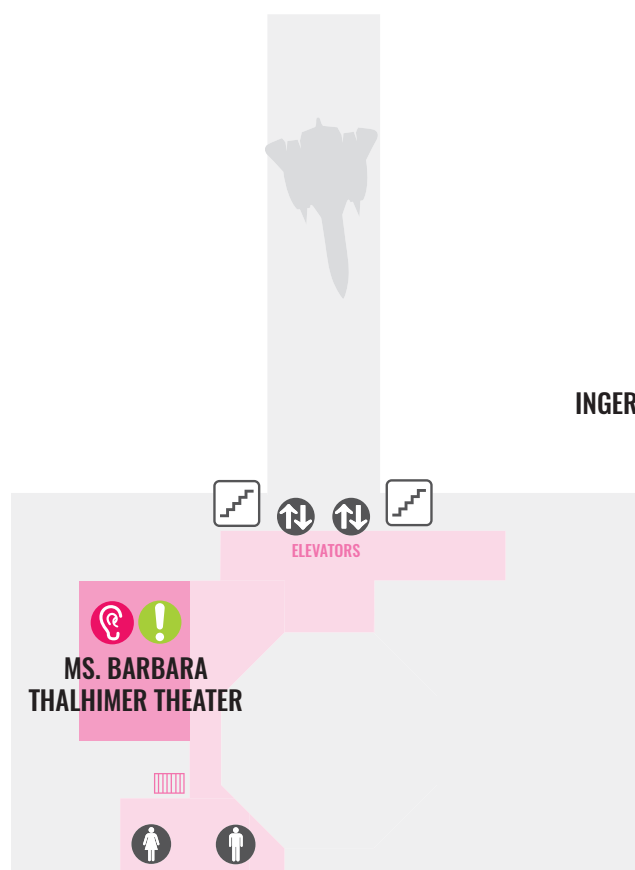
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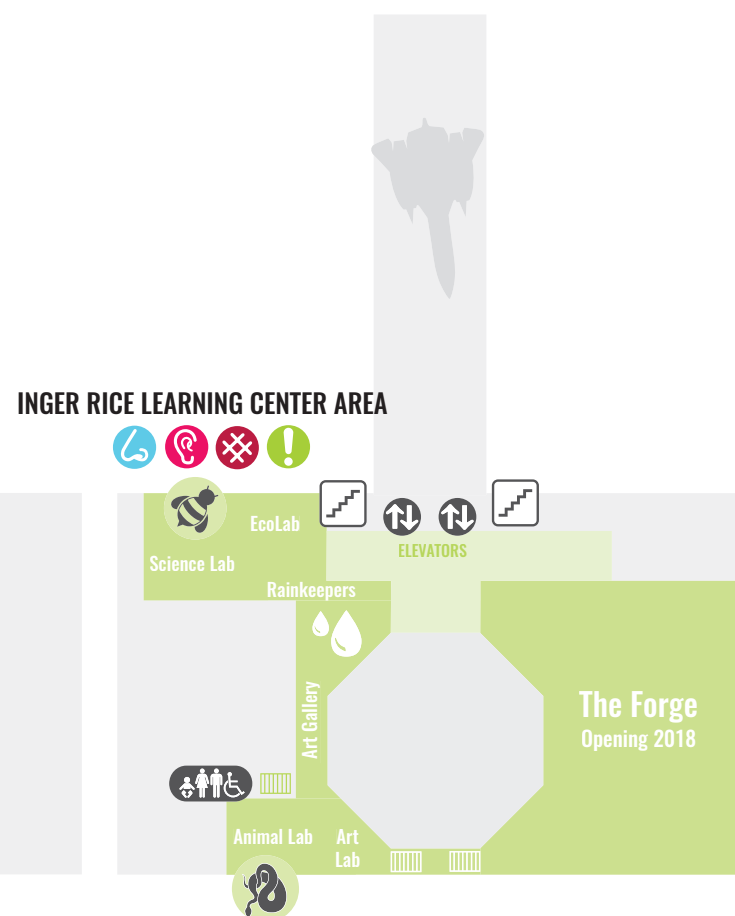
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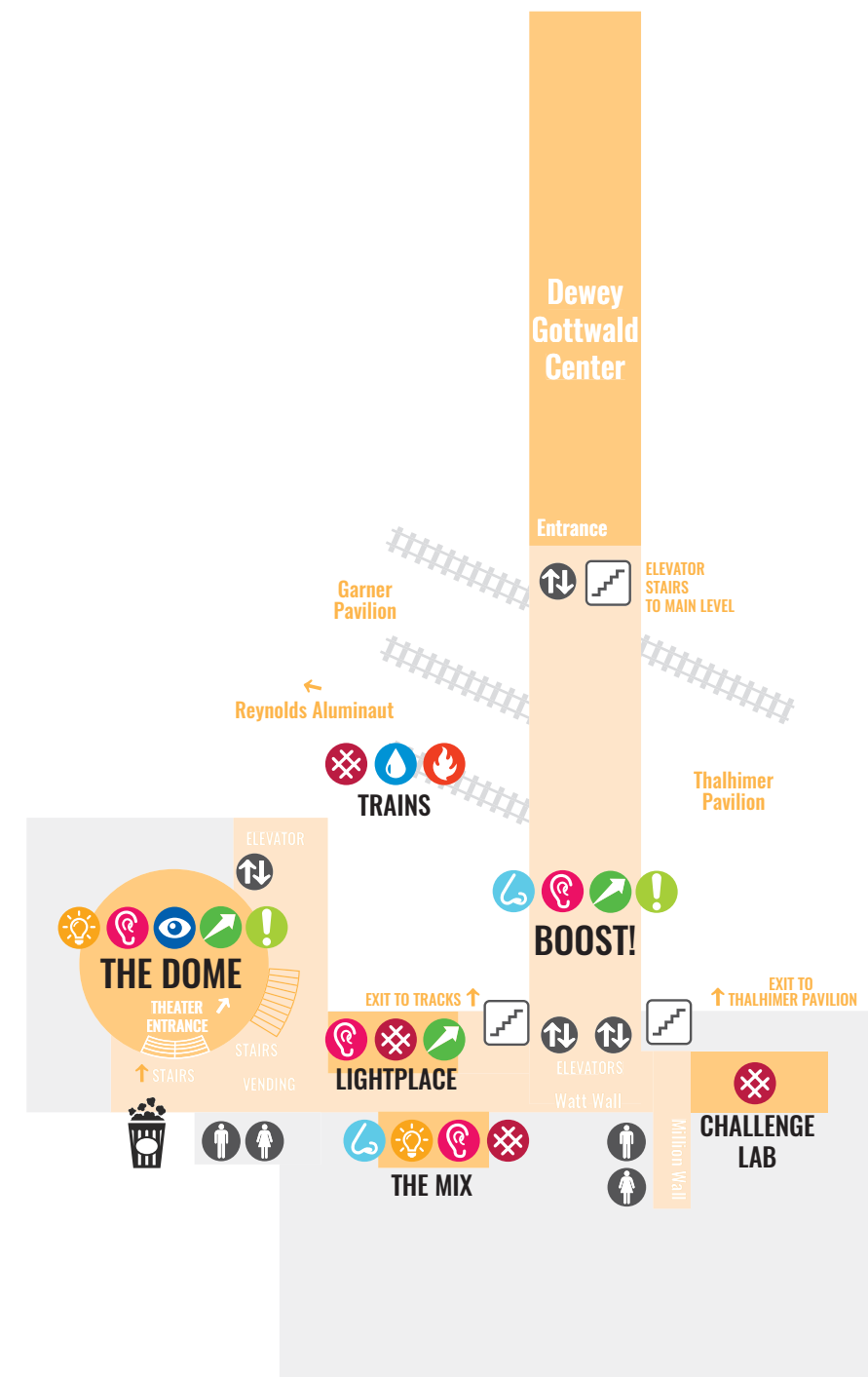
3
Level



2
Level



1
Level



B
Track
Level

