

DANVILLE SCIENCE CENTER

FIELD TRIP

GUIDE 2023-2024



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!



To book a field trip:
434.791.5160 ext. 203
dscgs@smv.org
dsc.smv.org/groups

For general information about
Science Center programs and events:
Visit dsc.smv.org

Follow us on



TABLE OF CONTENTS

- Exhibitions and Experiences 1
- Touring Exhibitions 2
- At-a-Glance Grade Level Finder 3
- Live Science Programs 4
- The Dome 6
- Outreach Programs 8
- General Info 9

Exhibitions and Experiences



©SEAN DEWITT PHOTOGRAPHY



©SEAN DEWITT PHOTOGRAPHY



Butterfly Station

View some of nature's most beautiful creatures! Find out which caterpillars eat certain plants, learn methods to attract these pollinators and get students inspired to create their own butterfly garden. Available mid-April through mid-September (weather dependent).

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! 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 you don't get wet!

Touring Exhibitions



Dinosaur Revolution

September 16, 2023–January 21, 2024

Help your students live large, romp in reptilian role-play and travel through time! Students will find evidence of dinosaur doings, discover theories of how they became extinct and slip on dinosaur feet to make a big impression. They will work together to master three Mesozoic Era missions, mimic dino behavior and learn why dinosaurs are one of the most successful survivors in Earth's history. Don't miss this chance to take a bite out of science!



Thomas & Friends™: Explore the Rails

February 10–September 8, 2024

The world's most beloved blue engine and his useful friends are rolling into town! Preschool and early elementary school-age students will find themselves surrounded by the Island of Sodor's iconic locations, such as Knapford Station and Sodor Steamworks. They will enjoy a variety of engaging STEM challenges, such as climbing aboard a large model of Thomas the tank engine, racing trains along a giant track, working together to sort and load cargo, maintaining engines and more!

© 2024 Gullane (Thomas) Limited *Thomas & Friends™: Explore the Rails!* was created by Minnesota Children's Museum, presented by Fisher-Price.

At-a-Glance Grade Level Finder

Live Science Programs

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

Dome Features

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

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

Extreme 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

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

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, fly on the backs of pterosaurs, 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 • 37 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 • 38 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



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

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

Grossology & You

Grades 4-8 • 27 minutes

Game show host Noreen Neuron will engage students in a competition to decide which body system is the best and brightest. The inner workings of human anatomy will promote both learning and laughter!

Virginia Standards of Learning:

LS.3

North Carolina Standard Course of Study:
LS.3.1, LS.5.1

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 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





Science Central



Science Station



Make the Most of Your Visit

Hours of Operation

Labor Day–Memorial Day: Wednesday–Saturday, 9:30 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 23 and December 24

Group Admission Fees

For groups of 10 or more.

Exhibitions.....	\$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 \$5 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.

**Call 434.791.5160 ext. 203
to start your journey today!**

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 the vendors below directly.



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

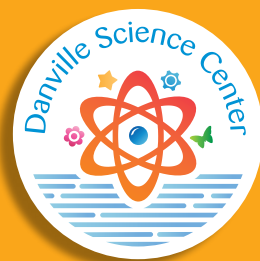
Help your students have a stellar cosmic experience with STARLAB. They will explore the relationship between the Sun, Earth and Moon, current and upcoming space missions, and repeating cycles and patterns in our portable planetarium.

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 programs 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



677 Craghead Street
Danville, Virginia 24541-1503
434.791.5160 | dsc.smv.org