

catawba
science
center



2016-2017

HOMESCHOOL SCIENCE CLASSES

Catawba Science Center offers hands-on learning and interactive exhibits that explore physical, natural, and earth sciences.

Homeschool classes offer enriching science opportunities for preschool through high school learners in geology, biology, astronomy, environmental science, and more! Classes are designed to complement the age-appropriate North Carolina Common Core and Essential Standards for Science.

Catawba Science Center is on the SALT Block at 243 Third Ave NE in Hickory.

www.CatawbaScience.org

Registration Information

Preschool – High School Classes

WHEN:

Pre-K – 8th Grade: Choose the Tuesday or Wednesday in the third week of each month
High School: Wednesdays in the third week of each month*

CLASS TIME:

1:00 to 2:30 PM

Dissection Classes

WHEN:

Wednesdays in the third week of each month*

CLASS TIME:

10:30 AM to 12:00 PM

*Tuesday classes may be added if demand is present.

CHECK-IN:

10 minutes prior to class time in the West Education Building lobby (adjacent to the main Arts and Science Center Building) for preschool – high school classes or HPC (in the main Arts and Science Building, on the second floor) for dissection classes.

CLASS SIZE:

Pre-K & Kindergarten: 15 students
1st – 2nd Grade & Dissection: 20 students
3rd Grade – High School: 24 students

SIGN OUT:

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

COST:

Preschool – 8th Grade:

- CSC Members: \$15 per class (\$120 entire year)
- Non-members: \$25 per class (\$200 entire year)

High School:

- CSC Members: \$20 per class
- Non-members: \$30 per class

Dissection:

- CSC Members: \$15 per class + specimen fees \$105 entire year + specimen fees
- Non-members: \$25 per class + specimen fees \$175 entire year + specimen fees

QUESTIONS:

Please contact Erin Graves, CSC Director of Programs at (828) 322-8169 or programs@catawbascience.org

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 administrative fee of \$5.

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

If you sign up for the year, refunds will not be paid for missed programs, unless they are canceled by CSC.

Scholarships for homeschool classes are available on a first-come, first-served basis for those who are eligible. Call CSC for an application. A \$25 application fee is due with completed application, which will be refunded if you are not awarded scholarship funds or will be applied to your first payment due if you are awarded funds.

An optional payment plan will allow for installments to be paid throughout the year. \$40 must be paid at time of registration. Call (828) 322-8169 for details.

Not a CSC member?

In addition to discounts on Homeschool Classes, CSC Members continue to receive great benefits:

FREE ADMISSION to CSC exhibits and aquaria.*

*Free Admission does not apply when members visit as part of an organized group, for example when visiting with a school/pre-school field trip.

DISCOUNT PRICING on CSC programs

- 10% DISCOUNT on Science Shop purchases
- FREE SUBSCRIPTION to CSC's member e-newsletter
- FREE BASEBALL on two CSC Member Nights at the Hickory Crawdads
- DISCOUNT RACING on CSC Member Night at Hickory Motor Speedway
- RECIPROCAL ADMISSION to 300+ participating ASTC Travel Passport Program museums

Other museums' policies are subject to change without notice. Please call other museums prior to visiting to verify their current reciprocity policy.

To receive discount pricing on CSC programs, your CSC membership must be valid throughout the time you or your family member(s) will participate in the program. Corporate memberships require a \$20 upgrade to receive program discounts.

CSC MEMBERSHIP APPLICATION

___ Annual: Family/Grandparent \$75* ___ Supporting \$100**

___ Corporate Member Upgrade \$20*

Name(s) _____

Address _____

City _____ State _____ Zip _____

Phone: H _____ W _____ C _____

E-mail _____

Child/Grandchild name(s) and birthdays _____

*Includes Member Benefits for two designated adults & their children/grandchildren 18 and under

**Includes Family Level Member Benefits, plus one free guest each visit

Science Class Descriptions

Pre-K – Kindergarten

September 13-14: **Bubbly Science**

Experiment with bubble-making and create a bubble-art masterpiece. The fun will bubble over!

October 11-12: **Simple Machines**

Find out how simple machines make our work easier. Explore gears and make things move.

November 15-16: **Into the Deep Blue Sea**

Discover the animals that live under the waves. Make an ocean in a baggie. Discover which male sea creature carries the babies.

December 13-14: **Weather Wonderful**

Discover the power of the sun, the importance of rain, why the wind blows, and how it snows. Make your very own weather chart to take home!

January 17-18: **Who Lives in the Desert?**

Explore the animals and plants that live in the sand, including a scorpion and lizard. Make a cactus to take home.

February 14-15: **Build It**

Hey junior engineers! Get creative using unusual construction materials including popcorn, toothpicks, and gumdrops.

March 14-15: **Air, Air All Around**

Experiment with air and the many things it can do. Make your own windsock.

April 11-12: **Animals in the Sky**

Bring your favorite stuffed animal then let's find it in the night sky in the Millholland Planetarium! Listen to stories and look for shapes and colors up above.

May 16-17: **Some More Slimy Simple Science**

Find out how to do some fun, slimy science at home. Make no-cook play dough, sidewalk chalk, slime, and more!

1st – 2nd Grade

September 13-14: **Play Dead 'Possum**

Discover the fascinating attributes and behaviors of this nocturnal creature.

October 11-12: **Autumn Leaves**

Explore the many colors of fall and the science behind this change.

November 15-16: **Color my World**

Use prisms and lenses to investigate color and light. Build your own kaleidoscope.

December 13-14: **STEM Festival**

Visit six different (and all new!) science stations featuring hands-on activities in science, technology, engineering, and math.

January 17-18: **Mighty Machines**

Pulleys, levers, and screws – oh my! Investigate simple machines and put your new knowledge to the test.

February 14-15: **Seashore Creatures**

Get to know the invertebrates that live along the seashore. Visit our touch tanks for an up close look!

March 14-15: **Fun with Food**

Experiment with the things you eat and learn about nutrition. Make healthy snacks to enjoy.

April 11-12: **Seeds of Life**

From the tiny radish to the coconut, find out why seeds are so amazing.

May 16-17: **Wild Weather Ride**

Explore all things weather-related on our planet and others too. Watch *The Zula Patrol: Under the Weather* in the Millholland Planetarium

3rd – 4th Grade

September 13-14: **Science Skills**

Discover the properties of liquids and learn the scientific method while experimenting with water. Make a magic star!

October 11-12: **Walk on the Wild Side**

Investigate animal furs, skulls, scat, beaks, and more to discover what a wildlife biologist does and what we can learn from things an animal leaves behind.

November 15-16: **Super Sleuth**

Put your detective skills to the test as you crack the case at a CSC "crime scene."

December 13-14: **STEM Festival**

Visit six different (and all new!) science stations featuring hands-on activities in science, technology, engineering, and math.

January 17-18: **Lights and Lenses**

Uncover the properties of light and color. Experiment with polarized light and lasers.

February 14-15: **Astronaut**

Discover what it takes to survive in space while watching *Astronaut* in the Millholland Planetarium. Bone up on the skeletal and muscular systems of the human body. Build a bone burrito!

March 14-15: **Animal Safari**

Work with your team to discover the anatomy, behaviors, and adaptations animals use to compete in a hostile world. Meet some of CSC's live animals.

April 11-12: **Swoosh!**

Explore the properties of wind using the book *Mirandy and Brother Wind*. Create a car that moves by your lung power.

May 16-17: **Bug Off!**

Dissect a grasshopper and learn many buggy facts.

Science Class Descriptions

5th – 6th Grade

September 13-14: Reptile Round-up

What makes an animal a reptile? How do snakes differ from lizards? Get ready for some scaly encounters.

October 11-12: Toying Around

Experiment with toys and make discoveries about convection, conduction, and radiation. Learn about the law of conservation of energy.

November 15-16: The Essence of Bioluminescence

Experiment with cool blue light. Watch *Into the Deep* in the Millholland Planetarium and learn truly illuminating facts about underworld sea creatures.

December 13-14: STEM Festival

Visit six different (and all new!) science stations featuring hands-on activities in science, technology, engineering, and math.

January 17-18: Moon Mania

Learn about the moon and its phases. What is on the surface of the moon? Can we see the American flag? What do other moons in the solar system look like? Let's travel to each one in the Millholland Planetarium!

February 14-15: Ribbit, Ribbit

Dissect a frog and discover fascinating amphibian facts. **Additional specimen fee of \$3.00 required.**

March 14-15: Food Chemistry

Dig a little deeper into the food we eat. Learn the basics of carbohydrates, fats, sugars, and proteins and how our bodies use them for energy.

April 11-12: What's In a Cell?

Put your microscope and lab skills to the test to examine cells up close and extract the DNA from a strawberry. Take home real DNA!

May 16-17: Dendrology 101

Do trees have veins and scars? Discover this and more as you walk to Ivey Arboretum to use field guides and scientific keys to identify trees.

7th – 8th Grade

September 13-14: Reptile Round-up

What makes an animal a reptile? How do snakes differ from lizards? Get ready for some scaly encounters.

October 11-12: It's Elementary

The periodic table is elementary. Use molecular models and play games while learning about atoms, elements, and compounds.

November 15-16: Dry Ice Investigations

Gain an understanding of matter, the nature of gases, and phase changes by experimenting with bubbling, mysterious dry ice. Brrrr!

December 13-14: STEM Festival

Visit six different (and all new!) science stations featuring hands-on activities in science, technology, engineering, and math.

January 17-18: Inside a Cell

Observe the differences between plant and animal cells. Perform a DNA extraction and take a look at what makes organisms unique!

February 14-15: Chromosomal Shuffle

Review the basics of Mendelian genetics and learn about the science of inherited traits.

March 14-15: Discover Astronomy

Investigate the formation of galaxies, stars, and planets. Watch *Stars: Powerhouses of the Universe* in the Millholland Planetarium.

April 11-12: The Name Game

Kingdom, phylum, class, order - where do you fit in? Learn the science of taxonomy.

May 16-17: What's that Smell

Phew, something stinks! Discover the science behind the smell.

High School

September 14: Microscopic Life

Learn the proper use of a compound light microscope. Observe protozoa, algae, and invertebrate organisms in pond water, as well as living specimens of *Amoeba*, *Paramecium*, and *Euglena*.

October 12: A Moldy Subject

Take a macroscopic and microscopic look at molds and yeast; experiment with the fermentation process.

November 16: Cell Structure and Function

Investigate basic cell structure and the cellular functions of osmosis and diffusion. Compare cells of plants, animals, and bacteria.

December 14: DNA Detective

Perform a DNA extraction and take a sample home! Put together a DNA puzzle and make your own model.

January 18: Unzipping DNA

Delve into the science of DNA replication and cell division. Observe mitosis microscopically in an onion root tip and whitefish.

February 15: Invertebrate Biology

Examine the diversity of some invertebrate phyla. Observe preserved and dried natural sponges and living specimens of *Hydra* and *Planaria*.

March 15: Lock and Key Science

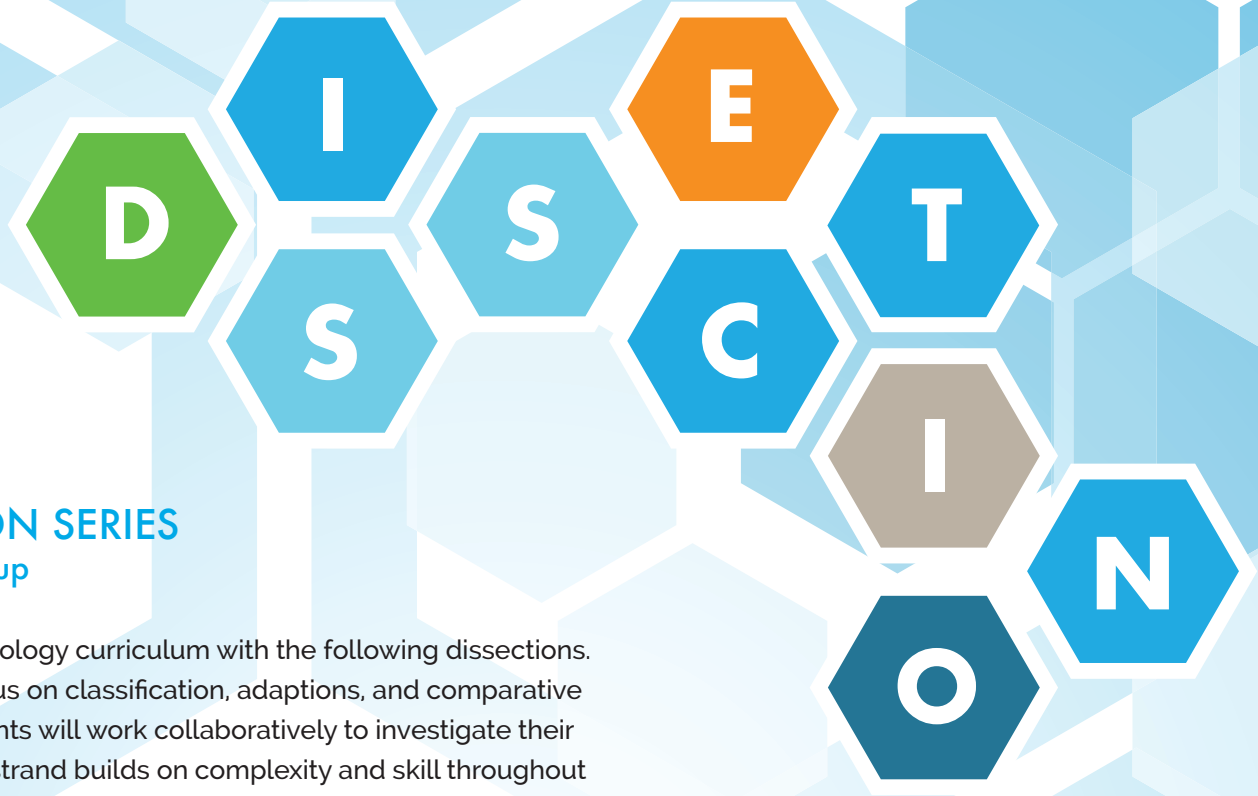
Learn how enzymes act as biological catalysts in nature. Perform several experiments and discover for yourself why enzymes are such a vital part of biology.

April 12: Plant Parts

Investigate stems, roots, leaves, and much more. Hone your skills and use your knowledge of botany to solve a mystery.

May 17: Ramblings in Nature

Break out your binoculars and field guides and join our naturalist at Glenn Hilton Park. Identify trees, flowers, and insects. Sharpen your senses as you try to identify birds by sight and sound.



DISSECTION SERIES

ages 13 and up

Enhance your biology curriculum with the following dissections. Classes will focus on classification, adaptations, and comparative anatomy. Students will work collaboratively to investigate their specimen. The strand builds on complexity and skill throughout the year. Specimen fees are in addition to class prices.

Month	Specimen(s)	Specimen fee
September	Squid/Sea star	\$4.00
October	Crayfish/Grasshopper	\$2.00
November	Frog	\$3.00
January	Snake	\$5.00
February	Dogfish Shark	\$3.00
March	Cow eye/sheep brain	\$7.00
April	Pig heart/sheep kidney	\$4.00
May	Fetal pig	\$8.00
Total		\$36.00
Class cost:	CSC Members, \$15 per class, \$105 entire year + specimen fee Nonmembers, \$25 per class, \$175 entire year + specimen fee	

CSC Homeschool 2016-2017 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.

FOR OFFICE USE ONLY Payment Plan

Constituent ID _____

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

Parent/Guardian _____

Primary phone _____ Is this: Home ___ Work ___ Cell ___

Secondary phone _____ Is this: Home ___ Work ___ Cell ___

Address _____ City _____ State ___ Zip _____

E-mail _____

CSC Family Member? Y__ N__ Exp. Date _____ *Family membership must remain valid through May 31, 2017.*

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

___ I hereby consent and authorize Catawba Science Center to use and reproduce any photographs of my children for promotional purposes or otherwise.

Class Selections: *Please circle Tuesday or Wednesday date*

Sept. 13, 14 Oct. 11, 12 Nov. 15, 16 Dec. 13, 14 Jan. 17, 18

Feb. 14, 15 March 14, 15 April 11, 12 May 16, 17

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

Class Cost:

CSC Members: \$15 per class, \$120 per year

Non-members: \$25 per class, \$200 per year

Payment Method:

___ Check enclosed ___ Please call for information:

Charge my ___ Visa ___ Mastercard ___ Discover

Name on card _____

No. _____ Security Code _____

Exp. date ___/___/___ Signature _____

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

If choosing payment plan, \$40 per child is due at time of registration.

\$ _____	Classes subtotal
\$ _____	Fee subtotal
\$ _____	Apply membership
\$ _____	Grand Total

Refund policy: A refund minus an administration fee of \$5 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 fully.

Medical Information: *(Completion required)*

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

Primary Phone(s) _____

Health/Accident Insurance: Employer _____ Company _____ 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 2016-17 homeschool program.

Signature _____ Date _____

CSC Homeschool 2016-2017 Registration Form

High School & Dissection Classes

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Constituent ID _____

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

Parent/Guardian _____

Primary phone _____ Is this: Home ___ Work ___ Cell ___

Secondary phone _____ Is this: Home ___ Work ___ Cell ___

Address _____ City _____ State ___ Zip _____

E-mail _____

CSC Family Member? Y__ N__ Exp. Date _____ (Family membership must remain valid through May 31, 2017)

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

I hereby consent and authorize Catawba Science Center to use and reproduce any photographs of my children for promotional purposes or otherwise.

Class Selections: *Biology, Please circle your choices.*

Sept. 14 Oct. 12 Nov. 16 Dec. 14 Jan. 18

Feb. 15 March 15 April 12 May 17

Class Selections: *Dissection series, Please circle your choices.*

Sept. 14 Oct. 12 Nov. 16 Jan. 18

Feb. 15 March 15 April 12 May 17

If Tuesday sessions are added, are you willing to switch? ___Y ___N

High School Classes:

CSC Members: \$20 per class

Non-members: \$30 per class

Dissection Classes:

CSC Members: \$15 per class, \$105 for the year

Non-members: \$25 per class, \$175 for the year

*See specimen and fee table on page 4.

Payment Method:

Check enclosed Please call for information:

Charge my Visa Mastercard Discover

Name on card _____

No. _____ Security Code _____

Exp. date ___/___/_____ Signature _____

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

If choosing payment plan, \$40 per child is due at time of registration.

Medical Information: (Completion required)

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

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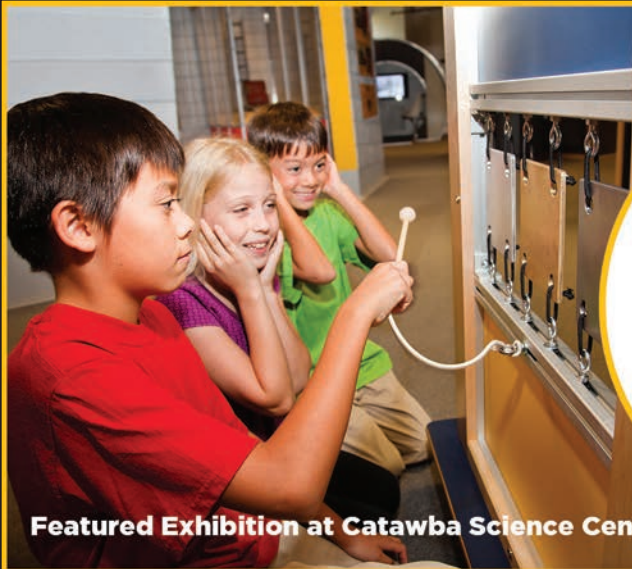
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Signature _____ Date _____

\$ _____	Classes subtotal
\$ _____	Fee subtotal*
\$ _____	Apply membership
\$ _____	Grand Total

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September 17, 2016 – January 8, 2017



Featured Exhibition at Catawba Science Center



Sound waves are all around us!

Create sound waves in a tube. Match mystery sounds. Test your hearing. Sort high and low pitches on a turntable. Can you locate a cricket and cat in a kitchen just by listening? Mix a soundtrack. Launch a sound wave toward an eardrum. How many decibels can you produce with your own voice? Team up and let out a roar in the Scream Chamber!

Sponsored By: **VONDRHLE**
CORPORATION

Featured Exhibition at Catawba Science Center



A National Traveling Exhibit by Cincinnati Museum Center

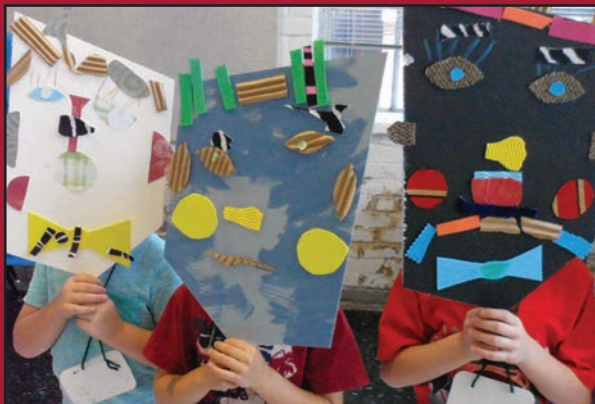
JANUARY
13
through
JUNE
4
2017



HICKORY MUSEUM OF ART HOMESCHOOL ART CLASSES

Classes for grades K-8 pair curriculum-based gallery activities with hands-on art lessons

2nd Thursday of the month • September – May
1-2:15 PM (a morning class will be added if afternoon class fills)
\$8/per class HMA Members • \$12/per class Nonmembers



On the SALT Block
In Same Building as
Catawba Science Center

Download a Brochure at www.HickoryArt.org
or call Ginny Zellmer at 828-327-8576, ext. 216