

Danville Science Center

# Field Trip Guide

2024–2025





# Plan a Field Trip That Sparks Curiosity and Promotes Discovery!

Are you looking for a field trip that will expand on classroom lessons, make a lasting impact and, most importantly, provide lots of fun? If so, you've come to the right place!

Danville Science Center field trips are packed with exciting, challenging and hands-on educational activities. Students of all ages get the chance to experience the amazing world around us as they discover how STEM is part of almost every aspect of life.

Whether you're coming to explore our exhibitions, plan to see an astronomy show or giant screen film in The Dome, or want to add a Live Science Program, we're ready and waiting with options to ensure a field trip full of engagement and innovation.

In this guide, you'll find a variety of options for your next field trip that will appeal to all ages. Reach out and let us help you customize the perfect itinerary for your students!

Don't forget that group leaders planning a visit are always admitted free, so stop by the Science Center anytime to explore our exhibitions before your field trip. When you visit, be sure to ask about our complimentary educator membership.

We look forward to helping your students discover their world!

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**Danville Science Center**  
**677 Craghead Street**  
**Danville, Virginia 24541-1503**  
**434.791.5160**  
**dsc.smv.org**

## Hours

Labor Day–Memorial Day  
Wednesday–Saturday, 9:30 a.m.–5 p.m.  
Sunday: 11:30 a.m.–5 p.m.

Memorial Day–Labor Day  
Tuesday–Saturday, 9:30 a.m.–5 p.m.  
Sunday: 11:30 a.m.–5 p.m.

Closed November 28 and December 24–25

## To book a field trip:

**434.791.5160 ext. 203**  
**dscgs@smv.org**  
**dsc.smv.org/groups**

Follow us on Facebook  
and Instagram



# Exhibitions



## Crescent Crossing

This interactive exhibition is packed full of train-themed fun! Pre-K and early elementary school-age students have opportunities to explore science, technology, engineering and math fundamentals, such as creativity, problem solving and cause and effect.



## Go

Collaborate, compete and get ready to go! Students will explore the intersection between the physics of machines and the biology of the human body. They can show off their strength, test their reaction time, act like a hamster, race a black bear and more!



## Water

Students will become immersed in the importance of every drop! They can discover history trapped in ice, experience clouds, uncover life in a droplet, plunge to the depths of the ocean, learn about water usage from a 2,000-bottle wall and enter a rain room where they don't get wet!



# Experiences

## Butterfly Station

Students can view some of nature's most beautiful creatures! They can find out which caterpillars eat certain plants, learn methods to attract these pollinators and get inspired to create their own butterfly garden.

This experience is weather dependent and only available mid-April through mid-September.



## Touring Exhibition

### Under the Arctic: Digging into Permafrost

**September 22, 2024–May 4, 2025**

Transport to the Arctic to experience the sights and smells of the world's only permafrost research tunnel. Students can step into the shoes of a climate science researcher to solve engineering challenges posed by thawing permafrost. They will reflect on real stories from people whose lives have been impacted by the changing climate and marvel at their adaptation and ingenuity. The frozen landscape provides clues to our past, present and future. Students will discover how choices can positively impact the environment.



The Kiwanis Club of Danville Foundation and the Charles G. Patterson, Jr. Charitable Foundation have generously provided support for this touring exhibition.

*Under the Arctic: Digging into Permafrost* was produced and is toured by the Oregon Museum of Science and Industry. The exhibition was developed in collaboration with the Geophysical Institute at the University of Alaska Fairbanks and made possible by a National Science Foundation (NSF) grant.



# At-a-Glance Grade-Level Finder

## Live Science Programs

	Pre-K	K	1st	2nd	3rd	4th	5th	6th	7th	8th
<b>3 ... 2 ... 1 ... Blastoff!</b>						•	•	•	•	•
<b>Animal Adaptations</b>	•	•	•	•	•					
<b>The Big Chill</b>					•	•	•	•	•	•
<b>Build a Butterfly</b>	•	•	•	•						
<b>Floating Boats</b>	•	•								
<b>Fossil Finds</b>					•	•	•			
<b>Good Vibrations</b>		•	•	•	•	•	•			
<b>Opposites Attract</b>		•	•	•	•	•				
<b>Riverside Science</b>						•	•	•	•	•
<b>Rock 'n' Roll</b>					•	•	•			
<b>The Shocking Truth</b>						•	•	•	•	•
<b>Simple Machines</b>					•	•	•	•	•	•
<b>Simply Soil</b>					•	•	•	•		
<b>Sow It, Grow It</b>	•	•	•	•						
<b>Super Senses</b>	•	•	•							
<b>Water, Water Everywhere</b>					•	•	•	•	•	•
<b>Wild Weather</b>						•	•	•	•	•
<b>The Web of Life</b>		•	•	•	•	•				

## Dome Features

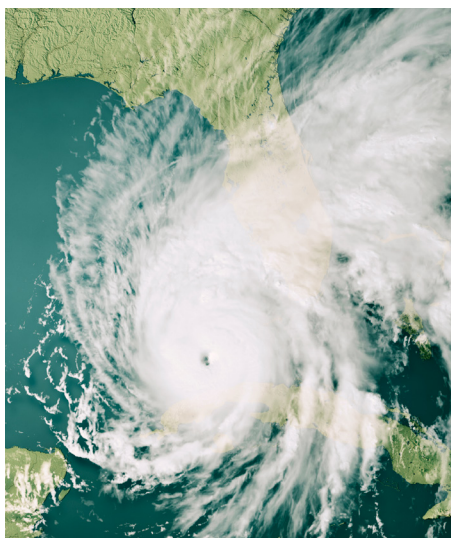
	Pre-K	K	1st	2nd	3rd	4th	5th	6th	7th	8th
<b>3-2-1 Liftoff!</b>			•	•	•	•	•	•		
<b>Accidental Astronauts</b>				•	•	•	•			
<b>Bugs! A Rainforest Adventure</b>					•	•	•	•	•	•
<b>Cosmic Journey: A Solar System Adventure</b>						•	•	•	•	•
<b>Dinosaurs: A Story of Survival</b>				•	•	•	•			
<b>Dinosaurs of Antarctica</b>						•	•	•	•	•
<b>Earth, Moon and Sun</b>	•	•	•	•	•	•	•			
<b>Edge of Darkness</b>						•	•	•	•	•
<b>Expedition Reef</b>						•	•	•	•	•
<b>Extreme Weather</b>						•	•	•	•	•
<b>Flight of the Butterflies</b>					•	•	•	•	•	•
<b>Into America's Wild</b>					•	•	•	•	•	•
<b>Magic Globe: A Story of the Seasons</b>			•	•	•	•	•			
<b>One World, One Sky</b>	•	•	•							
<b>Perfect Little Planet</b>					•	•	•	•		
<b>Superpower Dogs</b>					•	•	•	•	•	•
<b>Zula Patrol: Down to Earth</b>	•	•	•	•						



# Live Science Programs

Your students are budding scientists and adventurous explorers. They are constantly investigating and absorbing the world around them. To boost their innate curiosity, our Live Science Programs take classroom lessons to the next level by exploring fundamental scientific concepts and skills to develop an understanding of a broad range of topics.

Each program is approximately 30 minutes and can accommodate up to 30 guests. Programs marked **OUTREACH** are available to be presented offsite in the classroom.



## **3...2...1... Blast Off!** **OUTREACH** **Grades 4–8**

Students will have a blast using a cart to propel their understanding of force, rocket propulsion, potential and kinetic energy and Newton’s Laws of Motion.

Virginia Standards of Learning  
4.2, 5.2, 5.3, PS.8  
North Carolina Standard Course of Study  
PS.4.1, PS.5.2

## **Animal Adaptations** **OUTREACH** **Grades Pre-K–3**

Animals have basic needs, as well as physical and behavioral characteristics that help them survive in a variety of climates. Students will explore the diversity of organisms and how they adapt to their environments.

Virginia Standards of Learning  
K.6, K.7, 1.5, 2.4, 2.5, 3.4, 3.5  
North Carolina Standard Course of Study  
LS.K.1, LS.1.1, LS.2.1

## **The Big Chill** **Grades 3–8**

Dry-ice experiments offer dramatic demonstrations of scientific phenomena. Students will examine magic bubbles, bizarre balloons and fire extinguishers and experience changes with atoms, molecules and compounds in this ultra-cool program.

Virginia Standards of Learning  
5.7, 6.5, PS.2  
North Carolina Standard Course of Study  
PS.3.1, PS.5.1, PS.6.1



## **Build a Butterfly** **OUTREACH** **Grades Pre-K–2**

Students will investigate these beauties of the insect world! From metamorphosis to food sources to symmetry, butterflies are a wonderful starting point for understanding life cycles, camouflage and interdependency.

Virginia Standards of Learning  
K.6, K.7, 1.5, 2.4, 2.5  
North Carolina Standard Course of Study  
LS.K.1, LS.1.1, LS.2.1

## **Floating Boats** **Grades Pre-K–K**

Some things in our environment sink and others float. Students will investigate buoyancy by learning how to make a boat that will float heavy objects and testing how much weight it takes to sink the ship.

Virginia Standards of Learning  
K.1, K.3, K.4, K.5  
North Carolina Standard Course of Study  
PS.K.1

## **Fossil Finds** **OUTREACH** **Grades 3–5**

Students are going to dig this program! They will learn Earth history through this fossil investigation in coastal plain sediments and discover diversity in ancient ocean environments.

Virginia Standards of Learning  
2.5, 3.4, 5.8  
North Carolina Standard Course of Study  
LS.4.2

## **Good Vibrations** **OUTREACH** **Grades K–5**

We’ll blow your student’s mind—but not their eardrums—with the power of sound. What is sound? How does sound travel? How is sound measured? This program is sure to make waves as students learn all the news about noise.

Virginia Standards of Learning  
K.5, 1.2, 2.2, 5.5  
North Carolina Standard Course of Study  
LS.1.1

## Opposites Attract OUTREACH

### Grades K-4

Students will discover the effects of magnets on objects while exploring attraction, repulsion and magnetic poles. They will learn how magnets are used in daily life and investigate the interactions of magnets and their effects on objects.

Virginia Standards of Learning

K.2, 2.2, 3.2

North Carolina Standard Course of Study  
PS.4.1

## Riverside Science

### Grades 4-8

Students will walk down by the Dan River for a first-hand lesson in ecology. They will learn about our local ecosystem and watersheds, and conduct water-quality monitoring. A follow up classroom activity will continue to reinforce important science concepts.

Virginia Standards of Learning

4.8, 6.8, 6.9, LS.5, LS.7

North Carolina Standard Course of Study  
ESS.6.3, ESS.8.2, ESS.8.3

## Rock 'n' Roll OUTREACH

### Grades 3-5

This program rocks! Students will learn about weathering, erosion and major rock types as they explore the rock cycle, fossils and samples; perform streak tests and discover surprising results; and make their own model of a metamorphic rock.

Virginia Standards of Learning

4.8, 5.8

## The Shocking Truth OUTREACH

### Grades 4-8

Through hands-on experiments with static and current electricity, students will understand the function of different types of circuits while investigating the types of materials that allow and restrict the flow of electricity.

Virginia Standards of Learning

5.4, PS.9

North Carolina Standard Course of Study  
PS.4.2

## Simple Machines

### Grades 3-8

Can simple machines make work easier? Students will discover how levers, pulleys, inclined planes and others give us a helping hand through mechanical advantage. It's simply sensational!

Virginia Standards of Learning

3.2, 5.3, PS.8

North Carolina Standard Course of Study  
PS.3.2, PS.5.2, PS.7.2

## Simply Soil OUTREACH

### Grades 3-6

What is the difference between soil and dirt? Students will get hands-on to separate soil into four different-sized particles and learn about each component's important role in supporting a variety of plant life.

Virginia Standards of Learning

3.8, 4.8, 5.8

North Carolina Standard Course of Study  
ESS.3.2

## Sow It, Grow It OUTREACH

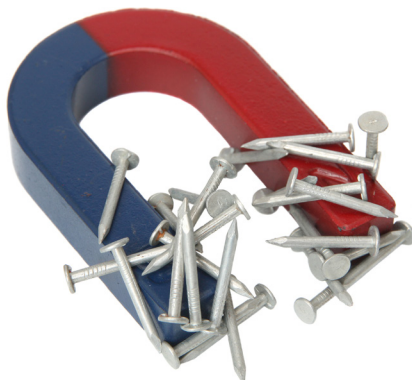
### Grades Pre-K-2

From seeds to flowers, and from roots to leaves, plants produce a variety of must-haves for humans and animals on Earth. Students sow their own seeds of learning with hands-on explorations of common plants.

Virginia Standards of Learning

K.6, K.7, 1.4, 2.4, 2.5, 2.8

North Carolina Standard Course of Study  
LS.1.1, LS.K.2, LS.2.2



## Super Senses OUTREACH

### Grades Pre-K-1

Have you ever followed your nose to find freshly baked cookies, investigated a strange sound or shaken a package to guess what's inside? Students will learn about the five senses as we trick our eyes and stump our sniffers with interactive games.

Virginia Standards of Learning

K.5

North Carolina Standard Course of Study  
PS.K.1

## Water, Water Everywhere

### Grades 3-8

How does pollution impact water quality? Students will watch a demonstration of the water cycle, see how this process leads to cleaner drinking water and discover how different soil types aid in water filtration.

Virginia Standards of Learning

3.7, 3.8, 4.8, 6.8, 6.9, LS.5

North Carolina Standard Course of Study  
ESS.3.2

## Wild Weather

### Grades 4-8

From cloud formation and lightning to rising seas caused by the increase in ice cap and glacier melt, students will explore various weather phenomena and better understand how extreme weather impacts the globe and its human inhabitants.

Virginia Standards of Learning

4.4, 6.7, LS.8

North Carolina Standard Course of Study  
ESS.4.3, ESS.5.1

## The Web of Life OUTREACH

### Grades K-4

This program helps students visualize the dynamics of the food web. They will understand the interconnected and overlapping food chains in an ecosystem and see how energy travels from the Sun to plants to bugs to birds and beyond.

Virginia Standards of Learning

K.7, 1.5, 2.4, 2.5, 3.5, 4.3

North Carolina Standard Course of Study  
ESS.4.3, ESS.5.1

# The Dome

Transport back in time, journey through the rainforest, take a cosmic journey through the solar system and much more! The Dome illuminates the universe with stunning clarity and brilliance on a gigantic 40-foot screen.

With new Dome features added regularly, adventurers of all ages are in for a treat!

Shows range from 20-45 minutes, and seating is limited to 95 per show. Ask about our special show times for groups of 25 or more.

## Astronomy Shows

### **3-2-1 Liftoff!**

**Grades 1-6 • 25 minutes**

Elon the hamster discovers a damaged robot in his garden. After repairing it, Elon learns that the robot fell from a spaceship that leaves in three days to prepare Mars for habitation. Will Elon get into space to return the robot in time?

Virginia Standards of Learning

K.3, 1.2, 3.2, 5.3

North Carolina Standard Course of Study  
PS.K.2, PS.1.1, PS.3.2, PS.5.2

### **Accidental Astronauts**

**Grades 2-5 • 32 minutes**

Follow the adventures of Cy, Annie and their dog, Armstrong, as they embark on an unexpected journey into space to explore the Sun and Moon system, solar storms and our fascinating home planet.

Virginia Standards of Learning

K.8, 1.6, 4.6

North Carolina Standard Course of Study  
ESS.1.1, ESS.3.1, ESS.4.1, ESS.6.1

### **Cosmic Journey: A Solar System Adventure**

**Grades 4-8 • 23 minutes**

Students will travel to the outer reaches of our solar system in search of worlds that might support life, see volcanoes tower 80,000 feet above a barren surface, experience monstrous hurricanes and explore multicolored rings suspended in air.

Virginia Standards of Learning

4.5, 6.2

### **Earth, Moon and Sun**

**Grades Pre-K-5 • 29 minutes**

Explore the relationship among cosmic bodies with Coyote, an amusing character adapted from Native American oral traditions, as he works through misconceptions about our home planet and its partnership with the Moon and Sun.

Virginia Standards of Learning

K.8, 1.6, 4.5, 4.6, 6.3

North Carolina Standard Course of Study  
ESS.K.1, ESS.1.1, ESS.2.1, PS.3.2, ESS.3.1, ESS.4.1, ESS.6.1

### **Edge of Darkness**

**Grades 4-8 • 25 minutes**

This film takes students on a spectacular flight through the great cliffs on comet 67P, gives them a look at the fascinating bright "lights" on Ceres and shows them the first closeups of dwarf binary planet Pluto/Charon and its moons.

Virginia Standards of Learning

4.5, 6.2

North Carolina Standard Course of Study  
ESS.6.1

### **Magic Globe: A Story of the Seasons**

**Grades 1-5 • 29 minutes**

Mia accidentally discovers a mysterious piece of astronomical machinery that changes the world's seasons. Students will follow along on the adventure to learn about weather, Earth science and nature.

Virginia Standards of Learning

1.6, 1.7, 2.7, 3.5, 4.6

North Carolina Standard Course of Study  
ESS.1.1, ESS.2.1, ESS.3.1, ESS.4.1, ESS.5.1

### **One World, One Sky**

**Grades Pre-K-1 • 30 minutes**

Students travel with Big Bird, Elmo and Hu Hu Zhu on an imaginary trip to the Moon, where they discover how different it is from Earth. Students will watch a brilliant spectacle of light and color as the stars twinkle over Sesame Street.

Virginia Standards of Learning

K.8, K.9, 1.6

North Carolina Standard Course of Study  
ESS.K.1, ESS.1.1, ESS.2.1

### **Perfect Little Planet**

**Grades 3-6 • 25 minutes**

Students will embark on a journey with an intergalactic family to discover our solar system. They'll walk the surface of Mars, sail through the rings of Saturn, discover lightning storms on Jupiter, dive over Miranda ice cliffs and fly over the surface of Pluto.

Virginia Standards of Learning

4.5, 4.6, 6.2, 6.3

North Carolina Standard Course of Study  
ESS.3.1, ESS.4.1, ESS.6.1

### **Zula Patrol: Down to Earth**

**Grades Pre-K-2 • 24 minutes**

The Zula Patrol must stop the villainous Deliria Delight before her toxic trash dumping causes catastrophic consequences. During this prehistoric pursuit, students learn about Earth's formation and development, and the life forms that call it home.

Virginia Standards of Learning

K.7, K.10, K.11, 1.7, 1.8, 2.5, 2.7, 2.8

North Carolina Standard Course of Study  
LS.K.1, LS.K.2, LS.1.1, LS.2.1

ESS = Earth System, Structures   LS = Life Science   PS = Physical Science





## Giant Screen Films

### *Bugs! A Rainforest Adventure*

**Grades 3–8 • 40 minutes**

Bugs are bizarre, beautiful and fascinating. From metamorphosis to mastery, predator to prey and community to concealment, extraordinary large-format images magnify insects and bring students face-to-face with their miniscule universe.

Virginia Standards of Learning  
K.6, K.7, 1.5, 2.4, 2.5, 3.4, 3.5, 4.5, 5.5  
North Carolina Standard Course of Study  
LS.K.1, LS.1.1, LS.2.1, LS.2.2, LS.4.1, LS.5.2, LS.6.2

### *Dinosaurs: A Story of Survival*

**Grades 2–5 • 28 minutes**

Celeste is preparing a class talk about how dinosaurs went extinct when she's confronted by a tantalizing question: what if there are still dinosaurs among us? Celeste embarks on an epic journey through time to discover the key to their survival.

Virginia Standards of Learning  
2.5, 3.4, 3.5, 4.2  
North Carolina Standard Course of Study  
LS.2.2, LS.4.1, LS.5.2, LS.5.3, LS.6.2

### *Dinosaurs of Antarctica*

**Grades 4–8 • 42 minutes**

From the Permian through the Jurassic, journey to the south polar landscapes of Antarctica millions of years ago. Students will follow scientists on a quest to understand the ice continent's transformation and to predict the future of human-driven change.

Virginia Standards of Learning  
4.2, LS.3, LS.6, LS.7, LS.10, LS.11  
North Carolina Standard Course of Study  
LS.4.1, LS.5.2, LS.5.3, LS.6.2

### *Expedition Reef*

**Grades 4–8 • 26 minutes**

Embark on an oceanic safari of the world's most vibrant—and endangered—marine ecosystems. Discover how corals grow, feed and reproduce while facing unprecedented threats from climate change, habit destruction and overfishing.

Virginia Standards of Learning  
4.3, 6.6, 6.9, LS.5, LS.6, LS.7, LS.8, LS.9  
North Carolina Standard Course of Study  
ESS.3.2, LS.4.1, ESS.4.3, LS.5.2

### *Extreme Weather*

**Grades 4–8 • 39 minutes**

Weather has always been one of the most dynamic and complex forces shaping our planet. Join teams studying the melting tidewater glaciers of Alaska and placing sensors inside tornadoes in the Great Plains.

Virginia Standards of Learning  
4.4, 6.7, LS.8  
North Carolina Standard Course of Study  
ESS.4.3, ESS.5.1

### *Flight of the Butterflies*

**Grades 3–8 • 44 minutes**

Migrate with millions of monarchs across North America! Students will be immersed in this compelling adventure as a super generation of butterflies travels to a new destination spanning thousands of miles and several generations.

Virginia Standards of Learning  
3.4, 3.5, 3.8, 4.2, 4.3, LS.5, LS.6, LS.8, LS.9  
North Carolina Standard Course of Study  
LS.3.3, LS.4.1, LS.5.2

### *Into America's Wild*

**Grades 3–8 • 45 minutes**

From the wilds of Alaska and lush coastline of Oregon to ancient canyons of the Southwest and rolling hills of the Appalachian Trail, this non-stop adventure shows students North American landscapes are as varied as they are stunning.

Virginia Standards of Learning  
3.5, 4.8, 6.8, 6.9, LS.9  
North Carolina Standard Course of Study  
ESS.3.2, ESS.4.2, LS.5.2, ESS.6.2

### *Superpower Dogs*

**Grades 3–8 • 44 minutes**

Students will journey around the globe to meet remarkable dogs who save lives, discover the powerful bond they share with their human partners and explore the astonishing science behind K9 superpowers.

Virginia Standards of Learning  
3.4, 4.2, LS.7, LS.10  
North Carolina Standard Course of Study  
LS.4.1, LS.5.3



# Bringing the STEM to You!

## Outreach Programs

Can't get to us? We'll come to you! Let us bring the excitement of the Science Center to your students. Throughout this guide, you will see Live Science Programs noted with **OUTREACH**. Those engaging activities about a variety of topics are available to be presented in your classroom.

## STARLAB Portable Planetarium

Help your students have a stellar cosmic experience with STARLAB. They will explore the relationship between the Sun, Earth and Moon, current and upcoming space missions, and repeating cycles and patterns in our portable planetarium.

Virginia Standards of Learning

K.9, 1.6, 1.7, 4.5, 4.6, 6.2, 6.3

North Carolina Standard Course of Study

ESS.1.1, ESS.3.1, ESS.4.1, ESS.6.1



Outreach programs are \$150 for the first program each day. Each additional program on the same day is \$100. Up to five of the same program can be scheduled on one day at your school. Programs are designed to serve up to 25 students per session. A mileage fee will apply for travel greater than 35 miles one way.

ESS = Earth System, Structures    LS = Life Science    PS = Physical Science





# Make the Most of Your Visit

## Group Admission Fees

For groups of 10 or more.

Exhibitions Only .....	\$8
Exhibitions + Dome .....	\$9
Exhibitions + Live Science Program.....	\$10
Exhibitions + Dome + Live Science Program.....	\$11

If you book a field trip in September, October, January or February, you will receive a \$1 discount per person.

Please ensure you have one adult chaperone for every 10 youth. One staff member for every four youth will be admitted free during a group visit. Additional adult chaperones, parents and siblings are \$7 each.

Since groups enjoy a discounted admission fee and exclusive programs, individual memberships and other discounts or coupons are not valid toward group admission fees.

## Trip Tips

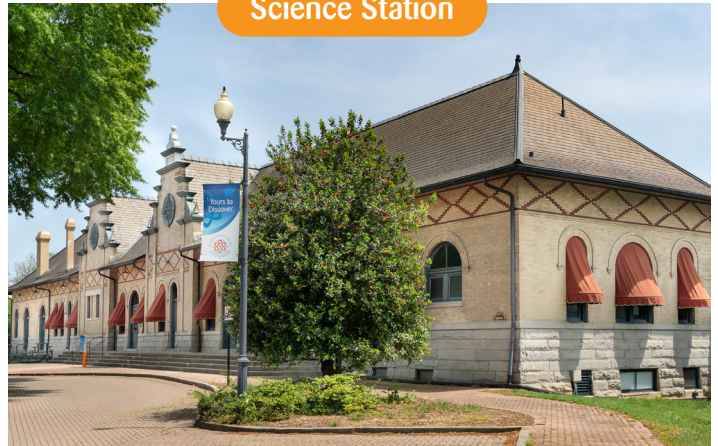
- If the number of students and chaperones has changed by more than five persons since booking the visit, please call at least three days in advance to update your numbers.
- Collect chaperone admission prior to your visit to make the check-in process smoother.
- If bringing bagged lunches, have lunch bags together in boxes or totes to make unloading from buses easier.
- If you need to purchase lunches, please contact Chick-fil-A® at 434.791.3199 or O’Kelly’s Deli & Pastries at 434.836.7970.



Science Central



Science Station



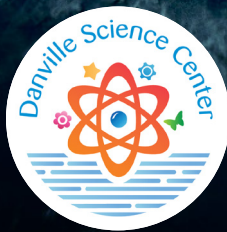
## Explore the Store!

Take a bit of the Science Center experience with you. The gift shop features a wide variety of science books, projects, games and toys carefully selected to engage students in thinking about and exploring science.

Souvenir bags can be pre-packaged for students. Containing some of our most popular items, these bags can be assembled in a price range of \$5 to \$10 each. Please call 434.791.5160 ext. 203 at least two weeks in advance of your group’s visit to order the bags.

Call 434.791.5160 ext. 203 to start your journey today!





Danville Science Center

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