

EARTH SCIENCE

Earth Science students dig into the composition and history of our planet. To help students better understand Earth's rich history, our recommended adventure examines resources, weather and climate.



DEMO



LAB



WORKSHOP

FEATURED ADVENTURE

LIVE SCIENCE PROGRAM

Science on a Sphere®: Earth Science

Discover how plate tectonics have shaped our world. See where volcanoes are located and earthquakes happen in near real-time! Track natural disasters from the past before taking a closer look at more recent occurrences that have impacted the world.

DOMES FEATURE

Cosmic Climate Cookbook

Energy, atmosphere and liquid water are critical ingredients for supporting life on a planet. This original Dome feature explores the cosmic recipe for planetary habitability, what life here on Earth can tell us about our Universe and how our planet is changing from the cosmic perspective.

EXHIBITION

Speed

Learn about the speed of Virginia's geological change by examining pre-historic fossils, exploring a variety of surprising machine speeds, using the speed of light to measure distances with amazing accuracy and uncovering man's journey to the moon and beyond in this experience your students will quickly – pun intended – love.

ADD TO YOUR VISIT

LIVE SCIENCE PROGRAM

Choose any of these engaging programs to add to your visit. Hands-on labs are approximately 45 minutes long and demonstrations are approximately 30 minutes long.

Renewable Resources Challenge

What are renewable and non-renewable resources? Students will investigate the pros and cons of each as they design and construct their own eco-friendly creation.

Preparing for a Hotter and Wetter Virginia

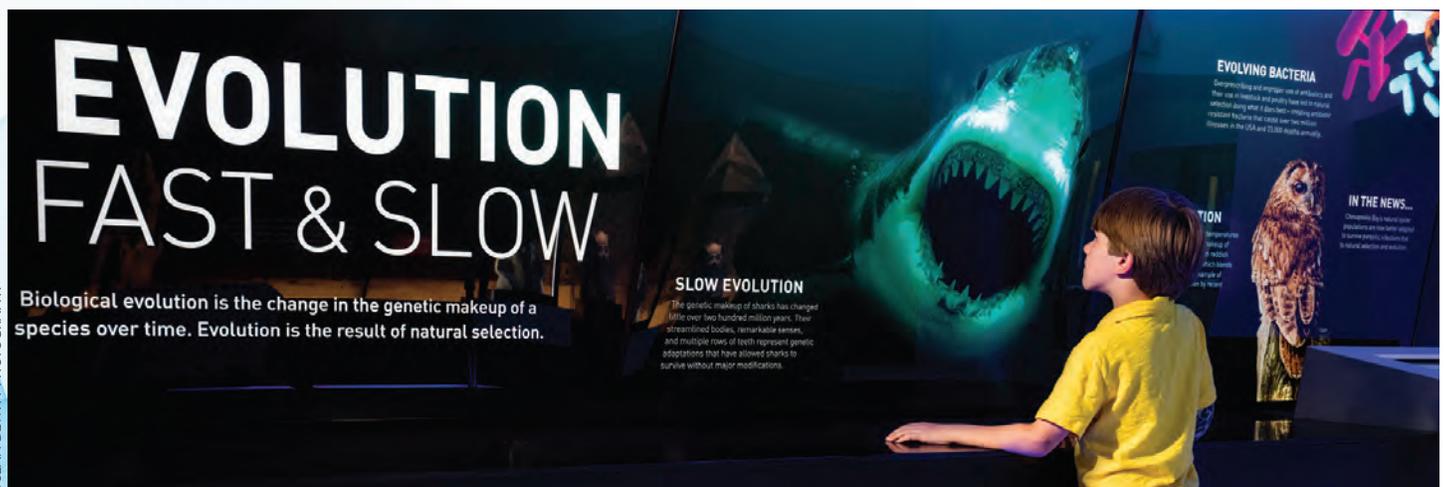
Extreme heat and rain events are already becoming more common here in Virginia. How can we leverage design, engineering, and natural landscapes to make our houses more resilient to these changes? Students will learn actionable steps they can take at home to become more resilient today.

Science on a Sphere®: Climate Resiliency

What can we do as individuals and communities to be resilient as the climate continues to change? A gallery educator will guide your students in a data-driven, deep dive into the science of climate change and community resiliency.

SOLS:

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Make your reservation today!

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BIOLOGY AND CHEMISTRY

Biology students conduct experiments to examine life forms.
Chemistry students explore the fascinating world of molecular science.
Our recommended adventure help these students get closer looks at their fields of study.

 DEMO

 LAB

 WORKSHOP

BIOLOGY ADVENTURE

LIVE SCIENCE PROGRAM

Cow Eye Dissection

You won't believe your eyes! Watch an educator dissect a cow eye while explaining its different parts and functions. Can cows see color? Do our eyes change over time? Learn about the eye-brain system by comparing the difference between human eyes and cow eyes.

DOME FEATURE

Amazon Adventure

Travel with explorer Henry Bates, a young man who risked his life for science in the 1850's, on a fascinating 11-year journey through the visually stunning and biodiverse Amazon rainforest. Experience the compelling clues Bates unearths in his major discovery of the phenomenon of mimicry, whereby certain animals adopt the look of others that helps them deceive predators and gain an advantage to survive. Nature is extraordinary and science is adventure, just waiting to be discovered.

EXHIBITION

Boost!

Boost! focuses on the science behind wellness, but it's so fun, students won't notice they're learning! Walk on a tightrope to appreciate balance; compose music using animatronic instruments or challenge peers to a battle of reaction times, memory games and vertical jumps. Boost! will really keep them on their toes.

CHEMISTRY ADVENTURE

LIVE SCIENCE PROGRAM

Radical Reactions

Chemistry is at its coolest when you put it into action! See four types of chemical reactions, learn the difference between exothermic and endothermic reactions, and watch as a colorless liquid solution changes to blue once shaken... not stirred.

DOME FEATURE

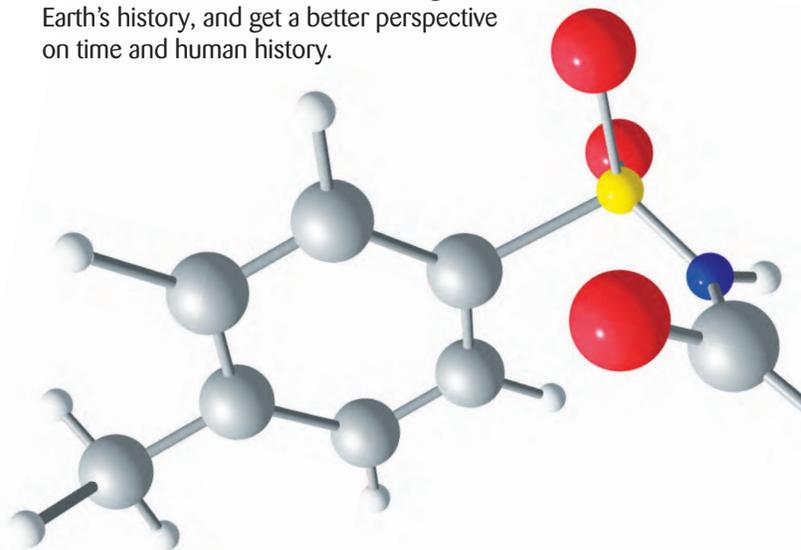
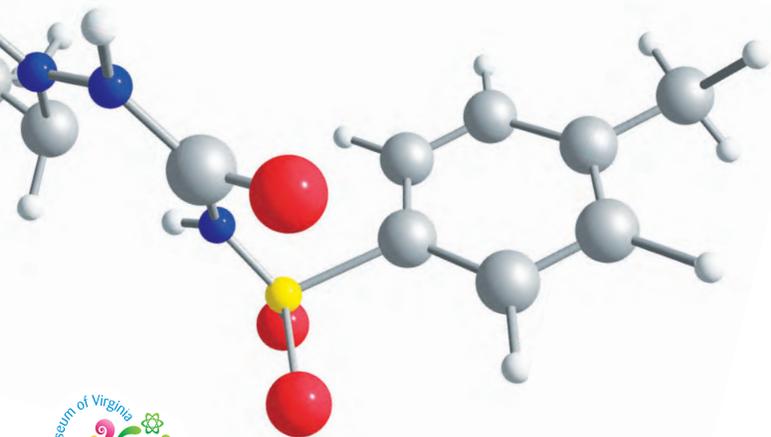
We Are Stars

Journey 13.8 billion years through time and space to discover our explosive origins. What are we made of and where did everything come from? Learn about our cosmic chemistry by following the formation of hydrogen atoms to the synthesis of carbon and beyond. See stars explode and planets form as you explore the secrets of the universe alongside the Time Master, a cheeky Victorian guide leading this steampunk-inspired adventure.

EXHIBITION

Speed

Take a glimpse into the hidden world around you – see the tracks left by fast-moving, invisible particles, compare relative speeds of change over long periods of time, check out our Eons in Inches timeline to uncover significant milestones in Earth's history, and get a better perspective on time and human history.



PHYSICS

Physics students take an in-depth look at the characteristics of energy and its connection with matter. To help students understand physical science principles, our recommended adventure investigates energy transformation and force and motion.



FEATURED ADVENTURE

ADD TO YOUR VISIT

LIVE SCIENCE PROGRAM

Video Controllers for Humanity (Grades 7+) 
Learn about circuitry and the design process through the creation of video game controllers. Using Makey Makeys, students will create their own controllers based on socially impactful and challenging parameters. No controller is complete until it's been tested, so buckle down to evaluate your creation – all in the name of science!

Maximum of 20 participants; must allow at least 1 ½ hours for program.

DOMESTIC FEATURE

Phantom of the Universe
Join us on a journey of discovery, following scientists around the world as they unlock the mystery of dark matter. Explore its creation during the Big Bang and its role in the formation of galaxies. Travel thousands of feet below the Earth's surface where teams of scientists work on experiments to detect the extremely rare interactions of dark matter with normal matter. Finally, take a tour of the gigantic CERN laboratory where beams of protons are hurled together in head-on collisions in an attempt to create new dark matter particles.

EXHIBITION

Speed
Watch falling water's hidden pattern revealed using modern camera technology; use your referee and umpire skills to make split-second decisions; put on your running shoes and test your sprinting skills against a friend, an Olympic athlete or an animal!

LIVE SCIENCE PROGRAM

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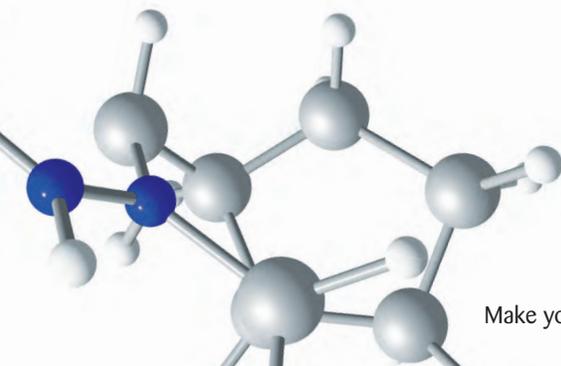
Catapult Competition Challenge 
Students will use their engineering skills to construct a working catapult. When done, they will compete to see which team's catapult can launch a projectile the furthest. This activity encourages a quick scientific investigation and students' skills in mechanics and physics come into play.

Egg Drop Challenge 
Design a structure that can protect an egg from a two-story drop while exploring kinetic and potential energy as well as energy transfer. And it's just fun to drop eggs.

SOLS:
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Make your reservation today!