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# Roper Mountain

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**2019 – 2020 Educator's Directory**  
Standards Based Learning Labs  
in Science and Social Studies

Registration deadline for on-site learning labs is September 9, 2019



# Roper Mountain Science Center



## Welcome!

Roper Mountain is a unique and special place that we are excited to share with you and your students! Check out the new offerings we have in this guide. Based on teacher feedback, we are utilizing a fillable PDF registration instead of fax ([click here for form](#)). This form can be submitted electronically or scanned and emailed to our Scheduling Office.

We know that we will provide an exceptional experience and setting that will give you and your students a memorable and standards-based field trip that cannot be duplicated.

We look forward to seeing you on the Mountain to *Search, Discover, Explore, and Create!*

**Michael Weeks**  
Director



Roper Mountain  
Science Center

A 402 Roper Mountain Road  
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# Roper Mountain Science Center



**Roper Mountain is an educational facility of Greenville County Schools, South Carolina. The center is dedicated to providing educational opportunities that excite and motivate students and their teachers. The 60 acre complex offers learning labs to students on a daily basis. The Mountain’s educators also travel to schools for outreach programs in science. Educational programs for the family are offered through Second Saturday public days, Friday night observatory/planetarium shows and special events throughout the year. Call the Education Office at 864.355.8967 or visit RoperMountain.org for information on all of our services.**

## Standards-Based Learning Labs

Learning labs held at the center and in the schools are designed to support the South Carolina Curriculum Standards in science, social studies, and physical education. We recommend that Greenville County School teachers request their visit for the month after they have completed a science curriculum unit.

## How To Schedule

- Teachers must submit a request form by the deadline of September 9, 2019
- This year we are utilizing a fillable PDF registration instead of fax. Registration forms can be submitted electronically ([click here](#)) or scanned and emailed to our Scheduling Office at [dogle@greenville.k12.sc.us](mailto:dogle@greenville.k12.sc.us).
- Registration forms may be mailed to:  
**Roper Mountain Science Center  
 Education Office  
 402 Roper Mountain Road, Greenville, SC 29615**
- Requests received after September 9, 2019 will be scheduled last.
- Admission for learning labs is free for Greenville County Public, Private, and Home School students and teachers except for special engagement learning labs, outreach and virtual field trips. For students outside Greenville County and for charter schools, see the fees page.
- On the request form, rank the group (1st, 2nd, 3rd) or list the learning labs (4th — high school) you would like to attend.
- The form enables up to two teachers to schedule a visit on the same day so they can share a bus.
- Multiple classes may request to visit the same day if noted on your request prior to your being scheduled.
- For more information about learning labs contact the Education Office at 864.355.8967.



## Roper Mountain Science Center

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## First Grade (September - April)



### First Grade Planetarium Days Adventures in Space Science (September - April)

Adventures in Space Science allows you to choose between three exciting planetarium shows, “The Little Star that Could,” “Magic Tree House: Space Mission” or “One World, One Sky: Big Bird’s Adventure,” in addition to receiving an engaging lesson on the properties of the Sun and Moon and the features of the day and night sky. **Science Standards: 1.E3A.1, 1.E3A.2**

#### The Little Star That Could Planetarium

An age-appropriate story about Little Star, an average yellow star in search of a planet of his own to protect and warm. Students will learn the importance of the Sun as a star that provides heat and light for Earth. Instructors will also demonstrate the daily patterns of the Sun and Moon including sunrise and sunset.

OR

#### Magic Tree House: Space Mission Planetarium

Peek into the tree house and follow Jack and Annie on an exciting adventure as they meet an astronomer and an astronaut who guide them along a fun-filled journey to discover the secrets of the Sun, Moon, planets, space travel and more.

OR

#### One World, One Sky, Big Bird’s Adventure Planetarium

Join Big Bird and Elmo as they explore the night sky with Hu Hu Zhu, a Muppet from “Zhima Jie,” the Chinese coproduction of Sesame Street. Together they take an imaginary trip from Sesame Street to the moon, where they discover how different it is from Earth. They also journey to Zhima Jie to learn about the similarities in our view of the sky.

Choose one of the following two options:

### Option A

Arrive at 11:00am and view the 11:15am planetarium show. Afterwards, have lunch before returning to school.

### Option B

Arrive at 11:30am and have lunch upon arrival before viewing the 12:15pm show.



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## First Grade (May Only)



### First Grade May Adventure Days

An exciting day of adventure awaits as you and your students participate in hands-on learning experiences specifically tailored to first grade learners. **These lessons are offered ONLY in May. Space is limited so these Adventures will be scheduled on a first come, first served basis.**

**Choose one of the following three options for your day-long experience:**

#### 1. Exploring Light & Shadows **New!**

In this day-long exploration, students will discover the properties of light and shadows through hands-on experiments in our Symmes Hall labs as well as enjoy an interactive presentation on space and light in the Hooper Planetarium.

##### **Magic Tree House: Space Mission** Planetarium

Peek into the tree house and follow Jack and Annie on an exciting adventure as they meet an astronomer and an astronaut who guide them along a fun-filled journey to discover the secrets of the Sun, Moon, planets, space travel and more.

**Along with the Planetarium show, your day also includes the following experiences:**

##### **Feel the Heat** Symmes Hall — 30 Minutes

Your future engineer will get warmed up with this hands-on experience! Students will explore the effect of the sun's heat in warming the earth by designing the most effective solution to block the sun's rays.

**Science Standards: 1.E.3A.4; 1.E.3A.5; 1.S.1A.2; 1.S.1B.1**

##### **See the Light** Symmes Hall — 30 Minutes

Unlock the mysteries of light! This hands-on experience will demonstrate how light behaves as it strikes an object and travels through translucent, transparent, and opaque materials. **Science Standards: 1.P.2A.1; 1.P.2A.2; 1.S.1A.4**

##### **Cast a Shadow** Symmes Hall— 30 Minutes

Can you solve the shadow challenge? Students will work on their "light moves" by using an interactive shadow box to explore how shadows change as an object moves past a light source. Students will use their discoveries to determine which location in a city would have the most shade throughout the day.

**Science Standards: 1.P.2A.1; 1.P.2A.3; 1.S.1A.2**

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# First Grade (May Only)



Continued from previous page.

OR

## 2. Down on the Farm **New!**

In this day-long exploration, students will move throughout the Living History Farm to learn about plant structures, land use, and natural resources as they interact with our farm animals, explore the gardens and discover artifacts from our community in our 200 year old cabins, as well as enjoy an interactive presentation on space and light in the Hooper Planetarium.

### **Magic Tree House: Space Mission** Planetarium

Peek into the tree house and follow Jack and Annie on an exciting adventure as they meet an astronomer and an astronaut who guide them along a fun-filled journey to discover the secrets of the Sun, Moon, planets, space travel and more.

**Along with the Planetarium show, your day also includes the following experiences:**

### **Gardening Goodness** Heritage and Herb Gardens — 30 Minutes

Students will explore our extensive Heritage and Herb gardens and discover the structures that help plants grow and reproduce while also helping with traditional chores that children participated in as they learn what it takes to make a garden grow. In the case of severe weather, this lesson will take place in the one room schoolhouse. **Science Standard: 1.L.5A.1 Social Studies Standards: 1.G.3; 1.E.2**

### **Cabin Life in the 1800s** Historic Kitchen and Cole Log Cabins — 30 Minutes

Students will discover the natural resources required to build and maintain a 19th Century farm as they participate in a number of hands-on tasks and handle artifacts that will give them a feel for what it was like to be a pioneer in our community in the 1800s.

**Science Standard: 1.E.4B.1; Social Studies Standards: 1.H.3**

### **Farm Animal Fun** Historic Barn and Potting Shed — 30 Minutes

Students will participate in the care and feeding of our barn animals, have a chance to milk our imitation cow and also make butter as we compare how goods and services have changed over time.

**Science Standard: 1.E.4; Social Studies standard: 1.E.2, 1.H.3**

Continued on next page.



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# First Grade (May Only)



Continued from previous page.

## OR

### 3. Natural Science Adventure **New!**

Discover the wonders of nature as you spend the day exploring Harrison Hall of Natural Science and discover all that it has to offer through participating in a rotation of six standards-based lessons. Explore plant and animal characteristics in our Rainforest, Marine and Ecology Labs then search for connections in the Mineral Lab between South Carolina's various earth materials and the products from which they are made. Also, your students will have the chance to hold, touch, and closely examine some of our most popular resident creatures while moving from one interactive exhibit to another.

#### **Creatures by the Seashore** *Marine Lab*

Students will discover the importance of conserving our oceans as they explore the aquariums and interact with a variety of marine animals in our touch tanks.

**Science Standard: 1.E.4B.2**

#### **Plants of the Rainforest** *Rainforest Classroom*

Students will examine a variety of everyday products such as cinnamon, ginger, cocoa, vanilla and others that come from plants that grow in the rainforest.

**Science Standards: 1.L.5A.1**

#### **Rainforest Exploration** *Rainforest*

In this immersive exploration of the rainforest, students will learn about the characteristics of this unique habitat and get up close with some of its inhabitants such as the African ball python. **Science Standards: 1.L.5B.2**

#### **South Carolina Environments** *Ecology Lab*

While exploring the Ecology Lab, students will examine the plants found within a variety of South Carolina environments including mountain streams, beaver ponds, cypress swamps and salt marshes. **Science Standards: 1.L.5B.2**

#### **Earth's Natural Resources** *Mineral Lab*

Students will discover the mineral wealth that lies beneath their feet as they examine a variety of natural resources found in South Carolina that are important to their daily life. **Science Standards: 1.E.4B.1**

#### **Butterfly Garden Discovery** *Outdoor Butterfly Garden*

Take a guided tour of our beautiful outdoor Butterfly Garden and observe the different parts of plants that help them survive and reproduce. In the case of inclement weather, this lesson will take place in the Discovery Lab.

**Science Standards: 1.L.5A.1, 1.L.5A.2**



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## Second Grade



### Second Grade Explorations

An exciting day of learning awaits your students as they explore multiple immersive lessons! Besides taking part in two different 45-minute learning lab pairings of your choosing, students will also experience an engaging planetarium presentation. 9:30am - 1:05pm

#### Planetarium Show

##### Zula Patrol: Under the Weather

Based on the acclaimed NBC Saturday Morning TV Series, this engaging experience takes students on a journey through the galaxy with the Zula Patrol on an expedition collecting samples of weather. Also included in this experience is a 10 minute sky talk focused on major constellations and Native American folktales related to them. **Science Standards: 2.E.2A.1, Social Studies 2-4.4**

Along with the planetarium show, choose one of the following two options:

#### Option A

##### Nature Quest/Awesome Amphibians

It takes cooperation to survive! Students will enjoy a guided nature walk with a naturalist to discover how the animals and plants depend on each other through a scavenger hunt. Emphasis will be placed on field safety and scientific observation. **Science Standard: 2.L.5B.1**

**(NOTE: in the event of inclement weather, students will remain indoors and participate in an Awesome Amphibians lesson)**

##### Animal Explorations

Come explore the Animal Kingdom! Through classification, students will become familiar with the physical characteristics of animals belonging to six basic groups including: Mammals, Birds, Amphibians, Reptiles, Fish, and Insects. Hands-on time with a variety of live and mounted animals will make this an exciting learning experience. **Science Standard: 2.L.5A.1**

#### Option B

##### Weather Explorers

Students will examine thermometers, wind vanes, rain gauges, and wind socks to learn how these instruments are used to measure and record weather. From using thermometers to observing bubbles, this lab will blow you away! **Science Standards: 2.E.2A.1, 2.E.2A.3**

##### Surviving in the Wild

From the mountains to the sea, students will discover what animals need in order to survive wherever they live. Students will visit and explore our specially-designed animal habitats and compare them with what an animal needs to survive in the real world. **Science Standard: 2.L.5B.1**



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## Third Grade



### Natural Science Discovery Day

You will receive three of the four 60-minute learning labs in the following “Discover” group. Learning labs will be at 9:30am, 11:15am, and 12:25pm. Lunch will be scheduled from 10:40am to 11:10am.

Also see the “South Carolina in a Day” 3rd grade option on the next page.

### Discover

Ecosystems, Energy, and Engineering Practices

#### Marine Exploration [Marine Lab](#)

Examine marine life up close and personal as you explore our marine habitat and discover how they can only survive in environments where their basic needs are met. **Science Standards 3.L.5A**

#### Fossils: Discover the Past [Paleo Lab](#)

In this hands-on lesson, students become paleontologists as they examine and investigate our fossil collection and learn about the past. The lesson will culminate with a visit to our outdoor fossil pit where they have a chance to discover sea-life fossils to take home. **Science Standards 3.L.5B.3**

#### Rainforest Adventures: Poison Dart Frog Discovery

[Rainforest Classroom](#)

What makes a poison dart frog poisonous while other frogs are not so deadly? Explore the tropical rainforest and the role this fascinating creature plays in the food chain. View a real poison dart frog and with some other not-so-dangerous frogs and toads. **Science Standards: 3.L.5.1; 3.L.5.A.2**

#### Pollinator Engineers [Ecology Lab](#)

Students will study the role of bees in pollination and then create a test device to solve an agricultural problem. **Science Standards: 3.S.1A.2; 3.S.1B.1; 3.L.5B.1**



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## Third Grade



### South Carolina In A Day

#### Social Studies and Science Experience

9:30am to 1:30pm

Up to four school classes rotate through four different 45-minute learning labs. Learning labs support both the Science and Social Studies state standards around the theme of our Palmetto State: South Carolina. Lunch will be scheduled as part of your visit. Not available in January.

#### S.C. Daily Life in the 1800s Living History Farm

Travel back in time with your students as they discover what life was like for independent farmers who lived in the South Carolina backcountry during the early 1800s. By participating in the daily chores that were required in the barn, garden, farmhouse, and kitchen, students will learn how these families scratched out a living on the Carolina frontier and compare their lifestyle to those of other social classes living throughout the rest of the state. **Social Studies Standards: 3-1.3, 3-4.1**

#### African Influence and the Soul of S.C. Living History Farm

Discover the cultural and economic impact of Africans upon South Carolina during the antebellum era by exploring our authentic local slave cabin for an eye-opening look at the living conditions of slaves and sharecroppers. Through participating in hands-on activities in our heirloom garden, students will evaluate the impact of the skills and knowledge utilized by slaves in successfully growing South Carolina's major cash crops of indigo, rice, and cotton. **Social Studies Standards: 3-1.3, 3-2.5**

#### Carolina Treasures: Our State's Minerals Mineral Lab

What is a mineral? How are minerals used? These and other questions will be answered as students discover there are mineral treasures buried under their feet that have important roles in our everyday lives. Our "mineral detectives" will refine their inquiry skills by determining the physical properties and uses of a set of products mined in South Carolina. They'll also learn about the formation of crystals, and pan for gem stones. **Science Standards: 3.E.4A.1, 3.E.4A.3**

#### Animals of the Palmetto State Natural Science Classroom

Through handling and closely examining a variety of live animals, students will discover ways in which these unique organisms obtain food for energy within specific South Carolina habitats. **Science Standards 3.L.5A.2**



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# 4<sup>TH</sup>

## Fourth Grade



**A typical Fourth Grade visit (except for Universe In A Day – refer to next page for details about this program) will consist of two 90-minute learning labs, one at 9:30am and a second one at 11:45am. Lunch will be scheduled as part of your visit.**

### **Storm Chaser Engineering** STEM Lab – 90 Minutes

The students are storm-chasing meteorologists on a mission. They will learn about how air masses and fronts cause the weather conditions that lead to thunderstorms and tornadoes. They will use what they learn along with engineering practices to help solve the real-world problem of how to better predict tornadoes by designing a tornado probe. **Science Standards: 4.E.2B.2, 4.S.1A.2, 4.S.1B.1**

### **Light Saves the Day!** STEM Lab – 90 Minutes

Superhero Rohawk has been captured! Working in collaborative teams as members of The Guardians of Greenville, students will use special skills and gadgets to help the hero escape through the assistance of light energy. They will use their engineering expertise to design/modify devices and find solutions to problems by taking advantage of the properties, behaviors, and interactions of light. By exploring light and energy, the Guardians of Greenville will free the superhero and save the world! **Science Standards: 4.P.4A.1, 4.P.4A.2, 4.P.4A.4, 4.P.4A.5; 4.S.1A.2**

### **American Revolutionaries** Living History Farm & One-Room School – 90 Minutes

By taking part in a reenactment, students will discover the hardships of military life as well as how the battle of Cowpens was part of the decisive turning point in our fight for freedom. Students will discover Revolutionary War spy techniques as they help to convey a secret message! Finally, they will learn about the significance of the Declaration of Independence and write with a quill pen. NOT available in January. **Social Studies Standard: 4-3.2, 4-3.3**

### **Sounds Dangerous! - Mystery on Mars** STEM Lab – 90 Minutes

Students will work as a team of engineers as they travel in their rover to a new base on Mars. The team detects a dangerous vibration in the rover which could jeopardize the vehicle and crew. Using sound meters and oscilloscope software, student teams will locate the source and properties of the sound, including pitch and volume. Then they will work as a team to decrease the vibration. Will they fix the threatening sound in time? Join the mission and find out! **Science Standards: 4.P.4B.2; 4.S.1A.6, 4.S.1B.1**



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# 4<sup>TH</sup>

## Fourth Grade Continued



### Universe In A Day

9:30am to 1:30pm

Up to four classes rotate through five astronomy areas. Using the Planetarium and unique resources, students will cover 4th Grade astronomy performance indicators. Lunch will be scheduled as part of your visit.

#### Live Lesson by the Astronomer

The astronomer will use the unique, full-dome planetarium to illustrate specific and challenging 4th grade space science concepts including:

- Earth: axis, tilt, rotation, day and night, orbital revolution and seasonal pattern
- Moon: location, movement, phases and tidal effect on oceans
- Sun: properties, apparent path in the sky and effects on Earth.

Science Standards: 4.E.3A.1; 4.E.3A.2.; 4.E.3B.1; 4.E.3B.2

#### And: “Earth, Moon & Sun” Planetarium Show

This exciting show, inspired by American Indian oral traditions, will help students learn concepts about the Earth-Moon-Sun system. Learn the basics of solar energy and why the sun rises and sets. Examine the moon’s orbit, craters, phases and eclipses. You’ll even take a look at past and future space travel to our moon... and beyond! Science Standards: 4.E.3A.1; 4.E.3A.2.; 4.E.3B.4

### Then Your Group Rotates through Four Labs:

#### Universe In A Day Labs:

##### Phases of the Moon Universe Classroom – 30 Minutes

Using moon box models students will manipulate the position of the moon in its orbit around the Earth. They will use this data to describe the Moon Phase Cycle.

Science Standards: 4.E.3B.1; S.1.A.2

##### Seasons Astronomy Classroom – 30 Minutes

Students will utilize Sun, Earth and moon models (Orrery) to explore the relationship between seasonal changes and the tilt, revolution and angle of sunlight on the Earth. Science Standards: 4.E.3B.4; S.1.A.6

##### Shadows of the Sun STEM Lab – 30 Minutes

Students will use Earth and shadow models to explain why the Sun appears to move across the sky throughout the day. Science Standards: 4.E.3B.3; S.1.A.6

##### Observatory & Telescope Observatory – 30 Minutes

Using small telescopes, students will observe objects to understand the significance of these tools in the study of outer space. They will construct reasons to support the claim that telescopes aid in exploration. The center’s historic telescope, one of the nation’s largest, will be the backdrop for the lesson.

Science Standards: 4.E.3A.3; S.1.A.6



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# 5<sup>TH</sup>

## Fifth Grade



**A typical Fifth Grade visit will consist of two 90-minute learning labs, one at 9:30am and a second one at 11:45am. Lunch will be scheduled as part of your visit.**

### **Southeastern Seashore Explorations** Marine Lab — 90 Minutes

Students will discover the complex and interactive relationships involved in an aquatic ecosystem. They will experience the biotic (living) and abiotic (non-living) components of ocean organisms by exploring our live Animal Touch Tanks and through hands-on experiences. They will apply this knowledge as they analyze the flow of energy through the ecosystem, with an emphasis on changes to food chains and food webs. **Science Standards: 5.L.4A, 5.L.4B.2**

### **Owl Pellet Dissection Lab** Natural Science Lab — 90 Minutes

Dissecting an owl pellet reveals the organisms in the owl's food web, as well as illustrating their niche in ecosystems. Unravel the secrets of the woods at night by dissecting the fuzzy clues of an owl pellet. Each student will keep their own dissected pellet for further investigation. **Science Standards: 5.L.4B.2, 5.L.4B.3**

### **Exploring the Unseen World** Ecology Lab — 90 Minutes

What mysterious creatures lie hidden beyond our normal sight? Students become ecologists as they collect samples from our woodland forest and pond and use scientific tools to examine biotic and abiotic factors of terrestrial and aquatic ecosystems. **Science Standard: 5.L.4, 5.L.4A.1, 5.L.4A.2**

### **A Challenging Mixture!** Chemistry Lab — 90 Minutes

Students have been hired by RMSC Recycling Company! While on the job, they will learn how to recognize a mixture by its physical properties and then use methods such as filtration, sifting, magnetism, chromatography, and flotation to separate a mixture back into its original state. Working in teams, students will devise a plan for separating a mixture of common recyclable materials. At quitting time, students will combine their efforts and total their earnings for a class paycheck! **Science Standard: 5.P.2B.6**

### **Reconstruction in South Carolina** Living History Farm and One-Room School — 90 Minutes

Students will visit historic cabins and the one-room schoolhouse to gain a better understanding of life after the Civil War. They will experience a one-room school lesson, work with cotton, and work in teams on a hands-on activity to become more familiar with sharecropping and the effects of Reconstruction on the South. **Social Studies Standard: 5-1.2, 5-1.4**

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## Fifth Grade Continued

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**A typical Fifth Grade visit will consist of two 90-minute learning labs, one at 9:30am and a second one at 11:45am. Lunch will be scheduled as part of your visit.**

### **Explorobotics — Exploring Speed!** STEM Lab — 90 Minutes

The mission to Mars starts now! Students will work as international space agency teams to complete their mission to survive on Mars by exploring position, direction and speed. Using programmable robots, teams will work collaboratively to analyze data to program a solution to complete their missions. Students will engage in hands-on problem-solving, computational thinking and the engineering process to complete their mission! **Science Standards: 5.P.5A.1; 5.S.1A.5; 5.S.1B.1**

### **Spy Academy: Unbalanced Forces** STEM Lab — 90 Minutes

Calling all agents! The world's top spy, 00Roper, has gotten into some trouble while stealing Dr. Ollie's plan for world domination from his secret island laboratory. Students will take on the role of spy agents-in-training and have to work together to engineer, implement, and modify gadgets to save him. They will learn about the relationships between force, friction, and motion using robots (Spheros) and message-sending rockets. The agents will use what they learn to design a way to save the day! **Science Standards: 5.P.5A.3; 5.P.5A.4**

### **Low Ropes, High Adventure Outdoors** — 90 Minutes (weather permitting)

Discover the importance of collaboration and creative problem solving as your students navigate their way through a series of highly interactive challenges that take place on our outdoor Low Ropes Adventure Course. Every element requires students to work cooperatively in small groups as they complete a series of physical activities while recognizing the positive attributes of themselves and others. **South Carolina Physical Activities Standards: 5-4.1, 5-4.3, 5-4.4, 5-4.5**

Made possible by: **FLUOR**.

### **Incredible Flight of the Monarch** Design Lab — 90 Minutes

Students will observe the life of a Monarch Butterfly and model how it uses energy from its ecosystem. They will explore physical and behavioral adaptations that allow the Monarch to migrate across different ecosystems while traveling from the United States to Mexico. By using the Engineering Design Process, students will also create and test butterfly wings in our wind tunnels.

**Science Standards: 5.L.4B, 5.S.1A.2, 5.P.5A.3**



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## Fifth Grade Continued



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### “Sea” It In A Day (January and February Only)

**9:30am to 1:30pm**

**Up to four school classes rotate through four different 45-minute ocean themed learning labs.**

#### **Landforms: Above and Below** - Mineral Lab

In this hands-on lesson, students will create and use models, including our augmented reality sand tables, to explore similarities and differences between the location and structure of landforms found on the continents and ocean floor.

**Science Standards: 5.E.3, 5.E.3A**

#### **A Muddy Mess! Interdependent Relationships of the Salt Marsh Ecosystem** - Ecology Lab

Dive into the wonders of the salt marsh and discover the vital role that it plays in the health of our coastline as students explore the interdependent nature of this fascinating ecosystem and create habitats from pluff mud, spartina grass and live fiddler crabs. **Science Standards: 5.L.4, 5.L.4A**

#### **Diving Deep into Coral Reefs** - Marine Lab

In this immersive lesson, students discover the fragile yet important role that coral reef ecosystems play in the health of our oceans. Through hands-on interaction with live ocean animals and visits to both natural and artificial reefs using virtual reality viewers, students will explore ways that energy is transferred within healthy ecosystems between predator and prey. **Science Standards: 5.L.4, 5.L.4A**

#### **Marine Energy Flow** - Discovery Lab B **New!**

Energy flows between organisms large and small in our vast oceans. Students will put their powers of observation to the test as they examine marine life up close using live specimens and microscopes. Students will analyze the flow of energy, as well as our role in the growing micro plastic dilemma in our oceans.

**Science Standards 5.L.4B.2, 5.E.3B.3**

6<sup>TH</sup>

## Middle School Assembly Combinations



### Schedule Up To 300 Students

9:30am to 12:15pm

Divide your classes into two groups (up to 150 students each) and attend two incredible shows back-to-back in the Auditorium and Hooper Planetarium and Giant Dome Theater. Greenville County students are free. Other students are \$10 for the assembly combination.

### 6th Grade

**I've got the Power! — Energy Transformations** Hipp Auditorium — Symmes Hall of Science — 60 Minutes

This program will demonstrate the Law of Conservation of Energy, giving students a greater understanding of energy and its relation to the world we live in. Join us as we identify the sources of heat, chemical, and electrical energy and how this energy can be transformed from one form to another. Then experience how powerful this transformation can be! Student volunteers will assist in the demonstrations. **Science Standards: 6.P.3A.1, 6.P.3A.2**

**AND** ONE of the Hooper Planetarium shows listed below

**"Tales of the Maya Skies"** Hooper Planetarium and Giant Dome Theater — 60 Minutes

"Tales of the Maya Skies" tells the story of how the ancient Maya interwove astronomy and culture to create a stable society that spanned 2,000 years, from 500 BC to 1500 AD. Mayan culture, life, architecture, and legends were intertwined with the ancient Maya's scientific observation and recording of planetary movements **Social Studies Standard: 6-4.3** Sponsored by: **FLUOR**

**OR**

**"Dynamic Earth"** Hooper Planetarium and Giant Dome Theater — 60 Minutes

In this highly engaging full-dome show, stunning satellite data visualizations and photorealistic animations are combined to provide unprecedented insights into the inner workings of Earth's dynamic climate system and the influence that the Earth-Sun system, plate tectonics, and the carbon cycle has upon its energy trails and environmental systems. **Science Standards 6.E.2A.2, 6E.2B**

**Both shows include "H2O Cycle"— 15 Minutes**

Using live action videography students will be immersed in the steps of the water cycle using the backdrop of the Upstate of South Carolina. The very popular review is set to "rap." You may find yourself humming it on the way back to school!

**Science Standards: 6.E.2A.3**



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# 6<sup>TH</sup>

## Middle School Learning Labs



### Schedule Up To 150 Students

9:30am to 1:30pm

### 6th Grade

Divide your classes into six groups to rotate through three different hands on STEM learning labs. Lunch will be scheduled as part of your day.

#### STEM Lab — The Power to Survive Symmes Hall of Science — Three 60-minute learning labs

The power is out; communications are down: How will you survive? In this three-part STEM lab, students will engage in hands-on learning to explore energy transformations and conservation of energy. Can wind energy supply the electricity needs? Is solar energy an option? Student teams will analyze data, solve problems, and then design and create solutions for survival through exploring generators, electromagnets and circuits. The interactive labs will include real-time solar energy production. Do your students have what it takes to survive?

Science Standards: 6.P.3.A.1; 6.P.3A.3; 6.S.1A.2; 6.S.1A.4; 6.S.1A.6

Made possible by: 



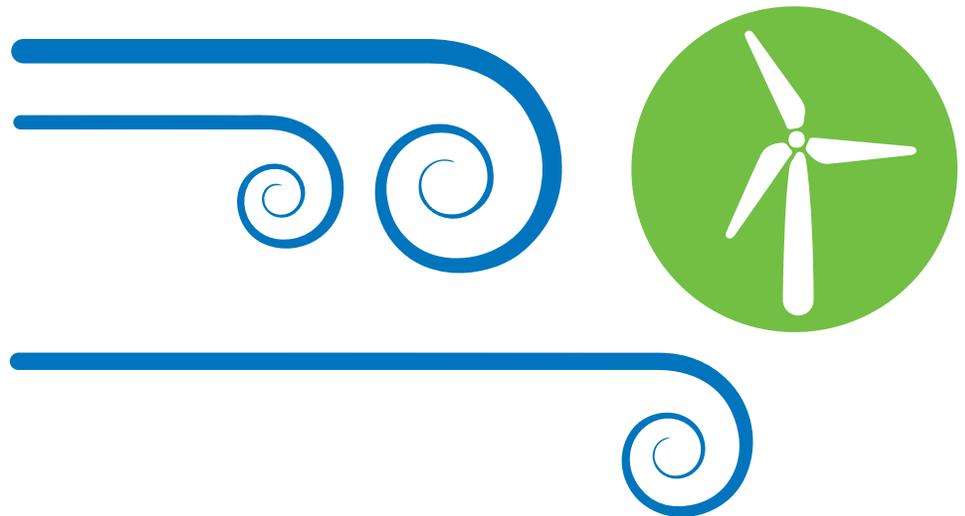
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# Middle School Assembly Combinations



## Schedule Up To 300 Students

9:30am to 12:15pm

Divide your classes into two groups (up to 150 students each) and attend two incredible shows back-to-back in the Auditorium and Hooper Planetarium and Giant Dome Theater. Greenville County students are free. Other students are \$10 for the assembly combination.

## 7th Grade

### Way Cool Science! – Physical and Chemical Changes in Matter

Hipp Auditorium – Symmes Hall of Science – 60 Minutes

Watch your students' *reactions* as they classify unknown changes as physical or chemical through our exciting, interactive demonstrations! Along the way they will explore physical properties, form conclusions about the law of conservation of matter, and delve into the effects of extreme temperature on different states of matter. Students will get an up close and personal view of chemical reactions, changes in states of matter, and acids and bases revealed by dramatic indicator changes. **Science Standard: 7.P.2B.1, 7.P.2B.4**

## AND

### “Habitat Earth” Living in a Connected World Hooper Planetarium and Giant Dome Theater - 45 Minutes

Living networks connect and support life forms large and small—from colonies of tiny microbes and populations of massive whales to ever-expanding human societies. Discover what it means to live in today’s connected world. Dive below the ocean’s surface to explore the dynamic relationships found in kelp forest ecosystems, travel beneath the forest floor to see how Earth’s tallest trees rely on tiny fungi to survive, and journey to new heights to witness the intricate intersection between human and ecological networks.

**Science Standards: 7.EC.5A.1, 7.ED.5B.1**

**In addition, students will also experience:**

### Ecosystems - 15 Minutes

Ewww, a maggot. But it’s only a decomposer! Students love to be “grossed out” and at the same time they will learn about the many important roles of living and non-living factors in an ecosystem. The show includes seventh grade terminology such as abiotic, consumer, community, omnivore, food web and many more – from the types of ecosystems to the roles of plants and animals and how it all interrelates.

**Science Standards: 7.EC.5A.1, 7.ED.5B.1**



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# Middle School Learning Labs



## Schedule Up To 150 Students

9:30am to 1:30pm

### 7th Grade

Up to 150 students will divide into six groups to rotate through three different hands on forensics learning labs. Using a CSI case and their inquiry skills, students discover more about chemical reactions, genetics, and blood typing. Lunch will be scheduled as part of your day.

**FORENSICS: Case of the Missing Chef** Symmes Hall of Science – Three 60-minute learning labs

Students are introduced to a case involving a missing chef. In three separate labs, students will act as forensic specialists, analyzing materials found at the crime scene. They will perform strawberry DNA extraction, evaluate DNA samples, determine blood type, and, in the chemistry component, analyze known and unknown materials found at the scene. At the end of the day, students will have enough information to argue a claim as to what happened to our missing chef!  
**Science Standards: 7.P.2B.3; 7.P.2B.4; 7.L.3B.1; 7.L.4A.1**



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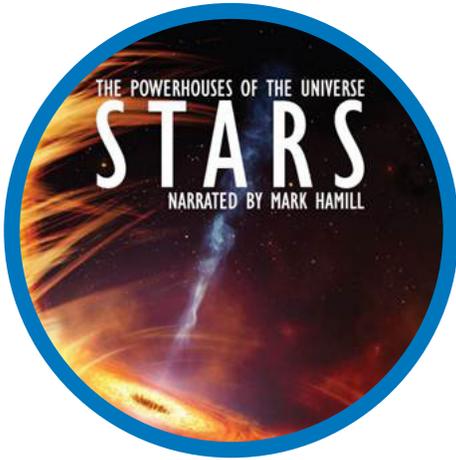
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**CRIME SCENE DO NOT CROSS**

# 8<sup>TH</sup>

## Middle School Assembly Combinations



### Schedule Up To 300 Students

9:30am to 12:15pm

Divide your classes into two groups (up to 150 students each) and attend two incredible shows back-to-back in the Auditorium and Hooper Planetarium and Giant Dome Theater. Greenville County students are free. Other students are \$10 for the assembly combination.

### 8th Grade

#### The New Wave: A Fresh Look at Energy

Hipp Auditorium – 60 Minutes

Students will dive into waves that surround us everywhere while exploring wave behaviors and interactions with matter. Exciting real-world demonstrations use light, sound, and electricity to help students understand how waves impact the world they know. Catch the wave and change students' perspective on energy.

Science Standards: 8.P.3A.1; 8.P.3A.3

## AND

#### “STARS” The Powerhouses of the Universe Hooper Planetarium and Giant Dome Theater – 30 Minutes

Every star has a story. Stars release the energy that powers the universe. New stars are created every day, born of vast clouds of gas and dust. Journey to the farthest reaches of our galaxy and experience both the awesome beauty and destructive power of STARS. This dramatic program features the voice talent of Mark Hamill (A.K.A. Luke Skywalker). This program also features a short star-talk including the current evening sky. Science Standards: 8-E.4A.1 and 2; 8.E.4B.1-6

#### Earth's Place in the Universe - “Live Sky” Visualizations – 20 Minutes

Using the latest in digital night sky simulation we will take a visual tour of the solar system and the Milky Way galaxy. Visuals will illustrate important concepts in astronomy and encourage students to observe the current night sky.

Science Standards: 8.E.4A.1, 8.E.4B.1, 8.E.4B.3, 8.E.4B.4



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9-12

## High School



### Schedule Up To 50 Students

9:30am to 1:15pm

**Low Ropes, High Adventure Outdoors** – All Day (weather permitting)

\*Waiver required

Discover the importance of collaboration and creative problem solving as your students navigate their way through a series of highly interactive challenges that take place on our outdoor Low Ropes Adventure Course. Every element requires students to work cooperatively in small groups as they complete a series of physical activities while recognizing the positive attributes of themselves and others.

**Class size limited to 50 students.**

South Carolina Physical Activities Standards: 5-4.1, 5-4.3, 5-4.4, 5-4.5

Made possible by: **FLUOR**.



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## Virtual Field Trips

# Virtual Field Trips



Give students the excitement of a field trip to Roper Mountain, even if you can't leave the school! Roper Mountain's dynamic instructors come directly to your classroom through two-way video conferencing technology. Each one hour lesson is unique, engaging and based on South Carolina and National standards.

## Science VFTs

### RMSA Junior Astronaut Training (Grade 1)

Students will join Roper Mountain Space Agency's Junior Astronaut Team where they will learn more about our Sun, the Star of our Solar System, and how technology enhances our knowledge about the Earth and the galaxy.

### Fossil Finders (Grade 3)

Join our team as we use evidence from fossils to understand what environments were like long ago. Students will be sent out in groups to uncover fossils. The excavators dig, fossil experts will identify the fossils, and ecologists will identify the environment the organism once lived in. The group will use this fossil evidence to infer what the dig location was like in the past.

### Matter Expedition (Grade 3)

Come experience a great adventure! Roper Mountain Science Center has sent Professor Roper out on assignment to learn about matter and how heat (thermal) energy can affect the states of matter. We'll follow along as she creates video blogs (Vlogs) all about her discoveries. Students will follow along on Professor Roper's journeys and may even be called to help her complete her mission.

### Roper Mountain Reality Check: Seasons (Grade 4)

Join our Roper Mountain Reality Fact Check Team. Our episode will tackle one student's tough question about the cause for seasons. We will compare temperatures and amounts of sunlight received for different parts of the world to determine the cause of the seasons.

### Amazing Animals (Grades 4 and 6)

We invite you to join our team at Roper Mountain as we work together to develop a new animal classification display exhibit! Students will observe amazing animals, make observations about the animals, and use them to classify each animal based on its characteristics.

### Weather Watchers (Grades 4 and 6)

Join our Weather Watchers team where we consult on weather related issues for areas all over the United States. Students will work in teams to analyze data and make safety predictions based on past hurricanes in South Carolina.

### Project Mars Ecosystems (Grades 5 - 8)

In this interactive lesson, students will work in teams to analyze the biotic and abiotic factors of terrestrial and aquatic ecosystems on Earth then apply what they learn in order to develop proposals to present to NASA that suggest the best Ecosystem that would be required to support a future colony on Mars.

To register for programs visit [RoperMountain.org](http://RoperMountain.org) or contact Jasmin Poor at [jpoor@greenville.k12.sc.us](mailto:jpoor@greenville.k12.sc.us) or 864.355.8930.



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## Virtual Field Trips

Give students the excitement of a field trip to Roper Mountain, even if you can't leave the school! Roper Mountain's dynamic instructors come directly to your classroom through two-way video conferencing technology. Each one hour lesson is unique, engaging and based on South Carolina and National standards.

Check our website for new offerings throughout the year.

### Social Studies VFTs

#### Spies of the American Revolution (Grades 3, 4, and 8)

It's 1780 and the British have invaded South Carolina. The patriot and loyalist militias are fighting but they need your help! Support your cause by serving as a spy for the American resistance or for the British. Discover the techniques you'll need to relay vital information such as invisible ink, cipher wheels, letter masks, and more.

#### Wagons West (Grades 3 - 7)

Come with us on a journey to the Oregon Territory! We start with an auction where, your "family" will bid on necessary items for your trek west. The students will make all the decisions themselves before we set out on our trip and then, as we progress, find out if they made wise choices. Using maps, a slide show and video clips, we will look at several landmarks along the way and calculate how far we have traveled across the Great Plain, rivers and mountains to finally arrive in Oregon City.

#### Westward by Rail (Grades 4 - 7)

All aboard! Come explore the technological advances made during the westward expansion of the 19th century and their impact on the history of the United States. Learn about the economics of railroad building, the challenges faced by both railroad companies, and see for yourself the lasting legacy of the Transcontinental Railroad.

To register for programs visit [RoperMountain.org](http://RoperMountain.org) or contact Jasmin Poor at [jpoor@greenville.k12.sc.us](mailto:jpoor@greenville.k12.sc.us) or 864.355.8930.



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# Science on Wheels Assembly Programs



**Bring Roper Mountain Science Center to your school! Our 60 minute standards-based assemblies are designed for up to 200 students per session. Please contact us if you'd like help choosing the best assembly for your venue at [jromatelli@greenville.k12.sc.us](mailto:jromatelli@greenville.k12.sc.us) or 864.355.8940.**

## Catch the Wave

### 60 minute version

Explore the similarities and differences between how light and sound travel. Compare the properties of light and sound in this exciting and interactive program. Note: This assembly requires a room that can be made dark.

**Science Standards: 4.P.4A, 4.P.4B, 8.P.3A**

**Recommended Audience: Grade 4**

### 45 minute version

Discover how light helps us to see. Designed specifically for 1st grade, this shorter version of the program focuses on 1st grade standards for light and shadow.

**Science Standards: 1.P.2**

**Recommended Audience: Grade 1**

## Use the Force

Learn how forces affect everything in our everyday lives. We'll really MOVE you as we explore the what's and why's of motion and forces!

**Science Standards: 2.P.4A, 5.P.5A, 6P.3A, 8.P.2A**

**Recommended Audience: Grade 5, Grade 2**

### 45 minute version

This shorter version of the program is best for younger students, or mixed grade audiences.

**Recommended Audience: Grade 2, multigrade**

## Matter of Fact

Investigate the differences between solids, liquids and gases. In this supercool program we will use liquid nitrogen to show how the three states of matter are affected by extreme changes in temperature.

**Science Standards: 2.P.3A, 3.P.2A, 5.P.2A**

**Recommended Audience: Grade 5, Grade 3, Grade 2**

### 45 minute version

This shorter version of the program is best for younger students, or mixed grade audiences.

**Recommended Audience: Grade 2, multigrade**

## Arcs and Sparks

Discover how electricity and magnetism are alike. We'll use hair-raising experiments to learn about the properties of electricity and magnetism and how much they have in common.

**Science Standards: 3.P.3A, 3.P.3B**

**Recommended Audience: Grade 3**

### 45 minute version

This shorter version of the program is best for mixed grade audiences.

**Recommended Audience: multigrade**

For more information visit our website for [Science on Wheels Assemblies](#).

To register, [click here](#).



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# Science on Wheels Starlab and Workshops



## Starlab

**Starlab is an inflatable planetarium that can visit your school. One class of up to 30 students at a time can fit inside for a lesson about the night sky.**

### Grade 1 — The Sun and Moon

See how the Sun and Moon change in our sky over time. We will investigate the reasons for the changes students observe in the sky and lay the foundation for understanding the structure of our solar system.

**Science Standards: 1.E.3A**

### Grade 4 — The Bigger Picture

Discover how the movement of objects in our solar system affects what we see in the sky. The Starlab allows us to see how the movement of the Earth, Moon and planets in our solar system affects what we actually see in our sky from day to night, night to night, and season to season. Choose from three focus topics for the lesson: The Solar System, Phases of the Moon, or Constellations.

**Science Standards: 4.E.3A, 4.E.3B**

### Grade 8 — Our Place in Space

Use observations from Earth to learn about the movement and position of our planet and solar system in the galaxy and the universe. This lesson takes us beyond the confines of the solar system to investigate our place in the larger scale of the galaxy and universe.

**Science Standards: 8.E.4A, 8.E.4B**

For more information visit our website for [Science on Wheels, Starlab](#). To register, [click here](#).

Starlab made possible by:  LOCKHEED MARTIN

## Workshops

**Workshop programs are hands-on engineering design challenges. One class of up to 32 students at a time can participate in the program.**

### Builder Workshop: The Great Coaster Challenge!

Design and build your own model roller coaster. Student engineers will work in groups of 2-4 to plan, build and demonstrate their own theme park roller coaster.

**Science Standards: Engineering practices standards for all grades**

**Recommended Audience: Grade 2 - 12**

For more information visit our website for [Science on Wheels, Outreach Workshops](#). To register, [click here](#).



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# Science on Wheels Planning Information



## Capacity

**Assemblies:** 200 students per session. Up to 3 sessions in a day.

**Starlab:** One class (maximum 30 students, 25 or fewer is recommended). One adult from the school is required to attend each session. Up to 4 sessions in a day.

**Workshop:** One class (maximum 32 students, 24 or fewer is recommended). One adult from the school is required to attend each session. Up to 4 sessions in a day.

## Start Time

**Greenville County Schools** — First program can start as early as 8:30am

**Out of County Schools** — Calculate the drive time from Roper Mountain Science Center to your school, then add that amount of time to 8:00am to determine your earliest program start time. For example, if it is a one hour drive from Roper Mountain to your school, add one hour to 8:00am and the earliest start time is 9:00am.

## Schedule

**Assemblies:** Assemblies are 45 or 60 minutes long. For multiple sessions of the same assembly (up to 3 in one day), allow at least 15 minutes between sessions to reset equipment. For two different assemblies, schedule at least 90 minutes between sessions to allow for breakdown and setup plus a lunch break for our educator. Setup is between 45 and 60 minutes depending on the assembly and breakdown is between 30 and 45 minutes.

**Starlab:** Sessions are 50 minutes long unless an alternate length has been agreed on. Allow at least 10 minutes between sessions and up to 4 sessions can be scheduled in a day. For four sessions, there must be a lunch break of at least 30 minutes at some point during the day. Setup is approximately 45 minutes and breakdown is about 20 minutes.

**Workshop:** Sessions are 60 minutes long unless an alternate length has been agreed on. Allow at least 10 minutes between sessions and up to 4 sessions can be scheduled in a day. For four sessions, there must be a lunch break of at least 30 minutes at some point during the day. Setup is approximately 60 minutes and breakdown is about 30 minutes.

**Contact us if you need to work out other options.**

## Location in School

**Assemblies:** A space large enough to fit all of the students (seated on the floor or in chairs), teachers, two six-foot long tables, and about 10 feet in between the tables and the audience. Gyms, cafeterias, and auditoriums work well. For smaller groups, classrooms can sometimes be used. All assemblies require two six-foot long tables, access to electricity, and access to a deep sink near the presentation space.

**Starlab:** A large space with ceilings at least 12' high and floor space of at least 30' x 30'. Nothing can be hanging from the ceiling or projecting from the walls into that 30'x30'x12' area. Gyms tend to work best, but other spaces can be used (cafeteria, auditorium stage, media center, large classroom). Nothing else can be scheduled in the space during the presentation times.

**Continued on next page.**



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# Science on Wheels Planning Information



Continued from previous page.

**Workshop:** A dedicated classroom space that can be used for all sessions (the program cannot move once set up). A larger space like a gym could also work, but chairs would need to be provided. Normal classroom furniture (tables/desks and chairs) should be left in the space.

### Payment

We accept checks or purchase orders from schools and PTA/Os. Payment is due within 30 days after the date of the program. An invoice will be emailed when the reservation is confirmed. Educators CANNOT take payment. Please mail your payment to Roper Mountain or send by courier. We CANNOT accept credit card payments by phone.

### Travel Area

We will travel to locations up to a 2.5 hour drive from Roper Mountain for a single day visit. There is a fee for schools outside of Greenville County of 85 cents per mile of driving. We use Google Maps to calculate drive times and distances. The city of Greer is considered part of Greenville county for the purposes of determining mileage fees.

### Fees: Assemblies (60 minutes)

- 1 Assembly — \$175
- 2 Sessions of the Same Assembly — \$250
- 3 Sessions of the Same Assembly — \$325
- 2 Different Assemblies on the same day — \$300

### Fees: Assemblies (45 minutes)

- 1 Assembly — \$150
  - 2 Sessions of the Same Assembly — \$210
  - 3 Sessions of the Same Assembly — \$270
  - 2 Different Assemblies on the same day — \$300
- Combination of 60 and 45 minute assemblies can also be made.

[See our website for details.](#)

### Fees: Starlab or Workshop

- 1 Session — \$150
- 2 Sessions — \$210
- 3 Sessions — \$270
- 4 Sessions — \$330

\*A mileage fee of \$0.85 per mile applies for all schools outside of Greenville County.

To register for a Science on Wheels Assembly visit, [click here.](#)  
To register for a Science on Wheels Starlab visit, [click here.](#)  
To register for a Science on Wheels Workshop visit, [click here.](#)



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## Public Events And Programs



### Open every Friday Night from January through November

#### Planetarium Shows

Gates open 5:15pm. Purchase tickets online or in the planetarium. Tickets purchased are for ONE showtime ONLY.

#### 6:00pm Showtime Includes: Feature Show (changes quarterly)

- SpacePark 360 Virtual Rollercoaster
- Viewing in the Daniel Observatory (Observatory opens at 8:00pm)

#### 7:30pm Showtime Includes: Feature Show (changes quarterly)

- Upstate’s Sky Tonight (live sky talk)
- SpacePark 360 Virtual Rollercoaster
- Viewing in the Daniel Observatory

### Friday Starry Nights Admission

Cash • Check • Credit Cards

\$6.00 Adults and Teens

\$5.00 Children Ages 4-12

\$5.00 Sr. Citizens 60 Years Plus

FREE School District Employee Pass and RMSC Membership Card

Pre-purchase tickets online at [RoperMountain.org](http://RoperMountain.org)

- Early arrival strongly recommended



## Public Events And Programs



## Second Saturday

### On select Second Saturdays from 9:00am to 3:00pm

Second Saturday is a great opportunity for the public to visit learning spaces throughout the science center and enjoy engaging experiences.

- The Living History Farm
- Harrison Hall of Natural Sciences
- Giant Dome Theater and Hooper Planetarium
- Daniel Observatory
- Symmes Hall of Science

Many Second Saturdays showcase special events or themes based on fascinating topics! For something new and exciting to do, mark your calendar and make Roper Mountain Science Center your destination for Second Saturday fun!

### Second Saturdays Admission

Cash • Check • Credit • Debit • Visa • Mastercard • Discover

\$8.00 Adults and Teens

\$7.00 Children Ages 4-12

\$7.00 Sr. Citizens 60 Years Plus

\$7.00 Military

FREE School District Employee Pass and RMSC Membership Card

Pre-purchase tickets online at [RoperMountain.org](http://RoperMountain.org)



# Science PLUS Institute

Participatory Learning, Understanding, and Sharing



**Our program is absolutely free for South Carolina public school teachers grades 1-12!**

**All courses are FREE and include::**

- Free science materials
- Innovative ideas and hands-on ideas taught by master science teachers
- Recertification credit



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## Join us for this year's Science PLUS Institute!

Science PLUS is a professional development program for public SC Science Teachers. Each course is grade specific and focuses on providing hands-on classes emphasizing the SC Science Standards

### Fall

Events hosted at RMSC and virtually around the state

### Summer

Week-long hosted at the Roper Mountain Science Center

Housing, lunch, and materials are all provided to participants FREE of charge

### How do I learn more?

Visit [RoperMountain.org](http://RoperMountain.org) and click on the Science PLUS page under the Educators tab.



# Planning Your Visit



## Confirming Your Visit

Once scheduled we will mail you a "FIELD TRIP NOTIFICATION." It will list the date, times and learning labs you are assigned. If you are sharing a bus with a second teacher, you should make contact with her/him and be sure the date works around your school schedule. Contact the education office immediately at 864.355.8967 if it does not.

Planning and previsit information, inclement weather policy and a map of Roper Mountain Science Center may be accessed at [RoperMountain.org](http://RoperMountain.org). Click on 'Educators' tab, then 'Field Trips' tab, then under 'Preparing your students' (3rd paragraph) - click on 'Previsit Information.'

## Schedule Your Bus

After obtaining permission for the field trip, it is important that you schedule a bus as soon as possible. RMSC does NOT schedule buses.

## Reminder Notice

Several weeks before your field trip, you will be sent an additional "FIELD TRIP NOTIFICATION" as a reminder of your trip, listing the date of your field trip. Additional materials may be included along with a map of the center's facilities.

## Arrival

Most learning labs begin at 9:30am. Please arrive 15 minutes before the learning lab starting time. Note: Some learning lab times may vary.

## Picnicking

Classes will be assigned a picnic shelter. **The center provides no food service. Schools are responsible for bringing lunches.** Some picnic shelters are not heated.

## Cancellation

If you must cancel a learning lab or visit, please contact the education office IMMEDIATELY at 355-8967. We will attempt to reschedule your visit, but it may not be possible.

## Chaperones

We request that teachers bring one chaperone per class. Chaperones: please do not bring additional students not in the registered class.

## Pre-visit

The educational value of your visit will be improved if you prepare your students in advance. We recommend you do the following:

- Explain the purpose of the field trip to students
- Describe the schedule of activities for the day.
- Review appropriate vocabulary.

## Class Size

- Planetarium Programs: Max of 162 people (students and adults)
- All Other Learning labs: 1 Class ONLY (plus teacher and one chaperone)
- Teachers are not allowed to combine two classes into one learning lab.

Continued on next page.



A 402 Roper Mountain Road  
Greenville, SC 29615

P 864.355.8900 F 864.355.8948

[RoperMountain.org](http://RoperMountain.org)





# Planning Your Visit



Continued from previous page.

### Special Education/Challenge Classes

All learning labs are available to all students in the grade levels shown in the guide. To assist our instructors in preparing for your class, please note the grade level at which your students work, as well as any special needs they may require.

### Home Schools: Guidelines for Scheduling

Individual home schools must request a visit as a class through the **home school association** of which they are members. Home school association classes must have a minimum of 12 students and no more than 27 students, plus a teacher and appropriate number of chaperones. The home school association's teacher is responsible for coordinating the field trip and supervision of all students. Students must be **grade appropriate** to the learning labs being requested. Requests are subject to the deadline listed in this guide. The center cannot accept requests from individual home school parents, nor can we be responsible for organizing a class made up of home school students. Home schools who are members of associations outside of Greenville County will be charged the learning lab costs.

### Roper Mountain Science Center Learning Lab Costs

**Greenville County Schools — FREE**  
Public, Private, and Home School Associations  
One or more Learning Labs — Free

**Greenville County Charter Schools**  
\*\*Two or more Learning Labs — \$12 per student  
Middle School Assembly Combo — \$10 per student

**Schools Outside of Greenville County**  
Two or more Learning Labs — \$12/student  
Middle School Assembly Combo — \$10/student

**Teachers & Chaperones — FREE**  
**Schools will be invoiced on the day of their visit.** The center reserves the right to ask school classes outside of Greenville County to post a deposit for their scheduled learning labs. Deposits are refundable up to 20 business days before the visit.

**We CANNOT accept credit card payments over the telephone.**

## Contact Information

**Education Office** 864.355.8967  
**Education Specialist** 864.355.8931  
**Address** 402 Roper Mountain Road Greenville, SC 29615

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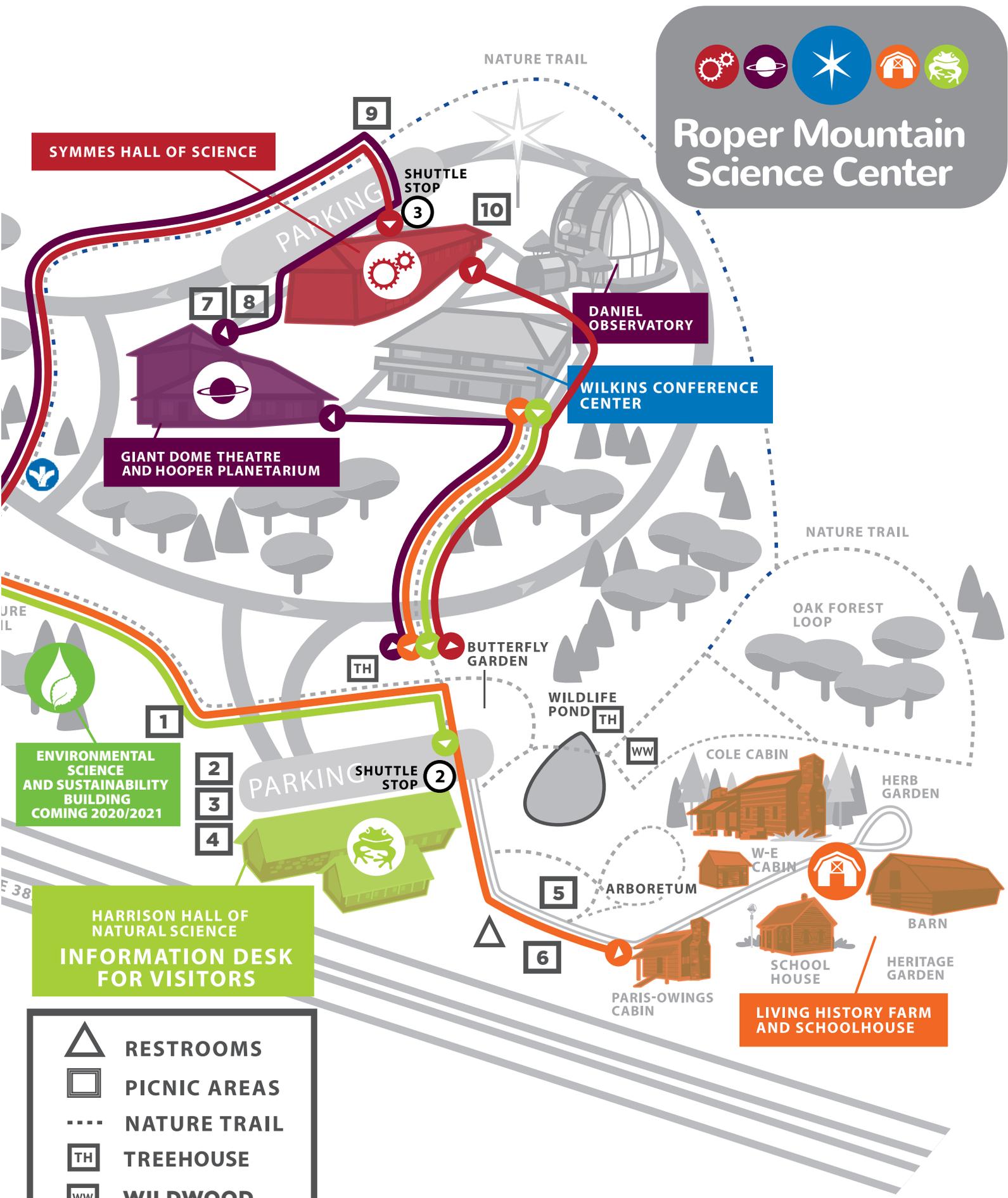
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# Roper Mountain Science Center



**SYMMES HALL OF SCIENCE**

SHUTTLE STOP

**DANIEL OBSERVATORY**

**WILKINS CONFERENCE CENTER**

**GIANT DOME THEATRE AND HOOPER PLANETARIUM**

**ENVIRONMENTAL SCIENCE AND SUSTAINABILITY BUILDING COMING 2020/2021**

**HARRISON HALL OF NATURAL SCIENCE**  
**INFORMATION DESK FOR VISITORS**

**LIVING HISTORY FARM AND SCHOOLHOUSE**

-  RESTROOMS
-  PICNIC AREAS
-  NATURE TRAIL
-  TREEHOUSE
-  WILDWOOD
-  BON SECOURS BEWELL TRAIL