

Homeschool Science Classes

2009-10 Guide to CSC Homeschool Science

Catawba Science Center is a nonprofit museum providing hands-on learning for all ages, with more than 18,000-square-feet of exhibit space centering on physical, natural and earth sciences, including a marine touch pool with LIVE sharks and a digital planetarium theater.

Catawba Science Center's mission is to further the public's understanding of science and technology in the Western Piedmont through the use of educational programs, exhibits, teaching collections and activities that emphasize physical participation.



Dear Homeschool Parents,

Welcome to another year of homeschool educational experiences at Catawba Science Center.

This year, CSC will continue with a high school specific science strand focusing on Earth Science, which combines chemistry, biology and physics.

New this year: Curt Spivey, Planetarium Coordinator, will teach an astronomy class for parents in the Millholland Planetarium.

Class descriptions, dates, fees and program details, as well as information on upcoming exhibits and planetarium shows at CSC, can be found inside.

Your ideas and suggestions have greatly assisted CSC in developing this year's programs, and are always welcome.

Thank you for your continued support and for making Catawba Science Center your partner in science education.

Sincerely,
Erin Graves
Director of Programs
programs@catawbascience.org

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CSC is Located on the SALT Block • 243 Third Ave. NE • Hickory, NC 28601
(828) 322-8169 • (828) 322-1585 (fax) • www.CatawbaScience.org

Open Tuesday – Friday, 10 a.m. to 5 p.m., Saturday, 10 a.m. to 4 p.m. and Sunday, 1 to 4 p.m.
Closed to the public on Mondays except Martin Luther King, Jr. Day,
Easter Monday, Memorial and Labor Day.

Registration Information

Pre-K – 8th Grade

When:

Choose the Tuesday or Wednesday in the third week of each month.

Class Time:

Pre-K – Kindergarten

1 to 2:30 p.m.

First – 8th Grade

1 to 2:30 p.m.

Check-in:

12:50 p.m. in the CSC Education Building lobby (adjacent to the main Arts & Science Center building.) Classes for Pre-K through 8th grade are held in the Education Building.

Class size:

24 students max

Pre-K & Kindergarten: 15 students max

1st & 2nd Grade: 20 students max

Sign-out:

To ensure student safety, we require that parents go to individual classrooms and pick up their children.

Cost:

CSC Members

\$10 per class, \$75 entire year

Nonmembers

\$20 per class, \$150 entire year

High School Classes

When:

Choose the Tuesday or Wednesday in the third week of each month.

Class Time:

1 to 2:30 p.m.

Check-in:

12:55 p.m. in the CSC Education Building lobby (adjacent to the main Arts & Science Center building.) Classes meet in the Education Building. *Class Size is 20 students max.*

Cost:

\$12 per class for CSC members

\$24 per class for nonmembers

Registration & Refunds

Payment and registration forms are required to reserve your child's space. Classes will be filled on a first-come, first-served basis. If you need to cancel a registration, you must do so at least two weeks prior to the class date in order to receive a refund, minus an administration fee of \$10.

Please note, CSC reserves the right to cancel a class (and issue full refunds) if minimum enrollment is not met.

Registrations are nontransferable.

If you sign up for the year (\$75 or \$150 for Pre-K - 8th), refunds will not be paid for missed programs, unless they are cancelled by CSC.

An optional payment plan will allow for \$25 installments to be paid throughout the year. *Call (828) 322-8169 for details.*

Not a CSC member?

Now's a great time to join Catawba Science Center.

Not only will you save on homeschool science classes, but you'll enjoy FREE admission to CSC permanent exhibits, including freshwater and saltwater aquaria, Hall of Astronomy, Inventor's Workshop, Preschool Explore It, Energy Avenue and more.

Plus, CSC members receive FREE admission to *Flip It, Fold It, Figure It Out* in September, *TreeHouses* in January, and the return of the ever-popular *Flutter-By Butterfly Habitat* in May.

2009-10 CSC Membership Form

Membership valid through April 30, 2010

New Renewal

Family Membership, \$70 * **Grandparent Membership, \$70 ****

See www.CatawbaScience.org for additional member/donor levels.

Parent/Grandparent names _____

Child/Children's name(s) and birthdays _____

Address _____ City _____

County _____ State _____ Zip _____

Phone: H _____ W _____ C _____

E-mail _____

* Parents/guardians with their children (18 & under)

** Grandparents with their grandchildren (18 & under)

Science Class Descriptions

Pre-K and Kindergarten 1st and 2nd Grade

September 15 & 16

Sink or Float – Learn what makes some objects sink and why others might float. Use a ball of clay to make a boat that floats.

October 13 & 14

Stuck on You – Find out what things magnets will stick to and why. Make a magnet discovery bottle.

November 17 & 18

Drip, Drip, Hop, Hop – Find out who lives in a rainforest. Make a tree frog and listen to the sounds of the rainforest.

December 15 & 16

Soil, Rocks and Minerals – Explore and identify objects that are made from animals, plants or rocks. Examine clay, sand and loam. “Mine” for gems to take home and start a rock collection.

January 12 & 13

Lions and Tigers and Elephants, Oh My! – Go on safari and discover who lives on the African savannah.

February 16 & 17

My Beating Heart – Listen to your heart with a real stethoscope, make your own squishy heart and see how blood pumps through your body.

March 16 & 17

Who’s Your Mama? – Learn how animal mommies take care of their babies. Make a joey pouch just like a mommy kangaroo.

April 13 & 14

Reduce, Reuse, Recycle – Participate in an Earth awareness scavenger hunt and learn ways to help through litter education, conserving energy and stopping pollution.

May 11 & 12

Chemical Concoctions – Are you ready to put on some goggles and get messy? Create an eruption, inflate a balloon and make silly putty.

September 15 & 16

Creepy Crawlies – Meet and learn about some of CSC’s resident insects, spiders and other creatures. Make a worm habitat and take your new “pet” home.

October 13 & 14

Hear, Here – Investigate the science of sound. Make waves as you learn about volume and pitch.

November 17 & 18

Going Batty – Participate in fun activities centered around Janell Cannon’s *Stellaluna*.

December 15 & 16

Science Inquiry Festival – Become a health and human body investigator in this fast-paced science festival. All new activities this year.

January 12 & 13

Slithery Snakes – Participate in fun activities centered around Janell Cannon’s *Verdi*. Meet a couple of CSC’s scaly inhabitants.

February 16 & 17

Sensible Science – Explore the world around you using your five senses. Compare our senses to those of other animals too.

March 16 & 17

Little Stars – Learn about our solar system in the Millholland Planetarium, including a viewing of *The Little Star that Could*.

April 13 & 14

Egg-citing Science – Crack the mysteries of the egg through dissection, experimentation and other hands-on fun.

May 11 & 12

Water Works – Bubble over with fun as you experiment with water. You will get wet; you may get soaked.

3rd and 4th Grade

September 15 & 16

Science Skills – How do scientists do the things they do? Learn all about the process of science. Pay close attention and ask lots of questions.

October 13 & 14

Star Power – Become an expert on our star, the sun, and its planets with this class in the Millholland Planetarium. View the new feature *The Little Star that Could*.

November 17 & 18

Sound Science – Make some noise and feel the waves. Create goofy musical instruments as you learn about the science of sound.

December 15 & 16

Science Inquiry Festival – Become a health and human body investigator in this fast-paced science festival. All new activities this year.

January 12 & 13

Rocks Rock – Become a geologist as you investigate rocks and minerals. Learn about North Carolina’s natural resources. Start your very own collection.

February 16 & 17

Two Liter Science – You’ll be amazed at what you can do with a two-liter bottle. (Bring two clean, clear 2-liter bottles to class.)

March 16 & 17

Robots! – What makes a robot a robot? How does programming work? Learn the basics, while using crickets and sandwich robots.

April 13 & 14

Creatures of the Night – Discover why bats are such amazing animals.

May 11 & 12

Kitchen Chemistry – You don’t have to leave your house to be a scientist. Find out how to use everyday kitchen products for science fun.

Science Class Descriptions

5th and 6th Grade

September 15 & 16

Science Skills — Study experimental design. Learn the procedures scientists follow while doing experiments with Madagascar hissing cockroaches and physical science.

October 13 & 14

Volts and Jolts — Have hair-raising fun with a Van de Graaff generator. Make a game board to take home.

November 17 & 18

Landforms — Study geology from the mountains to the sea. Learn about natural changes to the landscape as you make rivers, deltas and more.

December 15 & 16

Science Inquiry Festival — Become a health and human body investigator in this fast-paced science festival. All new activities this year.

January 12 & 13

Brain Basics — Map your cortex as you explore the connections between your brain and your senses. Dissect a cow eye to see an example of sense connection. (Additional \$2 dissection fee)

February 16 & 17

Forecast Fun — Learn facts about weather and identify factors that cause it. View *Force Five* in the Millholland Planetarium.

March 16 & 17

Dive Right In — Does a clam have a foot? Does a sea star have a mouth? Find out in this dissection class. (Additional \$4 dissection fee)

April 13 & 14

Move It — Experiment with motion using toys and learn about Newton's laws of motion and other physics forces.

May 11 & 12

It's Earth Shattering — Learn about one of nature's greatest forces — earthquakes. Can your structure withstand CSC's epicenter?

7th and 8th Grade

September 15 & 16

Science Inquiry — Explore the tools and procedures of science. Apply the scientific method — question, hypothesize and experiment.

October 13 & 14

Vet School — Want to be a veterinarian? Test your diagnostic skills by reading animal X-rays. Learn to use a syringe and how to suture.

November 17 & 18

Poly...what? — Find out what polymers are and perform amazing experiments to discover how they're used in everyday life.

December 15 & 16

Science Inquiry Festival — Become a health and human body investigator in this fast-paced science festival. All new activities this year.

January 12 & 13

Wild Weather — Identify factors that cause our weather. Observe lightning, make a cloud, and view *Force Five* in the Millholland Planetarium.

February 16 & 17

DNA Day — Crack the genetic code as you work to extract DNA from bacteria.

March 16 & 17

Biotech 101 — Learn some basic techniques of biotechnology, including micro-pipetting and gel electrophoresis.

April 13 & 14

Science Without Answers — Discover solutions to wacky science questions through fun experimentation.

May 11 & 12

Fizz, Bubble ... Boom! — Review basics of chemistry. Watch demonstrations and do experiments that fizz, bubble, foam...and explode!

High School

Earth Science Strand

September 15 & 16

Astronomical Adventures — Visit the planetarium to learn more about our universe — the history of astronomy, the movement of astronomical bodies, the planets, the sun and other stars, constellations and galaxies.

October 13 & 14

Muddy Boots Science: Where Eukaryotes Abound — Join in this outdoor laboratory experience to put your biological and environmental skills to the test. Conduct a population density study examining and comparing the characteristics and adaptations of eukaryotes (fungi, plants and animals). *An indoor version will be conducted if weather is uncooperative.*

November 17 & 18

It's a Matter of Chemistry and Physics — Examine the properties of water and its relationship to life, ecosystems and the environment. Explore an open and closed ecosystem, practice using scientific equipment, use chemical tests to evaluate water quality, use physics to measure the stream flow rate and sinuosity. Learn about the power of water as an eroding agent. *Outdoor class, weather permitting. Please come prepared.*

December 15 & 16

No class, high school participants can volunteer with the Science Inquiry Festival.

January 12 & 13

Rockin' and Rollin' — Learn about the rocks that support us all on earth's lithosphere and the fossils hidden within. We will explore the chemical, physical, and biological factors that affect rocks; conduct tests that help us identify rocks and minerals, and that help us understand the formation of caves and sinkholes; and explore the forces of earthquakes and volcanoes.

High School (continued)

February 16 & 17

The Soil Beneath our Feet –

Learn about the composition of soil, its properties and formation. Conduct labs to test the chemical, physical, and biological aspects of soil. Find the microscopic life within and perform laboratory tests to examine soil properties.

March 16 & 17

Oceans Away – Learn about the physical and chemical aspects of our oceans, including the properties of waves and the hazards at sea, the tidal cycles, sonar mapping of the sea floor, sea water composition and more.

April 13 & 14

Oceans Alive – Learn about the creatures that live in the sea. Examine animals from each classification of oceanic life and dissect two of the ocean's interesting inhabitants – lamprey and skate. (Additional \$5 dissection fee)

May 11 & 12

Atmospheric Convection – Learn about weather, the moderation of earth's climate and air pollution as we conduct experiments to investigate our planet's ocean of air, its pollutants and its impact on the earth and life upon the planet. Use quadrant sampling techniques to discover which is greater, indoor or outdoor air pollution.

2009-10 CSC Traveling Exhibits

Now through Labor Day, Sept. 7, 2009
Swamp Things: A Look at Life in a Southeastern Swamp

Sept. 26 – Jan. 10, 2010
Flip It, Fold It, Figure It Out

Jan. 23 – May 16, 2010
TreeHouses: Look Who's Living in the Trees

May 22 – Aug. 29, 2010
Flutter-By Butterfly Habitat

Planetarium Features

Now through September 2009
Heart of the Sun

Now through December 2009
The Little Star That Could

October 2009 – March 2010
Force Five

January – June 2010
Extreme Planets

April – September 2010
Carolina Skies

Family Friendly Laser Shows
Laser Holidays, Nov. 27 – Dec. 31, 2009
Laser Beatles, April 2 – 11, 2010

NEW THIS YEAR!

April 13-14 • *Stargazing Primer for Parents* – CSC Planetarium Coordinator, Curt Spivey, will teach parents in the Millholland Planetarium how to share the wonders of the Universe with their children.

Navigate the night sky, tour the solar system, learn the basics of selecting a telescope and find out about great resources in the area and online. Suitable for parents of kindergarteners through high school aged students. **Cost: \$8 CSC Members, \$16 Nonmembers**

CSC Homeschool 2009-10 Registration Form

Pre-K – 8th Grade Classes

Please use a separate form for EACH child registering. Photocopies are acceptable, or download additional forms at www.CatawbaScience.org. Return completed form with payment to:

Catawba Science Center, PO Box 2431, Hickory, NC, 28603, or fax to (828) 322-1585.

Child's name: _____ Birthdate (mo./day/yr.) _____ Grade _____

Parent/Guardian: _____ Phone: H _____ W _____ C _____

Address: _____ City _____ State _____ Zip _____

CSC member? Y N E-mail: _____

If corporate member, company name: _____ Employee name _____

Membership must be valid through April 30, 2010.

Other individuals allowed to pick up your child(ren): _____

Class selections: Please circle Tuesday or Wednesday date

Sept. 15 16 Oct. 13 14 Nov. 17 18 Dec. 15 16 Jan. 12 13

Feb. 16 17 March 16 17 April 13 14 May 11 12

Entire year option, Tuesday or Wednesday (please circle your day of choice)

Cost: CSC members, \$10 per class, \$75 entire year

Nonmembers, \$20 per class, \$150 entire year

Parent Option: Please circle date and list parent name(s): _____

April 13 14 (\$8 CSC members, \$16 nonmembers)

Payment method:

Check enclosed

Charge my Visa Mastercard Discover Am. Express

Name on card _____ No. _____

Exp. date ___/___/___ Signature _____

\$ _____	Subtotal
\$ _____	Dissection fees
\$ _____	Apply membership
\$ _____	Grand Total

I would like to participate in CSC's payment plan.

If choosing payment plan, \$25 is due at time of registration.

Refund policy: A refund will be issued if you cancel at least two weeks in advance. Cancellations made within two weeks of a class will not receive a refund. CSC reserves the right to cancel any programs in the event that minimum class enrollments are not met. If this occurs, your payment will be refunded.

Medical information: (Completion required)

Emergency contact (if parent can't be reached) _____

Phone: H _____ W _____ C _____

Health/Accident Insurance: Employer _____ Ins. Co. _____ Policy # _____

Name of insured _____ Dr. _____ Phone _____

Currently on any medications? If so, please list and describe schedule for emergency administration. Include any asthma or allergy medications. If there are medications that must be administered by CSC staff, written directions must be sent.

Allergies _____ Medications _____

I, _____, do hereby authorize CSC staff to act on my behalf in seeking any medical treatment or medicine for my son/daughter, _____, during the 2009-10 homeschool program.

Signature _____ **Date** _____

CSC Homeschool 2009-10 Registration Form

High School Classes

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Address: _____ City _____ State _____ Zip _____

CSC member? Y N E-mail: _____

If corporate member, company name: _____ Employee name _____

Membership must be valid through April 30, 2010.

Other individuals allowed to pick up your child(ren): _____

Class selections: Earth Science strand Please circle Tuesday or Wednesday date

Sept. 15 16 Oct. 13 14 Nov. 17 18 Dec. 15 16 Jan. 12 13

Feb. 16 17 March 16 17 April 13 14 May 11 12

Entire year option, Tuesday or Wednesday (please circle your day of choice)

Cost: CSC members, \$12 per class

Nonmembers, \$24 per class

Parent Option: Please circle date and list parent name(s): _____

April 13 14 (\$8 CSC members, \$16 nonmembers)

Payment method:

Check enclosed

Charge my Visa Mastercard Discover Am. Express

Name on card _____ No. _____

Exp. date ___/___/___ Signature _____

\$ _____	Subtotal
\$ _____	Dissection fees
\$ _____	Apply membership
\$ _____	Grand Total

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Signature _____ **Date** _____

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