



# Field Trip & Program Guide 2013 – 2014

**A Teacher's Guide to Pairing NC Common Core and  
Essential Standards with Hands-on Science**

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## reservations

Monday — Friday, 8:30 AM to 5:00 PM  
(828) 322-8169

**Fax:** (828) 322-1585

**E-mail:** [scheduling@catawbascience.org](mailto:scheduling@catawbascience.org)



# *Changing Lives and Inspiring Learning Through Science and Wonder.*

**Catawba Science Center** is a nonprofit science and technology museum, offering hands-on exhibits to explore physical, natural and earth sciences.

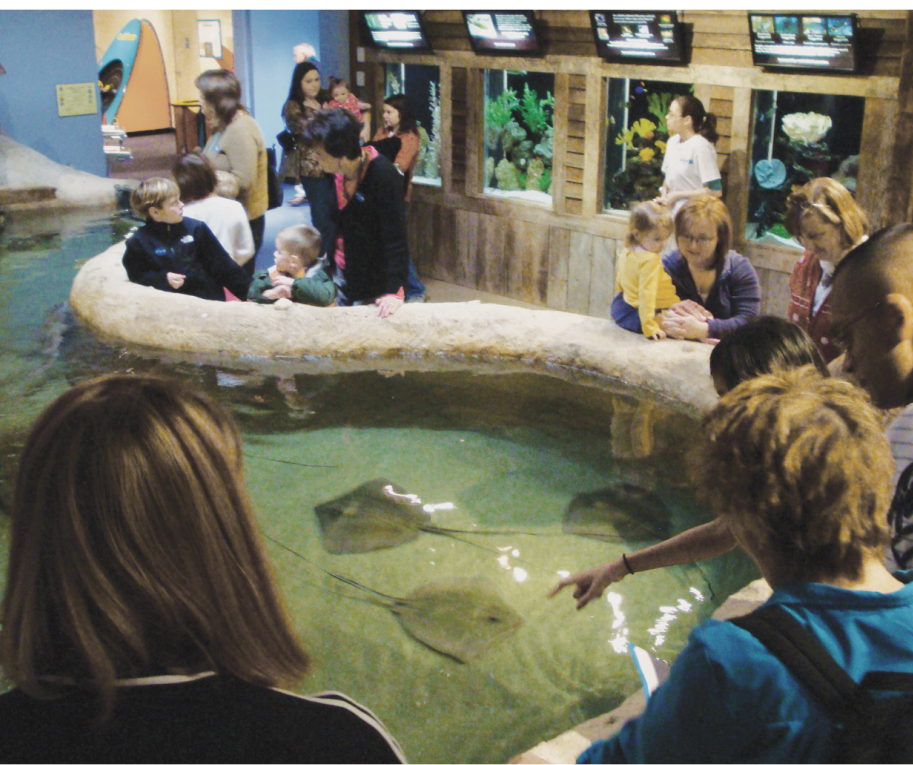
Featured amenities include the Inventor's Workshop, freshwater and saltwater aquarium galleries – including a marine touch pool with LIVE sharks and stingrays, Hall of Astronomy, two temporary exhibit halls, a digital planetarium theater and special events room for school group lunches and community gatherings.



**Located on the SALT Block • Arts & Science Center**  
243 3rd Avenue NE • Hickory, NC 28601

*Only 2.5 miles from I-40, follow the directional signs,  
or download directions from [www.CatawbaScience.org](http://www.CatawbaScience.org).*

**Phone:** (828)322-8169   **Fax:** (828)322-1585  
**Web site:** [www.CatawbaScience.org](http://www.CatawbaScience.org)  
**Email:** [schools@catawbascience.org](mailto:schools@catawbascience.org)



## **Public Hours:**

Tuesday – Friday  
10 a.m. – 5 p.m.  
Saturday  
10 a.m. – 4 p.m.  
Sunday  
1 p.m. – 4 p.m.

**CLOSED ON MONDAYS**  
(Office open 9 am - 5 pm)

Catawba Science Center is a member of:  
Association of Science & Technology Centers  
NC Grassroots Science Museums Collaborative  
Funded Affiliate of United Arts Council of Catawba County



# Offerings at a Glance

CSC programs feature grade-specific, hands-on experiences in natural, physical and earth sciences. **All programs complement the NC Common Core & Essential Standards and goals**, as listed below each description. All CSC programs are designed to further students' understanding of the Nature of Science.

## Classroom Programs

A field trip to Catawba Science Center is an exciting opportunity for groups to share interactive learning experiences. In addition to your chosen program, your group is free to explore the entire museum. Staff is located throughout CSC to enrich your group's visit.

*Please note: CSC Member benefits do not apply for visiting students or chaperones.*

**Length:** 50 or 80 minutes (noted in descriptions)

**Group size:** 30 students maximum per program

*Available between 9 a.m. & 4 p.m., Tuesday - Friday*

## Outreach Programs

Instead of scheduling a field trip to CSC, we can bring the same exciting classroom programs to your site. Please note within each class description whether or not the program is offered as outreach.

**Length:** 50 or 80 minutes (noted in descriptions)

**Group size:** 30 students maximum per program

*Available between 8:30 a.m. & 3:30 p.m., Tuesday - Friday*

## Assembly Programs

These programs will both educate and entertain large groups. Learn fascinating facts about live reptiles or observe exciting physical science demonstrations.

**Length:** 50 minutes

**Group size:** 200 students maximum per outreach program; 100 students maximum per program at CSC.

*Available between 9 a.m. & 3:30 p.m., Tuesday - Friday*

## Planetarium Programs & Shows

The planetarium/digital theater brings the night-time sky alive indoors. Programs are available for grades K-12, and focus on stars, the moon, planets and constellations. Groups can also choose to book a digital theater show, for the program fee.

**Length:** 50 minutes for programs, shows vary in length

**Location:** CSC

**Group size:** Planetarium programs can accommodate two classes at a time, up to 65 total participants. For programs, only groups from the same school will be combined. Programs held within the planetarium/digital dome theater have limited seating. The number of chaperones admitted per group will vary depending on available space.

*Available between 9 a.m. & 2 p.m., Tuesday - Thursday, 9 a.m. & 12 p.m. Friday*



# Offerings at a Glance

## Park Programs

Students in grades K - 8 will use their science investigation skills to explore ecosystems, including wetlands, field, forest and/or stream. Located in northwest Hickory, Glenn Hilton Park affords great learning opportunities, picnic shelters and play areas for visiting school groups.

**The City of Hickory encourages school groups to register in advance to reserve a picnic shelter. Schools from outside Catawba County must also pay a fee to reserve a shelter. Otherwise, first come, first served.** For more info about park guidelines, or to make a reservation, call Hickory City Parks at (828) 322-7046.

**Length:** 50 minutes to 1 hour, 20 minutes  
(see description under grade level)

**Location:** Glenn Hilton Park

**Group size:** 30 students maximum per program

Maximum 2 groups per time slot

Available between 9 a.m. & 4 p.m., Tuesday - Friday;  
August - October and April - June

## Museum Exploration Only

(No Program)

Self-guided explorations without programs are available to any group of 10 or more. A special group rate for this self-guided experience is \$5 per student.

*Please note: CSC Member benefits do not apply for visiting students or chaperones.*

## Lunch Space

CSC has a Special Events Room that accommodates up to 50 at a time. Space is reserved in 30 minute time slots and is reserved on a first come, first served basis. Groups are welcome to picnic on the public lawn. **No other lunch facilities are available.**

## Preschool Programs

CSC preschool educators use puppets, puzzles, live animals and more to introduce science to your students. Programs are available on site and as outreach.

**Cost:** \$100 per program

(contract for entire year available at varying rates)

**Length:** 45 minutes

**Group size:** 25 students maximum per program

For more info, contact [preschool@catawbascience.org](mailto:preschool@catawbascience.org).



# Kindergarten — 2nd Grade

**CREATURE FEATURE** (Kindergarten): Students will become zoologists as they explore and discover different animal groups such as insects, sea life, mammals and more. Meet some of CSC’s resident live animals. Program available for outreach and at CSC.

**Time:** 50 minutes

**Science Goals:** K.L.1.1, K.L.1.2

**Math Goals:** K.CC.4; K.CC.5; K.MD.3; K.G.1

**ELA:** SL1, 2, 3, 4, 6

**LITTLE SCIENTISTS** (Kindergarten): Compare and classify objects in this fun-filled class. Learn the names of some science tools. Be ready to put on your safety glasses and experiment! Program available for outreach and at CSC.

**Time:** 50 minutes

**Science Goals:** K.P.1.1, K.P.1.2, K.P.2.1, K.P.2.2

**Math Goals:** K.MD.2; K.MD.3; K.G.1

**ELA:** SL1, 2, 3, 6

**EXPLORING NATURE** (Grades K-2): Explore wetland and forest habitats. Discover the similarities and differences between plants and animals. Learn about their needs and how they change over time. Program held at Glenn Hilton Park. Available August – October, April – June.

**Time:** 50 minutes

**Kindergarten Goals:** Science - K.L.1.1, K.L.1.2, K.E.1.1, K.E.1.3; Math - K.CC.4, K.CC.5, K.G.1; ELA - SL1, 2, 3, 6

**First Grade Goals:** Science - 1.L.1.1, 1.L.1.2, 1.L.1.3, 1.L.2.1, 1.L.2.2, 1.E.2.2; ELA - SL1, 2, 3, 4, 6

**Second Grade Goals:** Science - 2.L.1.1, 2.L.1.2, 2.L.2.1, 2.L.2.2; ELA - SL1, 2, 3, 4, 5

**EARTHY MATTERS** (Grade 1): Classify and make discoveries about soil, rocks and minerals. Encounter creatures that live in the soil. Program held at CSC.

**Time:** 50 minutes

**Science Goals:** 1.E.2.1, 1.E.2.2, 1.L.1.1

**Math Goals:** 1.MD.2

**ELA:** SL1, 2, 3, 4, 5, 6

**PUSH ME, PULL ME** (Grade 1): Experiment with forces and balance and discover how pushes and pulls can make things move. Play with all sorts of magnets and make cool discoveries! Program available for outreach and at CSC.

**Time:** 50 minutes

**Science Goals:** 1.P.1.1, 1.P.1.2, 1.P.1.3

**ELA:** SL1, 2, 3, 4, 6

**UP IN THE SKY** (Grade 1): Gaze upward and identify the things found in the sky during day and night, and observe the moon’s phases. Includes a viewing of *Orion*, the story behind the constellation. Program available only at CSC in the Millholland Planetarium.

**Time:** 50 minutes

**Science Goals:** 1.E.1.1, 1.E.1.2

**ELA:** RL2; SL1, 2, 3, 4, 6

**CIRCLES OF LIFE** (Grade 2): Compare the life cycles of butterflies, frogs, beetles, ants and ladybugs using manipulatives, puzzles, and more. Play a life cycle game, and build Mr. Potato Head “babies.” Observe our live ant farm, toads, and beetles! Program available as outreach and at CSC.

**Time:** 50 minutes

**Science Goals:** 2.L.1.1, 2.L.1.2, 2.L.2.1, 2.L.2.2

**ELA:** SL1, 2, 3, 4, 5

**SOUNDS GOOD** (Grade 2): Make waves and vibrations while investigating the science of sound. Experiment with simple instruments and observe changes in pitch and volume. Program available for outreach and at CSC.

**Time:** 50 minutes

**Science Goals:** 2.P.1.1, 2.P.1.2

**ELA:** SL1, 2, 3, 4, 5

**WHEN IT RAINS, IT POURS** (Grade 2): Learn about solids and liquids and investigate further using magnifying glasses and microscopes. Use rain gauges, thermometers and anemometers to measure and describe weather conditions. **NEW experiments included this year!** Program available as outreach and at CSC.

**Time:** 50 minutes

**Science Goals:** 2.P.2.1, 2.P.2.2, 2.E.1.2, 2.E.1.4

**ELA:** SL1, 2, 3, 4, 5



# 3rd — 5th Grade

**BODY CONNECTIONS** (Grade 3): Investigate body systems, including a look at the skeleton and joints. Learn the importance of good nutrition and exercise, and discover the microbes that can make you sick. *Pair this with a viewing of Astronaut in the Millholland Planetarium for additional fee.* Program available for outreach and at CSC.

**Time:** 50 minutes

**Science Goals:** 3.L.1.1, 3.L.1.2

**Healthful Living Goals:** 3.PCH.2.1; 3.NPA.1.1; 3.NPA.1.2; 3.NPA.2.3

**ELA:** SL1, 2, 3, 4, 6

**ECOSYSTEMS IN DEPTH** (Grade 3): Explore the living and nonliving factors in forest and wetland ecosystems with a special focus on seeds and soils. Program held at Glenn Hilton Park. Available August – October, April – June.

**Time:** 50 minutes

**Science Goals:** 3.L.2.1, 3.L.2.2, 3.L.2.3, 3.L.2.4

**ELA:** SL1, 2, 3, 4, 6

**MATTER MANIA** (Grade 3): Explore the properties of three states of matter and make some fascinating discoveries about how matter changes. Mix up your own slime and take it home! Program available for outreach and at CSC.

**Time:** 50 minutes

**Science Goals:** 3.P.2.1, 3.P.2.2, 3.P.2.3

**ELA:** SL1, 2, 3, 4, 6

**SKY SEARCHERS** (Grade 3): Take a look at our solar system and find out where Earth fits. See what's in our current night sky, and discover the secrets of light and shadows. Program available only at CSC in the Millholland Planetarium.

**Time:** 50 minutes

**Science Goals:** 3.E.1.1, 3.E.1.2

**ELA:** SL1, 2, 3, 4, 6

**EARTH, MOON AND STARS** (Grade 4): Astro-adventurers will explore the relationship between the earth, moon and stars. Master the meaning behind the moon's movement. Program available only at CSC in the Millholland Planetarium.

**Time:** 50 minutes

**Science Goals:** 4.E.1.1, 4.E.1.2

**ELA:** SL1, 4, 6

**MAGNETICITY** (Grade 4): Learn about static and current electricity, build a circuit, investigate magnetic attraction, make an electromagnet & more. Don't miss this hair-raising program! Program available for outreach and at CSC.

**Time:** 50 minutes

**Science Goals:** 4.P.1.1, 4.P.1.2, 4.P.3.1, 4.P.3.2

**ROCK HOUNDS** (Grade 4): Be a geologist! Uncover the differences between rocks and minerals. Classify rocks based on their composition. Investigate properties of minerals and perform tests to identify them. Program available for outreach and at CSC.

**Time:** 50 minutes

**Science Goals:** 4.P.2.2, 4.P.2.3, 4.E.2.1

**ELA:** SL1, 4, 6

**SQUID SCIENCE** (Grade 4): Dive in and discover the many characteristics of a squid and learn how their adaptations make them suited to life in the ocean. Take a peek at the inside, too. Materials fee of \$6 per squid required. Program available for outreach and at CSC.

**Time:** 50 minutes

**Science Goals:** 4.L.1.2, 4.L.1.4

**ELA:** SL1, 4, 6

**ECOSYSTEMS IN DEPTH** (Grade 5): Explore the living and nonliving factors in forest and wetland ecosystems with a special focus on the interactions of plants and animals. Program held at Glenn Hilton Park. Available August – October, April – June.

**Time:** 1 hour, 20 minutes

**Science Goals:** 5.L.2.1, 5.L.2.2, 5.L.2.3

**ELA:** SL1, 3, 4, 6

**FIRE AND ICE** (Grade 5): Use your bare hands to cause a color change and make a liquid boil. Make fascinating, hands-on discoveries about conduction, convection and radiation. Be prepared to observe fiery demonstrations! Program available only at CSC.

**Time:** 50 minutes

**Science Goals:** 5.P.3.1, 5.P.3.2

**ELA:** SL1, 3, 4, 6

**INSIDE OUT** (Grade 5): Learn about the major systems of the human body by comparing them to that of a preserved frog. Students will work in teams of 4, unless otherwise requested. Additional specimen fees apply (\$5.50 per frog). Program available for outreach and at CSC.

**Time:** 50 minutes

**Science Goals:** 5.L.1.2

**Healthful Living Goals:** 5.PCH.4.2, 5.PCH.4.3

**ELA:** SL1, 3, 4, 6

**WEATHER UNDER PRESSURE** (Grade 5): Learn about the different factors that affect our weather. Discover how cloud formation is related to weather patterns and precipitation. Observe convection currents and the amazing effects of air pressure. *Pair this with a viewing of Force 5 in the Millholland Planetarium for an additional fee.* Program available for outreach and at CSC.

**Time:** 50 minutes

**Science Goals:** 5.E.1.1, 5.E.1.2, 5.E.1.3, 5.P.2.1

**ELA:** SL1, 3, 4, 6

# 6th — 8th Grade

**AN EYE OPENING EXPERIENCE** (Grade 6): Investigate concepts of light absorption, reflection and refraction. See for yourself how the eye works by dissecting a cow's eye. Students work in teams of 2-3 for the dissection. Additional specimen fees apply (\$3.00 per eye). Program available for outreach and at CSC.

**Time:** 50 minutes

**Science Goals:** 6.P.1.2, 6.P.3.2

**ELA:** SL1, 2, 4, 6

**SOLAR SYSTEM 101** (Grade 6): An examination of the unique features of the members of our solar system, and their influence on each other, including tides and eclipses. A review of space exploration, past and present. See it all on the dome! Program available only at CSC in the Millholland Planetarium.

**Time:** 50 minutes

**Science Goals:** 6.E.1.1, 6.E.1.2, 6.E.1.3

**ELA:** SL1, 2, 4, 6

**IT'S ELEMENTAL** (Grade 6): Beginning chemists meet here! An investigation into atoms, elements, and physical properties of matter. Experiment with density, volume and mass, and use your new science skills to identify an unknown element. Program available for outreach and at CSC.

**Time:** 50 minutes

**Science Goals:** 6.P.2.1, 6.P.2.2, 6.P.2.3

**ELA:** SL1, 2, 4, 6

**MICRO-INVESTIGATIONS** (Grade 7): Review the basics of plant and animal cells and their contents. Watch organelles in action to keep the cell alive. Observe several living microscopic organisms. Program held at CSC Wednesday through Friday only. Additional materials fee of \$25 required (will cover multiple classes on the same day).

**Time:** 1 hour, 20 minutes

**Science Goals:** 7.L.1.1, 7.L.1.2, 7.L.1.3

**ELA:** SL1, 2, 4, 6



**READY, SET, GO!** (Grade 7): What can frogs, rockets, and roller coasters teach you about energy and motion? What does friction have to do with hovercrafts? Find out in this action-packed class. Program available for outreach and at CSC.

**Time:** 50 minutes

**Science Goals:** 7.P.1.1, 7.P.1.2, 7.P.2.1, 7.P.2.2, 7.P.2.4

**ELA:** SL1, 2, 4, 6

**WILD WEATHER** (Grade 7): Learn about the different factors that affect our weather. Observe "lightning" and sling a psychrometer to determine humidity. *Pair this class with a viewing of Force 5 in the Millholland Planetarium for additional fee.* Program available for outreach and at CSC.

**Time:** 50 minutes

**Science Goals:** 7.E.1.1, 7.E.1.2, 7.E.1.3, 7.E.1.4, 7.E.1.5

**ELA:** SL1, 2, 4, 6

**HYDROMANIA** (Grade 8): Investigate aquatic ecosystems. Capture and identify macro-invertebrates and explore how they interact with other living things and their habitat. Test for dissolved oxygen, pH and turbidity. Wear shoes that can get wet. Program held at Glenn Hilton Park. Available August – October, April – June. A classroom option at CSC is available upon request August – June.

**Time:** 1 hour, 20 minutes

**Science Goals:** 8.E.1.1, 8.E.1.3

**ELA:** SL1, 2, 4, 6

**RADICAL REACTIONS** (Grade 8): Review chemistry with a peek at the periodic table of elements and explore the basics of reactions with fiery demonstrations. Experiment with systems to test the Law of Conservation of Mass. Program available at CSC only.

**Time:** 50 minutes

**Science Goals:** 8.P.1.1, 8.P.1.2, 8.P.1.3, 8.P.1.4

**ELA:** SL1, 2, 4, 6

**SICK SCIENCE** (Grade 8): Delve into the microscopic world of viruses, bacteria, fungi and parasites. Perform a chemical experiment to determine how a classroom "epidemic" began and spread. Program available at CSC only.

**Time:** 50 minutes

**Science Goals:** 8.L.1.1, 8.L.1.2, 8.L.5.1

**ELA:** SL1, 2, 4, 6



# Special Topics

## Math Programs

**SHAPE DETECTIVES** (Grades 1-2): Use observation skills to study geometric shapes in animals, plants and natural objects in the world around you. Practice nonstandard units of measurement and find the area of an animal's track. Examine evidence and chart your results to determine the culprit in a shape mystery! Program available for outreach or at CSC.

**Time:** 50 minutes

**First Grade Math Goals:** 1.MD.2, 1.G.1, 1.G.2

**Second Grade Math Goals:** 2.MD.1, 2.MD.3, 2.MD.4, 2.G.1

**SUPERMARKET MATH** (Grade 3): Attention shoppers! Feeling cheated by your chips? Seriously short on cereal? Use balances to weigh food and graph the results to investigate how supermarket products measure up. Program available for outreach or at CSC.

**Time:** 50 minutes

**Math Goals:** 3.MD.2

## Dissections

**ANIMAL INNARDS:** Let a CSC educator guide your students through the dissection of an animal or organ of your choice. Students work in teams of 2-4. Specimen options and their additional cost that will be added to the program fee follow. Program available for outreach or at CSC.

**Time:** 1 hour, 20 minutes for organisms or 50 minutes for organs

Squid – \$6.00

Cow eyes – \$3.00

Perch – \$7.00

Frogs – \$5.50

Pig hearts – \$8.00

Fetal pigs – \$23.00

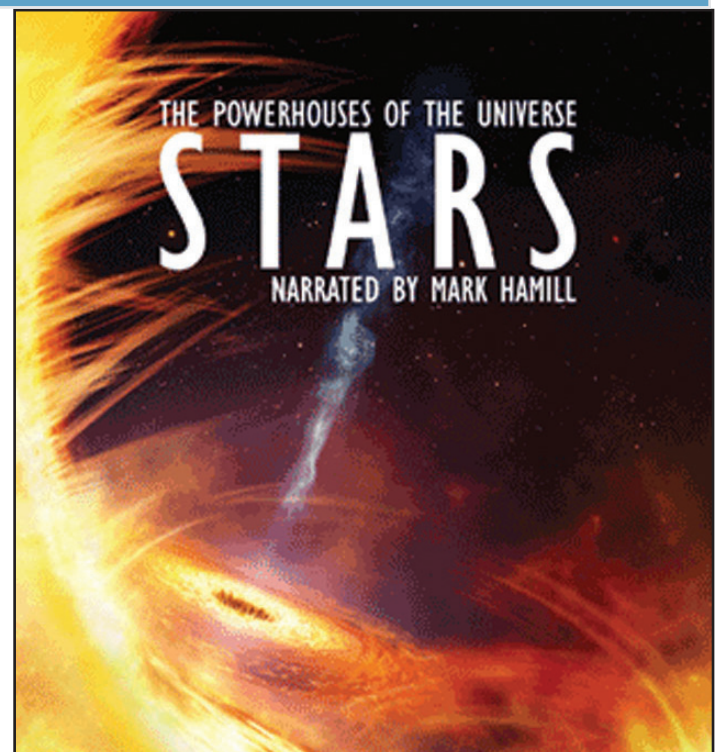
# High School

**Earth in Space:** Dive deep into the science of space with hands-on activities and a viewing of "Stars: Powerhouses of the Universe" in the Millholland Planetarium. Students will investigate the formation of galaxies, stars and planets; Earth's location and movement in the universe; the properties of stellar gases and the energy of space.

Program will be held in a CSC classroom and in the Millholland Planetarium; the program is only available at CSC.

**Time: 1 hour, 20 minutes**

**Earth/Environmental Science Goals:** EEn. 1.1.1, EEn. 1.1.2, EEn. 1.1.3, EEn. 1.1.4

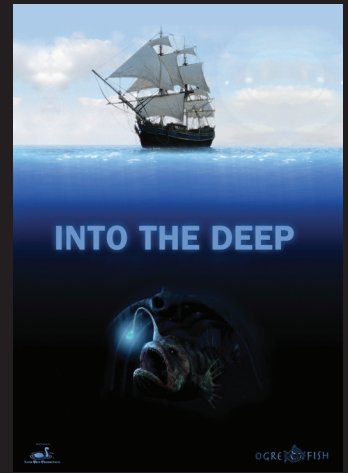


# PLANETARIUM SHOWS

**NEW SHOW!**

## **INTO THE DEEP**

A breathtaking journey exploring the deep sea, including its geology, marine biology, and overall marine environment. The show shares glimpses of rarely seen marine organisms: bio-luminescent frogfish, jellyfish, vampire squid, viperfish, pelican eels, and the mysterious fangtooth — all perfectly adapted to the extreme pressures and temperatures of their alien environment. (Grades 4 - 12)



### **Additional Titles Available:**

**Astronaut:** What does it take to become an astronaut and survive in the vacuum of space? This investigation on the effects of space on the human body explores the amazing worlds of inner and outer space, from floating around the International Space Station to maneuvering through microscopic regions of the human body. (K - Grade 12)

**Black Holes: The Other Side of Infinity:** Journey through one of the most mystifying, awe-inspiring phenomena in the Universe. Where do they come from, and how do we find them? (Grades 9-12)

**Extreme Planets:** From water worlds to molten landscapes, inhabitable moons to planets with multiple moons, these exotic worlds aren't just science fiction anymore. (Grades 6-12)

**FAQs: Astronomy & Space** A planetarium program which seeks to answer your questions. What is the brightest star in the sky? What is the most distant object you can see with just your eyes? Who invented the telescope? and more... (Grades 6 -12)

**Force 5: Feel the Fury:** Extreme weather takes center stage in this digital feature. See and feel what it would look like while standing in the middle of a deadly storm. (Grades 5-8)

**Heart of the Sun:** An examination of our nearest star from the cultures of ancient sky watchers to present day astronomers and astrophysicists. Available through March 2014 (Grades 6-12)

**How Old is the Universe?** - This question stretches the limits of our imaginations. Planetarium visitors will experience the 14 billion year age of the universe shrunk down to just one year. (Grades 6 - 12)

**Ice Worlds:** Ice Worlds is a tour of the icy landscapes of our solar system, especially our home planet Earth. Audiences explore the critical relationship between ice and life that has developed over millions of years. (Grades 6-12)

**Infinity Express** — A grand tour of the latest from the world of astronomy — from Mars and Jupiter to the Space Program and structure of the Universe. (Grades 6-12)

**Microcosm: The Adventure Within**  
An armada of nanoshells, displayed as yellow submarines, travels in the blood stream, through the eye, ear & brain, in search of a deadly virus. (Grades 6-12)

**Molecularium** — Review the states of matter, and learn all about atoms and molecules in this animated feature. (Grades 2-8)

**One World, One Sky: Big Bird's Adventure,** follows Sesame Street's Big Bird and Elmo as they explore the night sky with Hu Hu Zhu. Together, they take an imaginary trip from Sesame Street to the moon. (PK-Grade 2)

**Stars: Powerhouses of the Universe**  
Every star has a story. Some are as old as time, faint and almost forgotten. Others burn bright and end their lives in powerful explosions. New stars are created every day, born of vast clouds of gas and dust. (Grades 6 through 12)

**The Search for Extra Terrestrial Intelligence:** Explore all sides of this topic, from the planets found around other stars, to the feasibility of traveling to the stars, and what aliens might actually be like. (Grades 4-12)

**The Secret of the Cardboard Rocket**  
Embark on an outstanding adventure as two children spend a night touring the solar system alongside their ship's navigator, an astronomy book, in this animated feature. (PK-Grade 2)

**The Little Star That Could**  
Journey with "Little Star" as he meets other stars, learns what makes them special and discovers how they combine to form star clusters and galaxies in this animated feature. (PK-Grade 5)

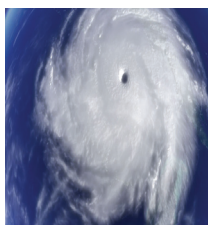
**The Zula Patrol: Under the Weather**  
Join The Zula Patrol on an exciting expedition across the sky. When the nefarious Dark Truder steals the weather from the Solar System planets, The Zula Patrol goes after him, discovering both terrestrial and planetary weather along the way. (PK-Grade 3)

## **Planetarium Pairings: PLANETARIUM SHOW + PROGRAM**

Reinforce the content received in your class by combining any digital planetarium feature with a classroom program for an additional fee. Pairings help expand the objectives covered during your CSC visit.



**Astronaut +  
Body Connections  
(3rd Grade)**



**Force 5 +  
Weather Under Pressure  
(5th Grade)  
Force 5 +  
Wild Weather  
(7th Grade)**



**Molecularium +  
Matter Mania  
(3rd Grade)**

# SCIENCE INQUIRY FESTIVAL

## *Scorpions, Owls and Bears, Oh My!*

How small is a baby black bear? Does a scorpion really glow? Students discover the answers to these questions and many more when your school books a Science Inquiry Festival.

Each of the six exciting stations features guided scientific investigations where students are able to hone their inquiry skills as they make predictions and observations, and interpret their findings. Students will investigate owl pellets, experiment with simple machines, erupt a volcano, make fascinating discoveries about matter, and much, much more in this popular outreach program.

**Program Requirements:** School must provide a gymnasium-sized room with access to water and electrical outlets, 12 tables and chairs, **and a minimum of 12 adult or high-school volunteers** to manage stations. Training is provided.

**Grade levels:** K – 8<sup>th</sup> Grade

**Length:** up to 5 one-hour sessions per day, or one three-hour evening session

**Cost:** \$450 first day or evening; \$250 for a second day/evening option

**Mileage:** Current federal mileage rate applies. A per diem charge and hotel cost is added if overnight stay is required (typically applies to schools in counties outside of Catawba, Burke, Caldwell, Alexander, Lincoln and Iredell).

Available October 15, 2013 – June 2014 only. Book early to reserve your date(s)!

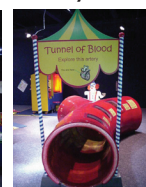
## Featured Exhibits



CSC brings you a new temporary exhibit inspired by Amy Stewart's best selling book ***Wicked Plants: The Weed that Killed Lincoln's Mother and other Botanical Atrocities***. This fun and family-friendly exhibit gives visitors a hands-on experience with some of the world's most diabolical botanicals without the risk of pain, poisoning, dismemberment or death. Thought provoking, entertaining and educational interactive displays set inside a ramshackle home create a fascinating portrait of the evildoers that may be lurking in your own backyard. History, medicine, science, legend and lore are brought together to present a compendium of blood-curdling botany that will entertain, alarm and enlighten.



**Body Carnival: The Science and Fun of Being You** explores the physical science of the human body. The concepts of force and pressure, the properties of light and sound, mathematics concepts, and the laws of motion are all a part of how our bodies interact with the world. Through a variety of exciting interactive activities, people will better understand the science of how their body works and interacts with the world.



Program	Max. # students per program	Fees Contract Schools	Fees Non-Contract Schools
Program at CSC or Glenn Hilton Park	30	\$100 per program <i>includes exhibit exploration</i> Admission for teachers & aides covered by program cost; 1 chaperone/10 students = free; additional = \$5 ea.*	\$125 per program <i>includes exhibit exploration</i> Admission for teachers & aides covered by program cost; 1 chaperone/10 students = free; additional = \$5 ea.*
Outreach Class at Your School	30	\$135 per program, or \$450 for 4 programs <i>(same topic &amp; day)</i> + current federal rate per mile	\$150 per program, or \$500 for 4 programs <i>(same topic &amp; day)</i> + current federal rate per mile
Science Inquiry Festival	400 per day	\$450 first day \$250 second day Current federal rate per mile and per diem charge outside Catawba County	\$450 first day \$250 second day Current federal rate per mile and per diem charge outside Catawba County
Science Assembly	200 - Outreach 100 - CSC	\$300 per assembly Additional same day, \$250 each additional back-to-back show Outreach charges apply	\$400 per assembly Additional same day, \$350 each additional back-to-back show Outreach charges apply
Self-guided CSC Exhibit Exploration	N/A	\$5 per person* 1 adult/10 = free; additional = \$5 ea.	\$5 per person* 1 adult/10 = free; additional = \$5 ea.

### Payment

All payments are due in full when your group arrives at Catawba Science Center (or when CSC staff arrive to deliver a program at your school) unless prior arrangements are made for invoicing.

**\* Membership admission discounts are not applicable with group visits.**

### Programs Outside the Unifour

Outreach programs conducted in counties other than Alexander, Burke, Caldwell and Catawba must total at least \$250 (plus mileage) per day. Mileage will be charged for all programs. For programs that require an overnight stay by CSC staff, a possible per diem and hotel fee may be charged.

# Planning Your Visit

Fill out this worksheet prior to contacting Catawba Science Center for an easier scheduling experience. Once scheduled, visit CSC's website to better prepare for the day of your field trip.

Program Title \_\_\_\_\_

Number of programs needed \_\_\_\_\_

You will need all teacher names. Group size for programs is limited to 30 participants.

Date \_\_\_\_\_

Alternate #2 \_\_\_\_\_

Alternate #3 \_\_\_\_\_

**Please note, CSC has the highest group visitation in March, April and May, between the hours of 9 a.m. and noon.**

While there are no guarantees, it is more likely that there will be fewer other groups visiting if you schedule *outside* of the above months and times.

Time range available for your programs \_\_\_\_\_

Do you want your program at CSC, or at your school? \_\_\_\_\_

The Special Events Room (located in the planetarium building) can accommodate groups of 50 at a time for lunch. **Reserved in 30 minute time slots per group of 50, on a first come, first served basis. Groups are welcome to picnic on the public lawn.**

**No other lunch facilities are available at CSC.**

**Special Events Room**    Yes    No

Time range needed \_\_\_\_\_

**Now you're ready to make a reservation:**

We encourage you to schedule well in advance. **To make a reservation, e-mail [scheduling@catawbascience.org](mailto:scheduling@catawbascience.org), or call (828) 322-8169, ext. 301.**

*Please do not fax this worksheet in lieu of a phone call or e-mail.*

**Cancellations:**

Please notify us immediately if you need to reschedule or cancel your visit. "No shows" and groups canceling within 24 hours of their scheduled visit will be charged the full amount. In the event of a rained-out program at Glenn Hilton Park, groups are encouraged to reschedule or have a self-guided exploration of CSC exhibits.

# Family Science Nights

## Looking for a fun & educational event for your school?

Catawba Science Center would love to host your students and their families for an exciting evening, featuring an after-hours visit of exhibits and planetarium programming, or a series of themed classes. Call (828) 322-8169 for pricing information.

## Assemblies

**PHYSICS PHUN** (suggested upper elementary — middle school): See a variety of physical science demonstrations that appear magical and then learn the science behind them. Featured demos include tablecloth yank, Van de Graaff generator, bed of nails and more.

**Program requirements:** two 6' tables, access to electricity

**ROCKIN' REACTIONS** (suggested upper elementary or middle school): Learn some basics of chemistry through these sometimes fiery demonstrations. Program includes liquid nitrogen favorites, exploding silo, elephant toothpaste and more.

**Program requirement:** one 6' table, access to water

**REALLY RAD REPTILES** (elementary – middle school): Get up-close and personal with a variety of live animals as your students discover the fascinating world of reptiles. Find out which characteristics alligators, snakes, lizards and tortoises share with each other and other animals, along with what makes each unique.

**Program requirement:** at least one 6' table

*Assembly programs available as outreach or at Catawba Science Center*

## Teacher Services & Benefits

### Customized Workshops

Let us design a special in-service workshop for your teachers or group. CSC Educators cater the workshops to meet your needs, and can cover any science topic and integrate it with the *NC Common Core & Essential Standards*.

Cost is based on the number of hours of instruction. Call (828) 322-8169, ext. 305 for more information.

### Supplement Your Income

CSC seeks certified K-12 educators to teach engaging science classes during the school year for evening groups and during scheduled holidays. During summer vacation, CSC also has opportunities for educators to teach throughout its annual Summer Fun Science Camp in June, July and August. Classes for youth in grades Pre-K through rising ninth are Monday — Friday, from 10 a.m. until noon.

Download an application at [www.CatawbaScience.org](http://www.CatawbaScience.org) on the employment page.

### Special Member Rates & Discounts

Receive a 10 percent discount on purchases in the Science Shop gift shop, with your teacher ID.

**Certified public & private school teachers (K-12) with current school ID in North Carolina** are also eligible for a CSC Membership at a reduced rate. Call (828) 322-8169, join online at [CatawbaScience.org](http://CatawbaScience.org) or mail the enclosed form with a copy of your school district identification.

### CSC Membership Application

Annual Membership valid for one year from joining/renewing

\_\_\_ Annual: Family / Grandparent, \$70\* (Teacher Discount \$10)      \_\_\_ Supporting, \$100+ \*\*

NAME(S): \_\_\_\_\_

ADDRESS: \_\_\_\_\_ CITY: \_\_\_\_\_ ST: \_\_\_\_\_ ZIP: \_\_\_\_\_

PHONE: (H) \_\_\_\_\_ (C) \_\_\_\_\_ (W) \_\_\_\_\_

EMAIL: \_\_\_\_\_

CHILDREN/GRANDCHILDREN NAMES & BIRTHDAYS: \_\_\_\_\_

\* Includes member benefits for two designated adults and their children / grandchildren 18 and under.

\*\* Includes annual member benefits, plus additional guest(s) each visit and free passes for friends.

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# Shop for Science

**Don't forget to visit CSC's Science Shop gift shop, with two locations.**

Teachers will find a variety of resources for the classroom, including science kits, colorful guidebooks, telescopes, ideas for science projects and a series of workbooks with engaging science experiments that support *National Science Education Standards*.



The Science Shop also features science-related gifts with aquatic and astronomy themes, as well as puppets, puzzles, posters, T-shirts, tote bags, coffee mugs and more. Prices start as low as \$1.00 for young shoppers.

Themed grab bags are also available for order in advance. To learn more about these and other items specially priced for student shoppers, contact the Science Shop manager at (828) 322-8169, x 309.

## Additional Opportunities on the SALT Block

**While you are at the Catawba Science Center...**

**INCLUDE A TRIP to the HICKORY MUSEUM OF ART!**

The Art Museum offers curriculum related tours and hands-on projects to school groups of all ages. Programs incorporate competency goals from language arts and social studies to engage students through visual learning. Check our website for correlation to your grade level.

**Tours will include the interactive exhibition —  
DISCOVER FOLK ART: Unique Visions by Self-Taught Southern Artists!**

**Tour Options:**

- \$3 per student for a 1 1/2 hour visit (includes tour plus hands-on art activity for kids to keep)
- \$2 per student for a docent led 1 hour tour only

**Call Ginny Zellmer to schedule your visit: 828.327.8576**



Located in the Arts & Science Center of Catawba Valley  
243 3rd Ave NE • Hickory, NC 28601  
828.327.8576

[www.HickoryArt.org](http://www.HickoryArt.org)





# Partners in Science

## **Aquarium**

BB&T/Cline Southern Insurance

## **Biology/Human Body**

Greer Laboratories, Inc.

Lane Venture

Medical Center Pharmacy, Inc.

## **Biology/Plants & Animals**

Broome Associated Insurance Agency

First Citizens Bank

Vanguard Furniture

Turf Pro Landscaping

## **Biotechnology**

Caldwell Memorial Hospital

## **Chemistry**

United Beverages of NC, LLC

## **Earth Science**

AFLAC- Gwen Butler

American Roller Bearing Company

## **Environmental Science**

Catawba Valley Wildlife Club, Inc.

Cloninger Ford of Hickory

## **Numbers**

Davidson, Holland, Whitesell & Co

Shuford Yarns, LLC

The Wells Fargo Advisors

Wells Fargo Bank

## **Physical Science**

Brittain Engineering, Inc.

Hi-Tech Fuses, Inc.

Hickory Sheet Metal Company

US Conec Ltd.

ZF Lemforder Corporation

C. R. Laine Furniture- Associate Partner

Design Tool, Inc.- Associate Partner

Hickory Brands, Inc.- Associate Partner

## **Preschool**

Aiken-Black Tire Service, Inc.

Baker Furniture, Inc.

Carolina Tape & Supply Corporation

David E. Looper & Company

Taylor & Viola, Inc.

Vesco Toyotalift

## **Space Science**

Corporate Management Services

Plastic Packaging Inc.

***Thank you to CSC's Partners in Science*** for providing essential support for science education programs during the 2012 - 13 school year. Their support helps CSC keep program fees low so more area schools can participate in hands-on science education at CSC.

***For more information about CSC's Partner in Science program, call (828) 322-8169.***