

EPIC/Homeschool Spring 2020

Two Locations: Andy Alligator Fun Park (for Moore-Norman area), starts Jan 27
and the Mad Science Lab (for the Edmond-OKC area), starts Jan 31.

Time: 10 to 11 am

Wacky Chemistry- a 6 week program

3rd-5th grade

Matter of Fact

This workshop introduces children to the structure of atoms and molecules. Students will learn how atoms combine to create molecules, and will examine molecules and molecular bonding using molecular models. Through a hands-on approach, students will learn and observe the difference between physical and chemical reactions. Finally, students experiment with the chemical reactions resulting in the creation of **Mad Science Slime** @ **Take Home**.

“Che-mystery”

Children discover the mysterious wonders of chemistry. They learn the difference between physical and chemical changes through exciting, hands-on investigations. They watch crystals form in water glass; and see acetone reduce foam to a puddle of white mud. Children get their hands dirty with a non-Newtonian fluid and use hydrophobic compounds to make marbled masterpieces! **The Dynamic Dish Take- Home** is great for students to use for chemical observation at home.

Kitchen Chemistry

Children get clued in on the chemical reactions that occur when they prepare, analyze, and digest their food. The class gets cooking with a color-changing solution display. Children divide common kitchen activities into chemical and physical reactions. A balloon blow-up demonstration helps them discover that yeast makes bread rise. Children test food samples in search of nutrients, starch, and protein. They discover what happens after they eat and digest nutrient-rich foods with their own **Digestor Inspector Take-Home**.

Mix it Up

Children identify mixtures in bottles as solutions, suspensions, or physical mixtures. They use flashlights to differentiate between suspensions and solutions. The instructor demonstrates the difference in molecular movement between hot and cold water and uses a pH indicator to show an acid from a base. The children separate mixtures with mechanical and chemical techniques. They take home a **Super Sorter kit** to continue collecting their chemical knowledge.

Discovering Polymers

This workshop acts as a primer to basic polymer chemistry. It serves as an excellent vehicle for the introduction of the physical and chemical properties of matter. In addition, students will explore polymers that play a significant role in our daily lives—like the many uses of plastics. They will understand the role that chemistry plays in creating these products and their applications. They take home a **polymer bouncy ball**.

Super Sticky Stuff

Children will get *stuck* on science in this one-hour class on sticky stuff! The class begins with a close-up examination of how Velcro hook-and-loop fasteners work. This is followed by a hands-on experiment with different types of tape adhesives. Children learn how to perform a ranking test, and determine the optimal glue to use on various materials. A hands-on activity using scientific labware and everyday items introduce the concepts of *suction*, *hydrogen bonding*, and *static cling*. They experience first hand these concepts as they work with their **Take Home Beakers**.

Jr Explorations- a 6 week program

K to 2nd grade

Energy and Motion

Students will learn all about energy and motion in this class. They will discover and differentiate between stored energy and energy used in motion. Through acting out and demonstrations, they learn some basic laws of motion and how things move. They will get to experiment with ribbon dancers, tube racers, Slinkys® and take home an energy toy called a “Boink®.”

Magnificent Magnets

This class provides an opportunity for students to explore the properties of magnets through a series of hands on activities. They learn about attractive and repulsive magnetic forces, discover what are magnetic poles, and that there are invisible fields around magnets. They also learn why some objects are magnetic and some are not. They take home a magnetic lab.

Weather Wonders

This class is sure to get young meteorologists fascinated about the elements that make weather. They will learn that the Earth’s heat comes from the sun and that heat, water and wind are what make weather happen. The water cycle comes alive with a simple demonstration along with how rain is formed in the clouds. They make and take home a windsock.

Color Lab

This topic will introduce children to the exciting world of color. Students learn why they see colors. Experiments with prisms and diffraction lenses give children the opportunity to explore the color spectrum of various light sources. They will blend colors to produce white light, and others that separate white light into colors. They will learn the colors of the rainbow and will experiment with their creative side during an activity on color mixing.

Shapes and Structures

Students learn all about different shapes and structures in this hands-on introduction to engineering science. They discover what shapes make strong structures and explore what forces keep tall structures and bridges together. They explore the concept of structures using Magnatiles® and even make their own structures to take home using colorful cornstarch noodles.

Let’s Measure

Children learn all about measurement during this hands-on program that will explore mass and length. They will use balances to measure the mass of different objects and even use giant feet to help them measure the length of objects. They will take their own measuring foot home so that they can practice what they have learned.



EPIC -Homeschool Science Explore

A monthly fun ‘show and do science’ program where
aspiring scientists:

- Get mesmerized and amazed by science activities and demonstrations
 - Learn solid scientific principles and processes
- Understand the life applications of the science principles presented
- Be involved- ‘do hands-on’ learning and make a *take-home project*
 - 1 hour and 20 minute program

Themes:

Fire and Ice (Jan 15)

Get ready for some sizzlin’ excitement! Join us for safe scientific fun with fire and ice! Learn about the amazing properties of fire and combustion. Then, cool off with spectacular demonstrations involving dry ice! Explore the molecular basis of how matter changes from state to state. Check out the “Big Burp”, the “Spoon Sizzle” and the famous “Mad Science Bath”, as we explore the science behind this amazing frozen CO₂ gas!

Up, Up and Away (Feb 19)

You think homework is pressure? Just wait until you learn how the weight of the earth’s atmosphere pushes down on you with the force of 2 ½ elephants! Explore how Bernoulli’s principle creates enough lift to make a jumbo jet fly or how air pressure can be used to launch a hot air balloon. Watch in amazement as our vortex generator creates giant smoke rings. Mad Science shows are fun and educational and this program will leave you flying high!

Engineers Shape the World (Mar 18)

We bring out the genius and creativity of engineers as they go through the design process –and solve real world problems! Children are amazed to know how bridges are built strong and structures withstand earthquakes. Structural integrity of different shapes are examined, and we even look at the strength of an egg!. A hands- on experience with electrons in action help them

discover how electrical engineers light up the world. We magically turn dirty, black water into clear, clean liquid! Environmental engineers help make a clean world thru the use of earth friendly materials! And more... join Mad Science as our young engineers learn to build and shape a better world. This program has you, literally, walking on eggs!

Wacky Water Show (April 15)

Water is an amazing natural resource! Its properties make it a universally useful substance that makes life possible. Water covers more than three fourths of the earth's surface and moves through continually from the land, to the atmosphere, to bodies of water in a never ending cycle of life sustenance. The same water that existed in the ancient times is still present today!

Join us as we share with your students some eye popping, jaw dropping actions that show the perplexing properties of water, and even how to have some fun with it. This is sure to make you appreciate and enjoy water like never before.

Mad Science Rocks: The Science of Sound and Music (May 13)

Mad Science rocks your students. Together we discover the science of sound and the universal language of music. Sound and music communicate, inspire and bring us together. Experience how Foley artists make stories come to life with sound effects. See soundwaves from vibrations make things jump, water splash and electric pulses move. Explore pitches using boomwhackers and even glasses of water to create a silly Mad Science symphony!

**All programs presented at the Mad Science Secret Lab
575 Enterprise Drive Ste 150, Edmond OK 73013**

Or call us to arrange for your preferred date, theme, or venue.

Book your EPIC class (learning funds apply) or Homeschool group now.
\$20/student with a minimum of 15 students*

**if you have less than 15 students, call us!*

Visit us at: okc.madscience.org

Facebook: [madscience okc](https://www.facebook.com/madscienceokc)

Phone: 405-285-9643 or 918-312-2436

Note: For out of the metro OKC area location---travel mileage will apply on top of registration