

# HOMESCHOOL SCIENCE CLASSES



2023-2024



Homeschool classes offer enriching science opportunities for preschool through high school learners in geology, biology, astronomy, chemistry, and more! Classes are designed to be hands-on as well as age and science content appropriate.

*Located on the SALT Block at  
243 Third Ave NE in Hickory.*

**828.322.8169**

**[www.CatawbaScience.org](http://www.CatawbaScience.org)**



# Registration Information

## Preschool – High School Classes

### WHEN:

**Preschool – 8th Grade:** Choose the Tuesday or Wednesday in the 3rd week of each month

**High School:** Wednesdays in the third week of each month  
*\*Please note the dates of the classes as they may not always be the third Tuesday/Wednesday of the month.*

### CLASS TIME:

1:00 – 2:30 PM

### CHECK IN:

10 minutes prior to class time in the West Education Building lobby (adjacent to the main Arts and Science building)

### SIGN OUT:

To ensure safety, sign-out will occur at the exterior doors for Grades PreK-2nd and in the West Education Lobby for Grades 3rd and up.

*\*Exceptions can be made for older students with parental permission, or for mobility limitations; contact Erin Graves for accommodations.*

### COST:

**Preschool – 8th Grade:**

- CSC Members: \$18.50/class + tax (\$148.00/year + tax)
- Non-members: \$28.50/class + tax (\$228.00/year + tax)

**High School:**

- CSC Members: \$22.50/class + tax
- Non-members: \$32.50/class plus tax



## 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 \$7.

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.

An optional payment plan will allow for installments to be paid throughout the year. At the time of registration, \$40 per child must be paid. Memberships may also be bought or renewed for an additional cost. Call (828)-322-8169 for more information.

### QUESTIONS:

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

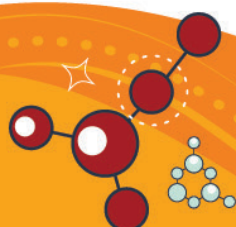
A colorful poster for the 'Homeschool Science Classes Open House'. The background is blue with orange and white circular patterns. At the top, it says 'HOMESCHOOL SCIENCE CLASSES' in white, followed by 'OPEN HOUSE' in large, bold, white letters. Below that, it says 'Wednesday, September 6th' and '1:00pm to 2:30pm'. On the left, there is a logo for 'catawba science center' with a white outline of North Carolina. On the right, there is an illustration of a chemistry flask with orange liquid and bubbles, and a Bunsen burner with a flame. At the bottom, it says 'Meet your child's teacher, see the classrooms, learn about the classes for this year, and questions and answer session. Join us for The Magic Treehouse: Space Mission in the planetarium at 2:00pm.'

**HOMESCHOOL  
SCIENCE CLASSES  
OPEN HOUSE**

**Wednesday, September 6th  
1:00pm to 2:30pm**

catawba  
**science  
center**

Meet your child's teacher, see the classrooms, learn about the classes for this year, and questions and answer session. Join us for *The Magic Treehouse: Space Mission* in the planetarium at 2:00pm.







**Educators take \$10 off Annual Membership purchases!**



## Membership Application

☐ Mr. ☐ Mrs. ☐ Miss ☐ Ms. ☐ Dr. ☐ Other

Adult #1 Name \_\_\_\_\_

Mailing Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_

Email \_\_\_\_\_

☐ Mr. ☐ Mrs. ☐ Miss ☐ Ms. ☐ Dr. ☐ Other

Adult #2 Name \_\_\_\_\_

Full Name(s) & Birthdate(s) of Child(ren) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**This membership is:** ☐ Renewal ☐ New ☐ Gift

**If gift membership:**

Gift From \_\_\_\_\_

Recipient Name \_\_\_\_\_

Mailing Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_

Email \_\_\_\_\_

**Membership Level:** (check one)

- |   |   |
|---|---|
| <input type="radio"/> College Student, \$60 | <input type="radio"/> Patron, \$120               |
| <input type="radio"/> Senior, \$65          | <input type="radio"/> Benefactor, \$250           |
| <input type="radio"/> Individual, \$80      | <input type="radio"/> Stellar Society, \$500      |
| <input type="radio"/> Grandparent, \$95     | <input type="radio"/> Angel, \$1,000              |
| <input type="radio"/> Family, \$95          | <input type="radio"/> President's Circle, \$2,500 |

**Membership Card:** (check one)

- ☐ Free Digital Membership Card (default)\*
- ☐ Printed Membership Certificate for \$6.00 (optional)

\* Email required for e-delivery.

## Choose Your Payment Method

### Payment

Membership Fee \$ \_\_\_\_\_

Printed Membership Certificate Fee + \$ \_\_\_\_\_

(\$6 optional)

Educator/Active Duty Military Member Discount\* - \$ \_\_\_\_\_

(\$10 off with ID)

Grand Total: \$ \_\_\_\_\_

### Billing Information

☐ Please charge my: ☐ Visa ☐ MasterCard ☐ Discover

Name on Card \_\_\_\_\_

Card Number \_\_\_\_\_

Exp. Date \_\_\_\_\_ Security Code \_\_\_\_\_

Signature \_\_\_\_\_

☐ Enclosed is my check payable to Catawba Science Center

\* To receive \$10 educator discount, valid ID is required at the time of purchase.

## Become A Member Today!

**MEMBERS GET MORE.**

**MORE DISCOUNTS.**

**MORE FUN!**

### MEMBERSHIP LEVELS

MEMBERSHIP BENEFITS*	ANNUAL			SUPPORTING		
	Individual - \$80	Family/Grandparent - \$95	Senior/College Student - \$65	Patron - \$120+	Benefactor - \$250+	Stellar Society - \$500+
Unlimited admission to CSC exhibit areas, including planetarium & aquaria						
Free admission to 350+ museums worldwide						
10% Off Science shop purchases						
Discounts on camps, birthday parties & programs						
Invitations to members-only exhibition openings & events						
Free subscription CSC's monthly e-newsletter						
Discounts & member nights at CSC Community Partners locations						
Free guests per visit				1	2	3
\$20 Science Shop gift certificate						
Invitations to VIP events & receptions						
Tickets to Annual Italian Dinner Fundraiser (upon request, while supplies last)						2

\*See website for details



Changing Lives and Inspiring Learning  
Through Science and Wonder

catawba  
**science**  
center



2

# Science Class Descriptions

## Pre-K – Kindergarten

### September 12-13: **Wonderful Water**

Learn all about water, including all its phases. Explore the things that sink and float by building a boat. Meet some creatures that live in water.

### October 17-18: **Backyard Animals**

What wildlife wanders your backyard? Learn about these living things, meet NC's state reptile, and make an owl to take home!

### November 14-15: **Thomas and Friends**

Learn about modes of transportation and the ways that people and animals can move. Explore CSC's Thomas the Tank Engine exhibit!

### December 12-13: **Energy Avenue**

Experiment with batteries, electricity, magnets, and more. Make a magnetic game to take home.

### January 16-17: **Polar Pals**

Learn about the animals that live in the Arctic and Antarctic. Discover how snow feels and who lives in the polar regions. Melt an iceberg and make some magic classroom snow.

### February 13-14: **African Safari**

Go on safari in the African savanna and meet the special animals that live there. Make your own savanna scene to take home!

### March 12-13: **Ready for Rainbows?**

Who or what is ROY G BIV and what's the connection to rainstorms? Discover that rainbows can be made with a little help from a prism.

### April 16-17: **Mix and Stir**

All things gooey will be explored as we look at mixtures, solutions, and chemical reactions. **Prepare for a mess!**

### May 14-15: **How Does Your Garden Grow?**

Let's look at the science of gardening. We'll get our hands dirty as we learn about and explore Hickory Greenway Harvest's raised bed garden.

## 1st – 2nd Grade

### September 12-13: **Science Tool Time**

Discover the world of tools around you, particularly those used by scientists. Learn how tools make our work easier and which ones we use every day.

### October 17-18: **Let's Get Energized**

Explore heat, sound, motion, and light to get at the basics of energy! Make glowing art to take home!

### November 14-15: **Body systems**

Investigate body systems and listen to your heart. Learn about and explore the skeletal, muscular, circulatory, and digestive systems.

### December 12-13: **Thomas and Friends**

Learn all about how people and animals move and get from place to place. Explore our Thomas the Tank Engine exhibit!

### January 16-17: **What Does It Matter?**

Explore the various properties of the three states of matter. Create some slime using your new knowledge.

### February 13-14: **Balloon Science**

Things that go up must come down. Explore gases, density, and flight – all with balloons.

### March 12-13: **Sink or Swim**

Do rocks ever float? Experiment with weight and buoyancy, create a liquid density column, and make a sink-or-swim discovery bottle to take home.

### April 16-17: **Pollinators Aren't Pests**

Bees, bats, and butterflies all help our gardens grow. Learn about pollination and pollinators by exploring Hickory Greenway Harvest's raised bed garden to see these wonders in action.

### May 14-15: **Awesome Animals**

Become a zoologist as you examine different creature groups such as insects, sea life, and more. Meet several of CSC's live animals.

## 3rd – 4th Grade

### September 12-13: **Science Fair 101**

Learn the steps of the scientific method, including experimental design and data collection, while testing the force necessary to crush columns.

### October 17-18: **Pumpkins Inside and Out**

Are all pumpkins alike? Find out using math and fun experiments.

### November 14-15: **Geology Rocks**

Uncover the differences between rocks and minerals, learn about the rock cycle, and where fossils are found.

### December 12-13: **Engineering Experts**

Become an engineering expert while making buildings out of blue foam blocks and other materials. Do you have what it takes to make the tallest tower?

### January 16-17: **Exploring Earth, Moon, and Stars**

Study the phases of the moon and create your own model. Explore the solar system and more in the Millholland Planetarium.

### February 13-14: **Kooky Chemistry**

Learn about physical and chemical changes as you mix, stir, and shake. Create some fun, gooey stuff using different types of chemical changes.

### March 12-13: **What in the World is That?**

Learn about the different types of land features and how they were formed. Look at volcanoes, canyons, valleys, rivers, oceans, and more.

### April 16-17: **Magnets and More**

Investigate magnetic attractions and discover how magnets are related to electricity. This class will be electrifying!

### May 14-15: **Animal and Human Adaptations**

Explore how animals and humans adapt to their environment to survive and thrive. Recognize how humans and animals interact. Examine the negative impacts we can have and how we can best protect our shared spaces.

# Science Class Descriptions

## 5th – 6th Grade

### September 12-13: Intro to the Scientific Method

What makes the best slime? Test your hypothesis by learning about the scientific method and using different materials to make your own ooey, gooey, non-Newtonian fluid.

### October 17-18: How Does It Survive?

Discover the difference between a producer, consumer, and decomposer. Investigate how they inter in the food web. Look at animal and plant adaptations that aid with their survival.

### November 14-15: Exotic Exosolar Planets

Board the spaceship in CSC's Millholland Planetarium to fly past the planets and away from the solar system. Watch *Extreme Planets* and learn about the unique worlds beyond the Sun.

### December 12-13: Rockets of the Sea

Dissect a squid as you explore this amazing marine invertebrate inside and out. Materials cost: \$3

### January 16-17: How Dense Is It?

What is density? Test different liquids and solids to discover their densities. Create a density column with your findings.

### February 13-14: Close Encounters

Enhance your microscope skills and slide preparation techniques as you view a hidden world of cells that help make up our world.

### March 12-13: Up, Up, and Away

Experiment with air pressure, kites, and hot air balloons in this fun-filled class.

### April 16-17: Hot! Hot! Hot!

Experiment with three types of heat transfer: conduction, convection, and radiation. This class ends with a bang!

### May 14-15: Neighborhood Watch

Investigate diverse forest and wetland ecosystems. Discover the roles of plants and animals in a community. Program held at Glenn Hilton Park. Participants will be driven in CSC vehicles; parents must sign a permission slip day of class.

## 7th – 8th Grade

### September 12-13: The Living Cell

Investigate the structures inside a cell and learn how they function to keep the cell alive. Observe several microscopic organisms.

### October 17-18: Geology 101

Discover what rocks and fossils tell us about the history of our Earth. Learn about different types of rocks and how they helped shape the planet that we have today.

### November 14-15: Outbreak

Investigate pathogens of all kinds, including viruses and bacteria. Perform a simulated flu test to determine the proper treatment. Discover how an epidemic can spread in a community, then beyond to become a pandemic.

### December 12-13: Forensic Science

Hone your detective skills as you learn the science of fingerprints, DNA analysis, and blood detection. Exercise your observation skills and power of deduction to solve a crime.

### January 16-17: Chemical Mysteries

Learn about chemistry! Explore what elements form many common substances, along with the properties of some elements and compounds.

### February 13-14: May the Force Be with You

Experiment with Newton's Three Laws of Motion relating force, mass, and acceleration. Explore CSC's Spin Exhibit.

### March 12-13: Pigeon Phun

Dissect a pigeon to study its anatomy and adaptations. Material cost: \$7

### April 16-17: Meteorology 101

Review the factors that cause our weather and the tools to forecast it. Learn why weather can turn wild while making lightning, clouds, and tornadoes.

### May 14-15: Astronomical Adventures

What is a space vacuum? Why do we have black holes? Discuss and investigate different types of space phenomena. Explore these in the Millholland Planetarium.

## High School – Chemistry

### September 13: It's Elementary

An introduction to chemistry, types of chemical reactions, lab safety, and equipment.

### October 18: Moles Are More Than "Critters"

Learn about the Law of Conservation of Mass and limiting reactants.

### November 15: The Puzzling Periodic Table

Study the relationship between elements within a group and elemental properties.

### December 13: pH Basics

Investigate acid and base chemistry. Work with the pH scale, indicators, and acid-base titrations.

### January 17: Anions and Cations

An introduction to electrolytes, oxidation/reduction reactions, and the field of electrochemistry.

### February 14: It's a Gas

What is the Ideal Gas Law? Investigate the gaseous state of matter and the effects of temperature, pressure, and volume changes on gases.

### March 13: Hot and Cold

Investigate endothermic and exothermic reactions.

### April 17: Quality vs. Quantity

An introduction to qualitative and quantitative analysis and identifying unknown compounds using various tests.

### May 15: Organic Chemistry: The Chemistry of Life

Investigate the chemistry of carbon and its unique compounds that make it the basis for life.

# CSC Homeschool 2023-2024 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](http://www.CatawbaScience.org)

Return completed form with payment to: Catawba Science Center, PO Box 2431, Hickory, NC, 28603, email to [scheduling@catawbascience.org](mailto:scheduling@catawbascience.org), or fax to (828) 322-1585.

Child's name \_\_\_\_\_ M\_\_ F\_\_ Birthdate (mo./day/yr.) \_\_\_\_\_ Grade \_\_\_\_\_

Parent(s)/Guardian(s) \_\_\_\_\_

Primary phone \_\_\_\_\_ Is this: Home \_\_\_ Work \_\_\_ Cell \_\_\_

Secondary phone \_\_\_\_\_ Is this: Home \_\_\_ Work \_\_\_ Cell \_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

E-mail \_\_\_\_\_

CSC Member? Y\_\_\_ N\_\_\_ (see pg. 2 ) Exp. Date \_\_\_\_\_ *Family membership must remain valid through May 31, 2024.*

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. 12, 13      Oct. 17, 18      Nov. 14, 15      Dec. 12, 13      Jan. 16, 17  
Feb. 13, 14      March 12, 13      April 16, 17      May 14, 15

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

### 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 a plan, we require a CC on file & payments will be auto-drafted on 12/14/2023 & 4/12/2024.** Down payment due at time of registration \$40 per child + membership renewed, if applicable.

Signature \_\_\_\_\_ Date \_\_\_\_\_

### 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 2023-2024 homeschool program.

Signature \_\_\_\_\_ Date \_\_\_\_\_

### Class Cost:

CSC Members: \$18.50/class (\$148.00/year) + tax  
Non-members: \$28.50/class (\$228.00/year) + tax

\$ _____	Classes subtotal
\$ _____	Tax (7%)
\$ _____	Fee subtotal
\$ _____	Membership Grand Total (if applicable)
\$ _____	<b>Grand Total</b>

*Refund policy: A refund minus an administration fee of \$7 will be issued if you cancel/change 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.*





# CSC Homeschool 2023-2024 Registration Form

## High School Chemistry Classes

Please use a separate form for EACH child registering.  
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at [www.CatawbaScience.org](http://www.CatawbaScience.org)

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Parent(s)/Guardian(s) \_\_\_\_\_

Primary phone \_\_\_\_\_ Is this: Home \_\_\_ Work \_\_\_ Cell \_\_\_

Secondary phone \_\_\_\_\_ Is this: Home \_\_\_ Work \_\_\_ Cell \_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

E-mail \_\_\_\_\_

CSC Member? Y\_\_\_ N\_\_\_ (see pg. 2 ) Exp. Date \_\_\_\_\_ *Family membership must remain valid through May 31, 2024.*

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:** *Chemistry, Please circle your choices.*

Sept. 13      Oct. 18      Nov. 15      Dec. 13      Jan. 17

Feb. 14      March 13      April 17      May 15

Check if able to switch to Tuesday classes \_\_\_ Y \_\_\_ N

### 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 a plan. **If choosing plan, we require a CC on file & payments will be auto-drafted on 12/14/2023 & 4/12/2024.** Down payment due at time of registration \$40 per child + membership renewed, if applicable.

Signature \_\_\_\_\_ Date \_\_\_\_\_

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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 \_\_\_\_\_

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Signature \_\_\_\_\_ Date \_\_\_\_\_

### High School Chemistry Classes:

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Non-members: \$32.50/class + tax

\$ _____	Classes subtotal
\$ _____	Tax (7%)
\$ _____	Fee subtotal
\$ _____	Membership Grand Total (if applicable)
\$ _____	<b>Grand Total</b>

*Refund policy: A refund minus an administration fee of \$7 will be issued if you cancel/change 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.*



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Through Science and Wonder

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6



On the SALT Block  
243 Third Avenue NE  
Hickory, NC 28601

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

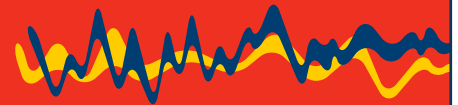
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Minnesota  
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Museum



Fisher-Price® presents

**THOMAS  
& FRIENDS**



# All Aboard!

for a Trainload of Adventures

**Pulling into the Station**  
**September 17<sup>th</sup>!**

Sponsored locally by

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MINNESOTA

Help Thomas and his friends haul freight, load  
coal and ride the rails on a train adventure!

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