

Explora!

Guide to educational programs

Come to Explora,
or we can
come to you!



Explora is an innovative experiential learning center, and we offer programs that can help motivate and excite student learning. Our on-site and outreach programs immerse students in thought-provoking, STEM-based experiences.

We are committed to supporting education throughout New Mexico, and we hope you will include Explora as part of your educational program this year!



Welcome to Explora!

Explora is dedicated to creating opportunities for inspirational discovery and the joy of lifelong learning through interactive experiences in science, technology, engineering, art, and math.

We offer a wide variety of programs that reflect our experiential, inquiry-based approach to learning.

¡Bienvenidos a Explora!

Explora se dedica a crear oportunidades para el descubrimiento inspirado y el disfrute del aprendizaje para toda la vida a través de experiencias interactivas de ciencia, tecnología, ingeniería, arte, y matemáticas.

Ofrecemos una amplia variedad de programas que reflejan nuestro enfoque educativo basado en la experimentación y la investigación.

Programas en español

Explora puede proveer sus exploraciones de exhibiciones, sus exploraciones de aula, y sus programas de extensión en español. Llama al 505-224-8323, de lunes a viernes, 9 am – 5pm.



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**Major support for Explora
provided by**

City of Albuquerque



~ TEACHERS ~

**After your program,
complete an
evaluation and be
entered in a
drawing for
free stuff!**

Edition: August 2017

What Does Explora Offer?

(See pages 42-43 for fees and registration information)

Field Trips to Explora

Field Trips to Explora (all ages) can be one-hour or two-hour exhibit explorations facilitated by Explora educators. Investigate gravity, water, light, air, numbers, sound, electricity, and more. You can also book a *Classroom Exploration* as an add-on to your field trip.

Classroom Explorations at Explora or your site

Classroom Explorations (all ages) are available at Explora and also at your site. They are one-hour experiential programs facilitated by Explora educators. They involve every student in active participation and learning through the exploration of physical materials. Each *Exploration's* materials are designed to provide opportunities for discovery around a specific science phenomena/content area, such as bubbles, magnets, energy, or probability. *Classroom Explorations* are benchmarked to New Mexico State Standards. *Classroom Explorations* are designed for a class of up to 30 students at a time. We can accommodate larger groups. Call us to find out how to make arrangements.

Family/Community Science at your site

Family/Community Science (all ages) is a mini-Explora set up at your site! Explora educators will facilitate tabletop activities and experiments designed to engage a range of students or even entire families! Create flying contraptions out of paper cups and test their flight in a wind tunnel; test your engineering and balance skills to build a tall tower; and explore reflection, symmetry, and mirrors and much more!

Professional Development and Workshops at Explora or your site

Get fresh ideas for teaching strategies and activities! Explora's two-hour workshops immerse participants in thought-provoking science-rich experiences that equip educators with resources and ideas. These workshops embrace an inquiry approach to learning, involve participants in fun, active exploration of physical materials, and foster 21st Century Skills: critical thinking, cooperative learning, creativity, communication, and innovation. Workshops can be customized to meet your staff's needs. For more information, see page 41.

There's more!
Call 505-224-8341 or
visit www.explora.us
for information about:

- Assemblies
- Programs in Spanish
- Custom Programs



Explora Classroom Explorations and the Common Core State Standards

In *Explora Classroom Explorations*, participants will be called upon to generate and test claims, gather and evaluate evidence in support of those claims, and present those claims and evidence relationships to others. These practices are at the heart of science and are advocated for in the Common Core State Standards (CCSS) and the Next Generation Science Standards (NGSS).

Many Explora programs also engage students with the Standards for Mathematical Practice as outlined in the CCSS. These practices include sense making and perseverance, quantitative and abstract reasoning, constructing and critiquing arguments, modeling, using tools, attending to precision, and finding and using structure.

Questions?

Call 505-224-8341 or email reservations@explora.us.
The reservations office is open Monday–Friday 9am–5pm.

Visit Explora's website (www.explora.us) to view a PDF of this Explora Guide to Educational Programs. You might also like to visit pages with details about: Outreach, Field Trips, and Exhibits.

Para español, llame al 505-223-8323, de lunes a viernes,
de 9am–5pm.

Teacher and student comments about the Explora experience

“Me gusta porque aprendo mucho”.



“Our students were extremely excited and engaged with every activity. The staff was kid-friendly, patient, and caring. We all had a wonderful experience learning and playing. Thank you.”

“Like the heart of a teacher.”



Classroom Explorations

at a glance by grade level

Pre-K – 2nd

Grade

		Physical Sciences	Life Sciences	Earth/Space Sciences	Engineering Design	Theater	Art	Math
Air, Air Everywhere	Pre-K-1	•		•				
Balancing Act	Pre-K-2	•						•
Be a Mad Hatter	K-2	•			•			•
Beautiful Bubbles	Pre-K-2	•				•		
Chemical Changes	1-2	•						•
Color Mix-Up	Pre-K-1					•		•
Crazy about Chromatography	1-2	•	•					
Discovering Triangles	K-2				•			•
Do Animals Play Hide & Seek?	Pre-K-2		•					
Floaters and Sinkers	Pre-K-2	•						•
Food Sleuths	2	•	•					
Forceful Magnets	Pre-K-2	•						
Growing Pains	K-2		•					
How Does Your Garden Grow?	Pre-K-2		•					
In a Spin	Pre-K-2	•						
Leaves, Leaves, Leaves	Pre-K-2	•				•		
Light and Shadow	Pre-K-2	•						
Looking for a Pattern	Pre-K-1		•			•		•
Measure Me	Pre-K-1	•						•
Mirror, Mirror on the Wall	Pre-K-2	•				•		•
Mysterious Matter	Pre-K-2	•						
On a Roll	Pre-K-2	•			•			
Pebbles, Sand, and Silt	Pre-K-2		•					
Round and Round	Pre-K-2	•						
Simple Machines	Pre-K-2	•						
What's that Sound?	Pre-K-2	•						
Where Does the Food Go After You Eat It? (at Explora only)	K-2		•			•		
Wonderful Water	Pre-K-2	•						•

**Classroom Explorations are available
at Explora or at your site!**

Classroom Explorations

at a glance by grade level

3rd – 5th

	Grade	Physical Sciences	Life Sciences	Earth/Space Sciences	Engineering Design	Theater	Art	Math
Acids and Bases	4-5	•						•
Be a Mad Hatter	3-5	•		•				•
Be a Rock Star	3-5	•	•					•
Building a Monument	3-5	•				•		
Chance or Lucky Guess?	4-5	•						•
Chemical Changes	3	•						•
Classy Investigation	3-5		•					
Crazy about Chromatography	3-5	•	•					
Crazy Light	3-5	•						•
Creative Programming	4-5			•		•		•
Density: Liquid Layers	4-5	•						•
Discover the Wonders of Nature	3-5		•					
Discovering Triangles	3-5			•				•
Ecology of the Forest	3-5		•					•
Energy That Moves You	3-5	•		•				
Energy Transformers	3-5	•						
Exciting Electricity	3-5	•						
Facts of the Matter	3-5	•						
Food Sleuths	3-5	•	•					
Forced into Action	3-5	•						
Galileo's Universe	3-5	•						•
Get Your Motor Running	4-5	•						
Good Vibrations	3-5	•						•
Go with the Flow	3-5	•						
Gravity Rules!	4-5	•						•
The Heat is On!	3-5	•						
In Contrast: Chemistry, Light, and Photos	4-5	•					•	
In Defense of Spiders	3-5		•		•			
Jump Rope Math	3-5	•						•
Kaleidoscope-Crazed	3-5	•					•	•
Looking Up Close	3-5		•					

Classroom Explorations

at a glance by grade level

3rd – 5th

	Grade	Physical Sciences	Life Sciences	Earth/Space Sciences	Engineering Design	Theater	Art	Math
May the Force be with You!	3-5	•						
Mobiles: Twisted but Balanced	4-5	•					•	
Möbius Twist	5			•				•
Muscle Up!	4-5	•						•
Mystery Mixtures	4-5	•						
On a Roll	3	•						
Pigments of Your Imagination: The Chemistry of Art and Science	3-5				•			
Play Ball	4-5	•						•
Playing Around with Polymers	4-5	•						
Shocking Discoveries	3-5	•						
Turn, Turn, Turn	5	•						
Water Filtration	3-5	•	•					
Water on the Move	3-5	•	•					

**Classroom Explorations are available
at Explora or at your site!**

Classroom Explorations

at a glance by grade level

6th – 8th

Grade

Physical Sciences

Life Sciences

Earth/Space Sciences

Engineering Design

Theater

Art

Math

	Grade	Physical Sciences	Life Sciences	Earth/Space Sciences	Engineering Design	Theater	Art	Math
Acids and Bases	6-8	•						•
Altered States	6-8	•						•
Be a Rock Star	6-8	•	•					•
Building a Monument	6-8	•				•		
Chance or Lucky Guess?	6-8	•						•
Circuit City	6-8	•		•				•
Crazy Light	6-8	•				•		
Creative Programming	6-8			•		•		•
Density: Liquid Layers	6-8	•						•
Ecology of the Forest	6-8		•					•
Energy That Moves You	6-8	•			•			
Energy Transformers	6-8	•						
Facts of the Matter	6-8	•						
Food Sleuths	6-8	•	•					
Forced into Action	6-8	•						
Galileo's Universe	6-8	•						•
Gearing Up and Gearing Down	7-8	•						•
Get Your Motor Running	6-8	•						
Good Vibrations	6-8	•						•
Go With the Flow	6-8	•						
The Heat is On!	6-8	•						
In Contrast: Chemistry, Light, and Photos	6-8	•				•		
In Defense of Spiders	6-8		•		•			
In Sync	6-8	•						
Kaleidoscope-Crazed	6-8	•				•		•
Looking Up Close	6-8		•					
Mobiles: Twisted but Balanced	6-8	•				•		
Möbius Twist	6-8			•				•
Motion Picture Math	6-8			•		•		•
Muscle Up	6-8	•						•
Music Math	6-8							•
Nature's Numbers	6-8							•

Classroom Explorations

at a glance by grade level

6th – 8th

Grade

		Physical Sciences	Life Sciences	Earth/Space Sciences	Engineering Design	Theater	Art	Math
Pigments of Your Imagination: The Chemistry of Art and Science	6-8						•	
Plants Capturing Light	6-8		•					
Plasma Scrutiny	6-8	•						
Playing Around with Polymers	6-8	•						
Shocking Discoveries	6-8	•						
Time to Reflect...and Refract	6-8	•						•
Triangles and Tribulations	6-8	•		•				•
Turn, Turn, Turn	6-8	•						
Water Filtration	6-8	•	•					
Water on the Move	6-8	•	•					
What's the Attraction?	6-8	•	•	•				

**Classroom Explorations are available
at Explora or at your site!**

Classroom Explorations

at a glance by grade level

9th – 12th

Grade

		Physical Sciences	Life Sciences	Earth/Space Sciences	Engineering Sciences	Theater	Art	Math
Action/Reaction of a Chemical Kind	9-12	•						•
Altered States	9-12	•						•
Circuit City	9-12	•		•				•
Crazy Light	9-12	•				•		
Creative Programming	9-12			•		•		•
Dream It, Build It: Creating Your Community	9-12							•
Energy Transformers	9-12	•						
Facts of the Matter	9-12	•						
Gearing Up and Gearing Down	9-12	•						•
Get Your Motor Running	9-12	•						
The Heat in On!	9-12	•						
In Contrast: Chemistry, Light, and Photos	9-12	•				•		
In Sync	9-12	•						
Kaleidoscope-Crazed	9-12	•				•		•
Mobiles: Twisted but Balanced	9-12	•				•		
Möbius Twist	9-12			•				•
Motion Picture Math	9-12			•		•		•
Nature's Numbers	9-12							•
Pigments of Your Imagination: The Chemistry of Art and Science	9-12					•		
Plants Capturing Light	9-12		•					
Plasma Scrutiny	9-12	•						
Time to Reflect... and Refract	9-12	•						•
Triangles and Tribulations	9-12	•		•				
Turn, Turn, Turn	9-12	•						
Water Filtration	9-12	•	•					
Water on the Move	9-12	•	•					
What's the Attraction?	9-12	•	•	•				
Yucca, Yucca, Yucca	9-12	•						

TEACHERS AND STUDENTS SAY:

“I think Explora really makes us think instead of showing us the answer. It teaches us to explore.”



“As a fourth grade teacher I am thoroughly impressed with everything.”

“I worked my brains out!”



Exploration Descriptions and Grade Level Availability

Available for grades:

	Pre-K-2	3	4	5	6	7	8	9-12	Adults
Acids and Bases		•	•	•	•	•	•		
Action/Reaction of a Chemical Kind								•	•
Air, Air Everywhere	Pre-K-1								
Altered States					•	•	•	•	•
Balancing Act	•								
Be a Mad Hatter!									
Be a Rock Star		•	•	•	•	•	•		•
Beautiful Bubbles	•								

Classroom Explorations are available at Explora or at your site!

Classroom Explorations are designed with multiple adaptations and extensions to engage different age groups. Common Core and NM State Educational Standards for each Classroom Exploration are on pages 32-37.

We use acids and bases every day. What's the difference? Students prepare an acid-base indicator and compare the relative strengths of some common acids and bases.

Bring your Jekyll, bring your Hyde! In this exploration students combine substances and identify reactants and products. Through careful observation and testing, students discover the four basic types of chemical reactions.

Have you stopped to marvel at the wonders of the air around you? Students "catch" air to see that it takes up space, use air to do work, and learn about the power of air pressure. Bubbles, pinwheels, and paint help us understand more about the air that is everywhere!

Use sonar to measure distance. Graph the relative pH levels of a variety of liquids. Students collect data using computers and a variety of probes, graph and analyze the results, and develop conclusions about the correlations between two variables.

Can you balance on one foot? Test your sense of balance and explore counterbalance and center of gravity with a wide variety of interesting objects.

Many people wear hats, but have you ever thought about why? Students test fabrics to determine which are the most water repellent, explore how hats' forms are related to their functions, observe hats in works of art, and make original hats to wear home.

This isn't about music; it's about geology! Students use microscopes and magnifying loupes to discover the main types of rocks, model the rock cycle, and perform a series of tests to unearth a mystery mineral.

Get ready for some soapy fun as students use a variety of materials and solutions to experiment with bubble blowing. Students observe the colors in a bubble and make colorful bubble prints.

Available for grades:

	Pre-K-2	3	4	5	6	7	8	9-12	Adults
Building a Monument		•	•	•	•	•	•		
Chance or Lucky Guess?			•	•	•	•	•		
Chemical Changes	1-2	•							
Circuit City					•	•	•	•	•
Classy Investigation		•	•	•					
Color Mix-Up	Pre-K-1								
Crazy about Chromatography	1-2	•	•	•					
Crazy Light		•	•	•	•	•	•	•	•

Classroom Explorations are available at Explora or at your site!

Tension in the classroom? Let us put it to good use! Students use their bodies to understand tension and other architectural forces in this constructive exploration. They also discover elementary structural principles and model-building techniques as they create their own unique architectural structures.

By flipping coins, rolling dice, picking marbles from a jar, and collecting data on candy, students discover that some outcomes are predictable. Students run experiments, collect data, and determine the probabilities of certain outcomes for independent events.

What's the difference between a physical change and a chemical change? How do simple mixtures differ from chemical changes? Students explore these differences and investigate several fascinating chemical changes.

Discover the relationships among voltage, current, and resistance in a DC (direct current) circuit. Connect your batteries to a variety of motors, buzzers, LEDs, resistors, lights, and switches to investigate resistance, conductivity, and the making of a flashlight.

We take the mystery out of animal classification! Students discover the five major vertebrate classes, build 3-D classification keys, and use their new skills to solve an animal mystery.

Experience the magic of colors changing before your eyes! Students use unusual materials to combine the primary colors and form new ones. They also learn the vocabulary of elementary math equations, such as "red plus blue equals purple," eliciting "ooohs" and "aaaahs" along the way.

Inside an ordinary black marker is a rainbow of color waiting to escape! Students investigate how paper chromatography is used to separate the components of mixtures, and test colored markers, food coloring, and candy to see what unexpected colors each contains.

Why do we see ourselves in mirrors? How are shadows made? Students use light boxes to explore the basic properties of white and colored light, including reflection and refraction, and investigate the properties of lenses.

Available for grades:

	Pre-K-2	3	4	5	6	7	8	9-12	Adults
Creative Programming			•	•	•	•	•	•	
Density: Liquid Layers			•	•	•	•	•		
Discover the Wonders of Nature		•	•	•					
Discovering Triangles	K-2	•	•	•					
Do Animals Play Hide and Seek?	•								
Dream It, Build It: Creating Your Community								•	
Ecology of the Forest		•	•	•	•	•	•		
Energy that Moves You		•	•	•	•	•	•		

Classroom Explorations are available at Explora or at your site!

Get creative with computers and MSW-Logo programming language. Students develop colorful graphic designs of geometric objects and animate them. Students design mini-animations with their own backgrounds and move creatures through their scenes.

Density is the property of matter that determines whether objects float or sink. Students compare the densities of salt solutions and a variety of liquids, and make a submarine that both sinks and floats.

How is a beak's shape related to its function? Can you tie your shoes without your thumbs? We'll use our greatest survival tool—our brains—to discover how adaptations help us survive and make us who we are. Students also spend time up close and personal with some of Explora's educational animals.

It's time to give triangles the attention they deserve! In this exploration students discover the different kinds of triangles and their importance. They also use triangles to build three-dimensional objects and begin to explore the perimeters and areas of these objects.

Playing hide and seek with some camouflaged animals helps us understand how their natural environments disguise them. After discovering the importance of this type of defense, students design camouflaged animals of their own.

What would your ideal community look like? Work with your team to design a community. Can you create one that fits your ideals and a given budget? Parks, transportation systems, recreation.... What components will your community include?

Play in the dirt to discover who and what is in it. Test soil samples for absorption and percolation, and find out how soil supports the health of the forest and the lives within it.

A car needs energy to move. Lights need energy to turn on. Investigate a variety of energy sources ranging from wind power to solar power to biofuels. Discover the benefits, possibilities, and challenges of different types of energies as you move cars and look for the hidden energy sources of sugar.

Available for grades:

	Pre-K-2	3	4	5	6	7	8	9-12	Adults
Energy Transformers		•	•	•	•	•	•	•	•
Exciting Electricity		•	•	•					
Facts of the Matter		•	•	•	•	•	•	•	•
Floaters and Sinkers	•								
Food Sleuths	2	•	•	•	•	•	•		
Forced into Action		•	•	•	•	•	•		
Forceful Magnets	•								
Galileo's Universe		•	•	•	•	•	•		
Gearing Up and Gearing Down						•	•	•	•

Classroom Explorations are available at Explora or at your site!

During these energizing activities, participants explore the different forms of energy and how these forms are converted from one to another. Students will experiment with “Newton’s Cradles” and build wind turbines that produce electricity.

Use batteries and wires to light a bulb, and explore open and closed circuits. Then make a gigantic complete circuit you won’t forget!

Atoms in motion—fast or slow—determine the states of matter we know. We’ll use liquid nitrogen (-320° Fahrenheit) and other materials to help students explore the properties of solids, liquids, and gases.

Roll up your sleeves and experiment with fruits, vegetables, other solids, and liquids to classify floaters and sinkers. We’ll modify materials to make them float or sink, and design a foil boat that will carry a cargo of pennies. How many pennies will your boat hold before it sinks?

What’s for dinner? Students test a variety of foods to determine the presence of proteins, fats, carbohydrates, and vitamins. We also learn the roles these substances have in a healthy diet, and what they really do inside our bodies.

Get on the move with Sir Isaac Newton and discover the laws that govern motion. Eggs may break and balls will fly as students experiment with simple tools to learn about inertia and to determine the forces, velocity, and acceleration of objects in motion.

Investigate which items are attracted to magnets and which are not, and explore attracting and repelling with a wide variety of materials. Students use magnets to add “fur” to animal pictures, race magnetic cars, and more.

Students gravitate toward experiments that have them swinging pendulums, rolling masses, and dropping objects as they explore several of Galileo’s famous experiments. By recording and analyzing data, students learn about the actions of pendulums and the laws that govern falling objects.

Sink your teeth into this exploration! Manipulate and arrange a variety of gears to speed up and slow down. Observe the teeth and turns of the gears to calculate the ratios that govern the transfer of power in a machine.

Available for grades:

	Pre-K-2	3	4	5	6	7	8	9-12	Adults
Get Your Motor Running			•	•	•	•	•	•	•
Go with the Flow		•	•	•	•	•	•		
Good Vibrations		•	•	•	•	•	•		
Gravity Rules!			•	•					
Growing Pains	•								
The Heat Is On!		•	•	•	•	•	•	•	•
How Does Your Garden Grow?	•								
In a Spin	•								

Classroom Explorations are available at Explora or at your site!

Students use batteries, magnets, wire, and paper clips to construct simple motors. Then they manipulate variables to improve the performance of their motors. Can the motors be made to run faster? Can they be turned into generators? Find out in this powerful exploration!

What is Bernoulli's Principle? Levitate balls and make an egg jump from one container to another to find out how airplanes fly and birds soar. The science of fluid dynamics is a great way to engage your students' natural curiosities and connect them to the world.

Catch a wave...a sound wave, that is! Students experiment with vibrations to learn how sound is produced and how it acquires its specific qualities. Find out how sound travels through various materials and how to tell whether it is coming or going.

Do heavier objects fall faster than lighter objects? Students investigate the force of gravity by balancing unusually-shaped objects and experimenting with their centers of gravity.

What do butterflies and frogs have in common? Students observe plants and animals at different stages in their life cycles, and discover how plants and animals change and grow up to be like their parents.

Are your students acting like hot little molecules? What else is new? We'll use their natural tendencies, along with some dramatic experiments, to help them understand how molecules transfer heat through conduction, convection, and radiation.

Plant seeds of wonder in your students! Discover the origin of a plant by dissecting a seed and finding out what makes it grow. Sow seeds of continued interest by taking student plantings with you to observe at school or at home. This exploration will grow on you!

Experiment with spinning and twirling, looping and whirling. Students make their own tops and "twirly birds" to take home.

Available for grades:

	Pre-K-2	3	4	5	6	7	8	9-12	Adults
In Contrast: Chemistry, Light, and Photos			•	•	•	•	•	•	•
In Defense of Spiders		•	•	•	•	•	•		•
In Sync					•	•	•	•	•
Jump Rope Math		•	•	•					
Kaleidoscope Crazed		•	•	•	•	•	•	•	•
Leaves, Leaves, Leaves	•								
Light and Shadow	•								
Looking for a Pattern	Pre-K-1								
Looking Up Close		•	•	•	•	•	•		

Classroom Explorations are available at Explora or at your site!

In this exploration, students become “sensitive” to light. Experiment with black-and-white photographic paper, penlights, and photo chemicals to create abstract drawings and prints with light.

Live Theater: This interactive courtroom drama will not determine the fate of spiders...or will it? Audience members play a decisive role in arachnid justice.

Explore the phenomenon of resonance by snapping, plucking, or striking rubber bands, springs, rods, pendulums, and more to observe their natural springiness. Use techniques of matching natural frequencies to “magically” move pendulums, oscillate springs, and amplify vibrations of objects.

How far will you go as you jump, skip, measure, investigate, and graph? Jumping rope can be seriously fun when you go to great lengths making predictions about travel, proportions, and number of skips.

Explore the amazing properties of mirrors, lenses, and light, and discover all the wonderful images and colorful patterns you get when angles and symmetry come into play. Students design and build their own unique kaleidoscopes.

Sort a variety of leaves and observe them up close. Students discover how special leaves are by investigating the hidden colors in a green leaf and exploring leaf patterns with rubbings and prints.

Discover different ways to make shadows as we investigate light by bouncing and bending it, explore shadows and shadow shapes, and experiment with colored light and colored shadows.

Investigate patterns in nature, discover designs in animal footprints, experiment with rhythm patterns, and create your own design on a big hat you can wear.

Students use microscopes and magnifiers to discover the fascinating world of organisms and elements among us. Explore the structures and functions of a variety of interesting features among a micro-world of bugs, plants, and rocks.

Available for grades:

	Pre-K-2	3	4	5	6	7	8	9-12	Adults
May the Force be with You!		•	•	•					
Measure Me	Pre-K-1								
Mirror, Mirror on the Wall	•								
Mobiles: Twisted but Balanced			•	•	•	•	•	•	•
Möbius Twist				•	•	•	•	•	•
Motion Picture Math					•	•	•	•	•
Muscle Up!			•	•	•	•	•		
Music Math					•	•	•		

Classroom Explorations are available at Explora or at your site!

They repulse, they attract! Students experiment with pairs of magnets to find magnetic objects, create their own magnets, learn about magnets' properties and behaviors, and find Earth's North Pole.

Students discover measuring concepts such as more, less, weight, and height in this practical exploration. We'll use scales, measuring cups, droppers, and more to explore the concept of measuring.

Students investigate reflection and symmetry as they compare their images in reflective materials, build kaleidoscopes, and make symmetrical art.

Explore balance, movement, and design by constructing sculptures in the style of Alexander Calder's mobiles. We compare and contrast symmetry and asymmetry in design and weight, and explore cause and effect by trying to balance weights and physically work out visual choices.

Can you change your donut into a cup for your hot chocolate? Find out how by using the properties of topology! Experiment with ways to stretch, compress, and bend shapes into new ones using various materials. Investigate the topology and geometry of shapes as you solve puzzles and explore Möbius strips. Use these ideas to map out and build a twisted roller coaster.

Explore persistence of vision with optical toys like zoetropes, flip books, thaumatropes, and a variety of computer programs. Use measurement skills and other applied math concepts to animate pictures and make them come alive!

What do a grasshopper's rear legs, a Ferris wheel, an overpass, and a car jack have in common? You'll find out in this exploration by creating and using a variety of simple machines. Change the size and direction of forces to give yourself a mechanical advantage and make your work easier!

You've probably enjoyed listening to your favorite music. Now you can unlock the mystery of its structure! Find the math in music as you design rhythm patterns, discover music fractions, and keep the beat while putting it all together.

Available for grades:

	Pre-K-2	3	4	5	6	7	8	9-12	Adults
Mysterious Matter	•								
Mystery Mixtures			•	•					
Nature's Numbers					•	•	•	•	
On a Roll	•	•							
Pebbles, Sand, and Silt	•								
Pigments of Your Imagination: The Chemistry of Art and Science		•	•	•	•	•	•	•	•
Plants Capturing Light					•	•	•	•	•
Plasma Scrutiny					•	•	•	•	•

Classroom Explorations are available at Explora or at your site!

Investigate properties of solids, liquids, and gases as you compare and contrast different kinds of matter. Students investigate various solids, swirling liquid layers, and more.

From forensics to fireworks, chemists learn about interesting substances by performing various tests. Using chemical analysis and powers of observation, each student determines the composition of his or her own mystery mixture. Chemical reactions, suspensions, solutions, and mixtures are all part of this mysterious exploration.

Experience the joy and playfulness of mathematics! Explore pinecones, flowers, and snails, and play with numbers and number sequences. Find out how 1-1-2-3... leads you to the golden mean and the golden rectangle used by many artists. Discover how nature makes use of number sequences to grow a tree and to efficiently arrange seeds, flower petals, and leaves.

Observe and compare rolling systems using recycled materials, cups, and marbles. Test which shapes roll the best, and create a roller coaster for marbles.

Get ready to sort rocks, dig in sand, and look for living material in garden soil as we investigate properties of these natural materials.

Do artists need to understand chemistry? Explore the art-science connection by using pigments to make your own paints. Then use your handmade paints to create an original work of art.

What are the factors that regulate photosynthesis? Students experiment with leaf pigments, light intensity, and light frequency to shed light on nature's own solar cells.

Solids, liquids, gases...and plasma! Explore plasma, the fourth state of matter. What happens to gas molecules in plasma, and how does the gas affect the plasma's color? Students investigate a plasma ball and use a spectroscope to identify the type of gas based on its color.

Available for grades:

	Pre-K-2	3	4	5	6	7	8	9-12	Adults
Play Ball!			•	•					
Playing Around with Polymers			•	•	•	•	•		
Round and Round	•								
Shocking Discoveries		•	•	•	•	•	•		
Simple Machines	•								
Time to Reflect... and Refract					•	•	•	•	•
Triangles and Tribulations					•	•	•	•	•
Turn, Turn, Turn				•	•	•	•	•	•
Water Filtration		•	•	•	•	•	•	•	•

Classroom Explorations are available at Explora or at your site!

By playing with flexible tracks and a variety of balls, students make discoveries about the effect of mass on collisions and the ways to affect velocity. Students also explore bounciness and elasticity in this engaging exploration.

What is a polymer? Do the properties of polymers change when they're made from different substances? Students investigate the properties of this special material by making a number of different polymers and comparing their bounciness, stretchiness, and more.

Test different shapes to see which ones make the best wheels and investigate different surfaces for roadways as you explore wheels moving "round and round."

Shock your students into learning with a simple touch of the Van de Graaff electricity generator! Energize their understanding of static electricity with this hair-raising class full of empowering experiments.

Test your strength with levers and pulleys, and experiment with the ways simple machines make work easier in this powerful exploration.

Use flashlights, lasers, rolling balls, prisms, and more to explore reflection and refraction. Explore the properties of reflection in visible and infrared light. Use lasers to measure reflected angles in milky water, observe different reflections in straight, curved, and bumpy mirrors, and build a refracting telescope using foam cups.

Have you always thought the triangle was just the shape between the circle and the square? It turns out that a triangle has some very important properties for engineering and construction. Find out more in this challenging trial-and-error exploration using triangles to construct games and roller coasters.

Students feel torque as they spin on turntables, and explore the rotational momentum of spinning objects as they manipulate variables like size, mass, distribution, and shape in this exploration that will leave their heads spinning.

Students experiment with a variety of materials to filter water samples. Students test their samples before and after for turbidity, hardness, and pH, and find out how effective different filtration methods may be.

Available for grades:

	Pre-K-2	3	4	5	6	7	8	9-12	Adults
Water on the Move		•	•	•	•	•	•	•	•
What's that Sound?	•								
What's the Attraction?					•	•	•	•	
Where Does the Food Go After You Eat It? (at Explora only)	•								
Wonderful Water	•								
Yucca, Yucca, Yucca!					•	•	•	•	•

Classroom Explorations are available at Explora or at your site!

How does water move through the soil? Students design, build, and test aquifer models to track contaminants, water tables, and well levels.

Explore sound waves and observe how they travel through water or air. Students feel vibrations caused by sound waves and experience these waves doing work.

Through hands-on exploration, students create a magnet and compass, observe magnetic force fields, and discover how these fields are related to electricity. Then they will use all of these concepts to build an electromagnet and an electric motor.

Let's answer this question by consulting our 8-foot-tall, blue-haired doll, whose canvas body unzips to reveal ten large digestive, circulatory, and respiratory organs. We'll learn what these body parts do and how to stay healthy, too!

Get wet exploring ice and water during several exciting activities. Students experiment with water drops and investigate absorption, adhesion, and other unique properties of ice and water.

What's the difference between soap and detergent? How does either one compare with a natural soap made from yucca roots? In this exploration you can "suds up" with lab techniques designed to compare and test the power of these cleansing agents.

New Mexico Public Education Department State Standards, Common Core State Standards (CCSS), and NM Pre-K Essential Indicators (EI)

Explora *Classroom Explorations* are benchmarked to the standards established for relevant grade level by the New Mexico Public Education Department.

Explora's *Classroom Explorations* meet the following CCSS math standards: "Measurement & Data: Represent & Interpret Data" and "Analyze Patterns and Relationships." Some Explora *Classroom Explorations* also meet additional CCSS math standards, which are listed with each corresponding *Exploration*.

Exhibits Exploration (Grades Pre-K-12)

Science: Strand I, Standard I, BM I, II

Acids and Bases (Grades 4-8)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM I, PS 4-1,2, 5-3,4, 6-1,2, 8-1

Action/Reaction of a Chemical Kind (Grades 9-12)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM I, PS 9/12-2,3,12,13,14,15

Air, Air Everywhere (Grades Pre-K-1)

EI#1, 2, 4, 14, 15, 18, 19, 20, 23
Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM II, PS K-1, 1-1, 2-3,5

Altered States (Grades 6-12)

Science: Strand I, Standard I, BM I, II and BM III, PS 6-1,2, 7-1,2, 8-1, 9/12-1,3,4,5 and Strand II, Standard I, BM I, PS 6-1, 9/12-2,4 and Strand III, Standard I, BM I, PS 6-2

Balancing Act (Grades Pre-K-2)

EI#1, 2, 4, 12, 14, 15, 20, 23
Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM III, PS K-1,2, 1-1,2, 2-1

Be a Mad Hatter (Grades K-5)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM I, PS K-1,2, 1-2 and Strand III, Standard I, BM I, PS 2-3 Art: Standards 1, 3, 8

Be a Rock Star (Grades 3-8)

Science: Strand I, Standard I, BM I, II and Strand II, Standard II, BM II, PS 3-1, 4-1 and Strand II, Standard III, BM II, PS 6-1,3, 8-1

Beautiful Bubbles (Grades Pre-K-2)

EI#1, 2, 4, 14, 15, 18, 19, 20, 23
Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM I, PS K-2, 1-2

Building a Monument (Grades 3-8)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM III, PS 4-4, 5-3, 8-1,2,3
Art: Standards 1, 3, 8

Chance or Lucky Guess? (Grades 4-8)

Science: Strand I, Standard I, BM I, II and BM III, PS 4-1, 5-2,3, 6-1,2, 7-1
CCSS: 4th-5th: Operations & Algebraic Thinking, Measurement and Data, Ratios & Proportional Relationships, Statistics and Probability

Chemical Changes (Grades 1-3)

Science: Strand I, Standard I, BM I, II and BM III, PS 2-1, 3-3 and Strand II, Standard I, BM I, PS K-2, 1-2, 2-1, 3-1

Circuit City (Grades 6-12)

Science: Strand I, Standard I, BM I, II and BM III, PS 9/12-3,4 and Strand II, Standard I, BM II, PS 6-1, 9/12-1,3 and BM III, PS 8-4, 9/12-3
CCSS: The Number System, Expressions and Equations, Measurement and Data

Classy Investigation (Grades 3-5)

Science: Strand I, Standard I, BM I, II and Strand II, Standard II, BM I, PS 3-2,3, 4-1

Color Mix-Up (Grades Pre-K-1)

El#1, 2, 4, 5, 14, 15, 20, 23
Science: Strand I, Standard I, BM I, II and BM III, PS 1-1 and Strand II, Standard I, BM I, PS K-1,2
Art: Standards 1, 3
CCSS: Operations and Algebraic Thinking

Crazy about Chromatography (Grades 1-5)

Science: Strand I, Standard I, BM I, II and BM III, PS 2-1, 3-3 and Strand II, Standard I, BM I, PS K-2, 1-2, 2-1, 3-1,2, 4-1

Crazy Light (Grades 3-12)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM II, PS 3-1,2, 4-3, 6-1,4, 8-5, 9/12-11

Creative Programming (Grades 4-12)

Science: Strand I, Standard I, BM I, II and Strand III, Standard I, BM I, PS 5-2, 6-2, 8-3, 9/12-1,4
CCSS: Geometry

Density: Liquid Layers (Grades 4-8)

Science: Strand I, Standard I, BM I, II and BM III, PS 4-3 and Strand II, Standard I, BM I, PS 6-1,2, 8-1 and BM II, PS 5-1

Discover the Wonders of Nature (Grades 3-5)

Science: Strand I, Standard I, BM I, II and Strand II, Standard II, BM I, PS 3-1,2, 4-1, 5-3, 6-1,3 and Strand II, Standard II, BM II, PS 4-1,2,3, 5-2,3, 6-2

Discovering Triangles (Grades K-5)

Science: Strand I, Standard I, BM I, II and BM III, PS 3-1,2,3, 4-1,3,5-1,2,3,4
CCSS: Geometry, Measurement and Data

Do Animals Play Hide and Seek? (Grades Pre-K-2)

El#1, 2, 4, 9, 12, 14, 15, 19, 20, 23
Science: Strand I, Standard I, BM I, II and Strand II, Standard II, BM I, PS K-2, 1-1,2,3, 2-1 and BM II, PS K-1,2, 2-2,3

Dream It, Build It: Creating Your Community (9-12)

CCSS: The Real Number System, Creating Equations, Quantities

Ecology of the Forest (Grades 3-8)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM I, PS 3-2 and Strand II, Standard II, BM I, PS 5-1,3, 7-1,2,3 and BM II, PS 3-1 and Strand II, Standard III, BM II, PS 8-2

Energy That Moves You (3-8)

Science: Strand I, Standard I, BM I, II, BM III, and Strand II, Standard I, BM II, BM III, Strand III, Standard I

Energy Transformers

(Grades 3-12)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM II, PS 3-3, 4-1, 2, 5-3,4, 6-1,2,3, 8-1,2,4, 9/12-1,3,6,11 and BM III, PS 4-2,4, 5-3,4, 8-8, 9/12-7,8

Exciting Electricity (Grades 3-5)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM II, PS 4-4

Facts of the Matter (Grades 3-12)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM I, PS 4-2, PS 5-1, 2,3,5,6, 8-1,4,7, 9/12-5,10 and BM II, PS 8-2 and Strand II, Standard I, BM II, PS 5-1, 9/12-2,4,5

Floaters and Sinkers

(Grades Pre-K-2)

El#1, 2, 4, 9, 12, 14, 15, 20, 23
Science: Strand I, Standard I, BM I, II and BM III, PS K-1 and Strand II, Standard I, BM I, PS K-1,2, 1-1
CCSS: Counting and Cardinality

Food Sleuths (Grade 2-8)

Science: Strand I, Standard I, BM I, II and BM III, PS 2-1 and Strand II, Standard II, BM III, PS 2-2, 3-2, and Strand III, Standard I, BM I, PS 7-1

Forced into Action (Grades 3-8)

Science: Strand I, Standard I, BM I, II and BM III, PS 3-2 and Strand II, Standard I, BM II, PS 4-1,2 and BM III, PS 4-2,3,4, 5-1,2,3,4, 8-1,2,3,8

Forceful Magnets

(Grades Pre-K-2)

El#1, 2, 4, 12, 14, 15, 19, 20, 23
Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM I PS K-1,2, and Strand II, Standard I, BM III, PS K-1,2, 2-2

Galileo's Universe (Grades 3-8)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM II PS 4-2, 5-4 and BM III, PS 3-3, 4-2,3,4, 5-3,4, 8-1,2,3

Gearing Up and Gearing Down (Grades 7-12)

Science Strand I, Standard I, BM I, II and Strand II, Standard I, BM II, PS 9/12-3 and Strand II, Standard I, BM III, PS 8-7,8, 9/12-7,8,9 and Strand III, Standard I, BM I, PS 9/12-2,3,4

Get Your Motor Running (Grades 4-12)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM II, PS 4-4, 5-4, 6-1, 8-1,4, 9/12-1,3,4,6 and Strand III, Standard I, BM I, PS 9/12-4

Go with the Flow (Grades 3-8)

Science: Strand I, Standard I, BM I, II and Strand II, Standard III, BM II, PS 3-3, 5-2, 6-5

Good Vibrations (Grades 3-8)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM II, PS 4-3, 6-4, 8-6 and BM III, PS 4-1

Gravity Rules! (Grades 4-5)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM II, PS 4-2 and BM III, PS 3-3, 4-3,4, 5-3,4

Growing Pains (Grades K-2)

Science: Strand I, Standard I, BM I, II and Strand II, Standard II, BM I, PS K-1, 1-1,2,3,4 and BM II, PS K-1,2, 1-2, 2-1,2

The Heat is On! (Grades 3-12)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM I, PS 4-2, 5-3, 6, 9/12-5 and BM II, PS 3-3, 5-1,3, 6-1,2, 9/12-1,2,4,5

How Does Your Garden

Grow? (Grades Pre-K-2)

El#1, 2, 4, 12, 14, 15, 20, 23

Science: Strand I, Standard I, BM I, II and BM III, PS K-1 and Strand II, Standard I, BM I, PS K-2 and BM II, PS 2-3 and Strand II, Standard II, BM I, PS K-1,2, 1-1,2

In a Spin (Grades Pre-K-2)

El#1, 2, 4, 12, 14, 15, 20, 23

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM I,K-1,2, 1-2 and BM II, PS K-1, 1-1, 2-5 and BM III, PS K-1, 1-1, 2-1

CCSS: Measurement and Data

In Contrast: Chemistry, Light and Photos (Grades 4-12)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM I, PS 4-1, 8-8,9,10, 9/12-15 and BM II, PS 6-1

Art: Standards 1, 3, 8

In Defense of Spiders

(Grades 3-8)

Science: Strand II, Standard II, BM I, PS 3-1,2, 6-1,3, 7-3, 9/12-4 and BM II, PS 4-2,3 and Strand III, Standard I, BM I, PS 9/12-17,19

Theater: Standards 1, 3, 5, 6, 8

In Sync (Grades 6-12)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM II, PS 6-4, 8-6 and BM III, PS 8-8, 9/12-8,10,12

Kaleidoscope-Crazed

(Grades 3-12)

Science Strand I, Standard I, BM I, II and Strand II, Standard I, BM II, PS 3-2, 8-5

CCSS: Geometry

Jump Rope Math (3rd-5th)

Science: Strand I, Standard I, BM I, II, BM III, and Strand II, Standard I, BM II, BM III, Strand III, Standard I
CCSS: Operations and Algebraic Thinking, Measurement and Data

Leaves, Leaves, Leaves

(Grades Pre-K-2)

El#1, 2, 4, 9, 12, 14 15, 20, 23

Science: Strand I, Standard I, BM I, II and Strand II, Standard II, BM I, PS K-1,2, 1-1,2

Light and Shadow

(Grades Pre-K-2)

El #1, 2, 4, 10, 12, 14, 15, 20, 23

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM I, PS K-2, 1-2

Looking for a Pattern

(Grades Pre-K-1)

El#1, 2, 3, 4, 5, 6, 9, 14, 15, 20, 23

Science: Strand I, Standard I, BM I, II
Math: Algebra Strand, Geometry Strand

CCSS: Operations and Algebraic Thinking, Geometry

Looking Up Close (Grades 3-8)

Science Strand I, Standard I, BM I, II and Strand II, Standard II, BM I, PS 3-2, 4-1

May the Force be with You!

(Grades 3-5)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM III, PS 3-1,2,3, 5-3

Measure Me (Grades Pre-K-1)

El#1, 2, 4, 9, 11, 12, 14, 15, 20, 23

Science: Strand I, Standard I, BM I, II and BM III, PS K-1, 1-1 and Strand II, Standard I, BM I, PS K-2

CCSS: Counting and Cardinality, Measurement and Data

Mirror, Mirror on the Wall

(Grades Pre-K-2)

El#1, 2, 4, 9, 12, 13, 14, 15, 20, 23

Science: Strand I, Standard I, BM I, II

CCSS: Geometry

Mobiles: Twisted but Balanced

(Grades 5-12)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM II, PS 9/12-1,3 and Strand II, Standard I, BM III, PS 4-3,4, 6-1, 8-1,3,7,8, 9/12-1,2

Art: Standards 1, 3, 8

Möbius Twist (Grades 8-12)

Science: Strand I, Standard I, BM I, II

CCSS: Geometry

Motion Picture Math

(Grades 6-12)

Science: Strand I, Standard I, BM I, II

CCSS: Measurement and Data

Muscle Up! (Grades 4-8)

Science: Strand I, Standard I, BM I, II and Strand I, Standard II, BM I, PS 5-1 and BM II, PS 5-1, 6-2 and BM III, PS 5-3, 6-1 and Strand II, Standard I, BM II, PS 5-4, 7-1 and BM III, PS 5-5

Music Math (6-8)

CCSS: Ratios and Proportional Relationships

Mysterious Matter

(Grades Pre-K-2)

El#1, 2, 4, 11, 12, 14, 15, 18, 19, 20, 23

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM I, PS K-1,2, 1-1,2, 2-1,2

Mystery Mixtures (Grades 4-5)

Science: Strand I, Standard I, BM I, II and BM III, PS 5-3 and Strand II, Standard I, BM I, PS 4-1 and Strand III, Standard I, BM I PS 4-2

Nature's Numbers (6-12)

CCSS: Complex Number System

On a Roll (Grades Pre-K-3)

El#1, 2, 4, 10, 11, 12, 14, 15, 18, 19, 20, 23

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM I, PS K-1,2, 1-2 and BM II, PS K-1, 1-1, 2-5, and BM III, PS K-1, 1-1, 2-1

Pebbles, Sand, and Silt

(Grades Pre-K-2)

El#1, 2, 4, 9, 12, 14, 15, 18, 19, 20, 23

Science: Strand I, Standard I, BM I, II and BM III, PS K-1, 2-1 and Strand II, Standard III, BM II, PS 2-1,2,3

Pigments of Your Imagination:

The Chemistry of Art and Science

(Grades 3-12)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM I, PS 6-1,2, 9/12-2

Art: Standards 1, 3, 8

Plants Capturing Light

(Grades 6-12)

Science: Strand I, Standard I, BM I, II and Strand II, Standard II, BM I, PS 7-5, 8-2, 9/12-3,7 and BM III, PS 7-1,2,3,4,5, 8-1,2, 9/12-3,7

Plasma Scrutiny (Grades 6-12)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM I, PS 7-4, 8-1,4,5,7,10, 9/12-1,2,5,10 and BM II, PS 9/12-2,10

Play Ball (Grades 4-5)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM II, PS 4-1 and Strand II, Standard I, BM III, PS 4-2,3, 5-1,4

Playing around with Polymers

(Grades 4-8)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM I, PS 4-1,2, 5-1, 3, 6-1,2,4 and Strand III, Standard I, BM I, PS 4-2, 5-2, 8-1

Round and Round

(Grades Pre-K-2)

El#1, 2, 4, 10, 11, 14, 15, 18, 19, 20, 23
Science: Strand I, Standard I, BM I, II and BM III, PS K-1 and Strand II, Standard I, BM I, PS K-1,2, 1-2 and BM III, PS K-1,2, 1-1, 2-1
CCSS: Measurement and Data

Shocking Discoveries

(Grades 3-8)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM I, PS 4-2 and BM II, PS 4-1,4, 5-3, 6-1, 8-4 and BM III, PS 4-1, 5-3

Simple Machines

(Grades Pre-K-2)

El#1, 2, 4, 9, 11, 14, 15, 18, 19, 20, 23
Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM II, PS K-1, 1-1 and BM III, PS K-1,2, 1-1, 2-1

Time to Reflect ... and Refract

(Grades 6-12)

Science: Strand I, Standard I, BM I, II and Strand I, Standard I, BM III, PS 6-2, 7-1,3, 8-2 and Strand II, Standard I, BM II PS 6-1, 8-5, Strand III, Standard I, BM I, PS 9/12-2,4
CCSS: Geometry. Measurement and Data

Triangles and Tribulations

(Grades 6-12)

Science: Strand I, Standard I, BM I, II and BM III, PS 8-1,2, 9/12-4,5 and Strand III, Standard I, BM I, PS 8-3
CCSS: Geometry, Measurement and Data

Turn, Turn, Turn (Grade 5-12)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM III, PS 5-1,3,4, 8-1,2,3,7,8, 9/12-8

Water Filtration (Grades 3-12)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM I, PS 7-1 and Strand II, Standard II, BM I, PS 8-1 and Strand II, Standard III, BM II, PS 3-1, 6-7, 9/12-12, and Strand III, Standard I, BM I, PS 4-1, 5-1, 9/12-12

Water on the Move

(Grades 3-12)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM I, PS 7-1 and Strand II, Standard II, BM I, PS 8-1 and Strand II, Standard III, BM II, PS 3-1, 6-7, 9/12-12, and Strand III, Standard I, BM I, PS 4-1, 5-1, 9/12-12

What's that Sound?

(Grades Pre-K-2)

El#1, 2, 4, 12, 14, 15, 20, 23
Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM II, PS 2-4

What's the Attraction?

(Grades 6-12)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM II, PS 6-1 and BM III, PS 8-4,5,6, 9/12-1,5

Where Does the Food Go After

You Eat It? (Grades Pre-K-2)

Science: Strand II, Standard I, BM III, PS K-2, 1-1,2, 2-1,2,3

Wonderful Water

(Grades Pre-K-2)

El#1, 2, 4, 9, 12, 14, 15, 18, 19, 20, 23
Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM I, PS K-2, 1-1,2
CCSS: Math: Counting and Cardinality

Yucca, Yucca, Yucca (Grades 6-12)

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM I, PS 6-1,2, 7-4, 8-1, 9/12-2 and Strand III, Standard I, BM I, PS 9/12-3,15

Available at Explora or your site

Professional Development Programs and Workshops

Immerse yourself in science-rich experiences as we take an inquiry approach to learning that involves every participant in active exploration of physical materials to stimulate our minds! Get great ideas to implement in your classroom.

Explora's award-winning exhibits and education programs inspire participants to investigate a variety of real-world STEM topics in highly engaging and collaborative learning environments. Skilled educators facilitate these learning experiences, creating enjoyable and interesting activity-based programs while fostering higher-level thinking and problem-solving skills.

Early Childhood Teacher and Provider Workshops

Motivate and excite student learning! Have fun with science-rich experiences while learning to facilitate an inquiry approach to early childhood teaching.

Facilitated by state-approved Early Childhood Trainers, these workshops are designed to inspire confidence in exploring science topics in the early childhood classroom. Our workshops involve every participant in fun active investigation of physical materials and learning strategies to stimulate minds. Get creative ideas to implement in your classroom! You can earn Continuing Education Units and Early Learning Guidelines by attending these workshops.

Visit www.explora.us for workshop information and descriptions. Workshops can also be customized to meet your staff's needs. Call 505-224-8341 or email reservations@explora.us to book a workshop at Explora or your location.

Workshop Fee*

\$20/person per workshop
\$320 for groups up to 20 people.

*Some workshops have a materials fee. Call for details.



Program Reservation Policy

Making a Reservation

Contact Reservations at 505-224-8341 or reservations@explora.us to request a reservation. Let us know at this time about any special needs. Reservations are held once the completed form is received. Please read forms carefully, sign, and return the reservation/invoice form.

Chaperones

One adult chaperone is required for every 6 students. Adult chaperones who are Explora members are welcome to use their memberships for their own field trip admissions. Payment for participating students and non-member adults is required and defrays program expenses.

Paying for a Program

Payment must be made on or before the day of your visit by credit card, check, cash, or purchase order. Advance payment may be made by calling 505-224-8341 or by mailing a check or purchase order to:

Explora, Attn: Reservations Coordinator
1701 Mountain Rd. NW
Albuquerque, NM 87104

Rescheduling or Canceling a Program

Because Explora reserves space and an educator for your group, these policies apply:

Rescheduling:

More than 5 business days before visit – no fee.

5 business days or fewer before visit – 15% booking fee.

Canceling:

More than 5 business days before visit – 15% booking fee.

5 business days or fewer before visit – 50% late cancellation fee.

No-shows: The full amount will be charged.

Reservations are required for group visits of 12 or more people.

More information

reservations@explora.us Tel. 505-224-8341

The reservations office is open Monday–Friday 9am–5pm.

Para información en español, llame al 505-224-8323,
de lunes a viernes, 9am–5pm.

Fee Schedule for Field Trips to Explora

- Reservations are required for group visits of 12 or more people.
- One adult chaperone is required for every 6 students.
- Explora family memberships do not apply to classroom programs. Adult chaperones are welcome to use their memberships for their own field trip admissions. Payment for participating students and non-member adults is required and defrays program expenses.

■ Classroom & Exhibit Exploration Package (2 hours)

per student _____ **\$9.00**

per chaperone _____ **\$4.00**

■ Exhibit Exploration (2 hours)

per student

or chaperone _____ **\$6.00**

■ Classroom Exploration (1 hour)

per student _____ **\$5.00**

■ Exhibit Exploration (1 hour)

per student

or chaperone _____ **\$4.00**

Call Explora's Educational Services Group at 505-224-8394 about Science Fair Workshops, Professional Development, In-service Workshops for Educators, Custom Programs, and Early Childhood Educators' Continuing Education Classes.

Contact Reservations at 505-224-8341 to request a reservation.

Fee Schedule for Outreach

We'll bring our programs to you!

Two to six hours of Explora programs _____ \$250.00

Programs can be a combination of:

■ **Classroom Explorations** (1 hour each)

■ **Family/Community Science Events** (up to 3 hours)

Exciting science activities and tabletop exhibits designed for a festival or open house setting. It's a mini-Explora at your location!

■ **Assembly Programs** (1 hour each)

For audiences of up to 125 people. Choose two of the following topics for each assembly:

- Fizzing and Foaming: Colorful Chemistry
- Shocking Electricity (requires ability to darken room)
- Super Cold: Liquid Nitrogen and the States of Matter
- The Science of Sound
- Under Pressure: Air Pressure

LOCAL SPECIAL!

One-hour Classroom Exploration

within 30 miles of Explora _____ \$150.00

(maximum 30 participants per program)

Call today to book your program!

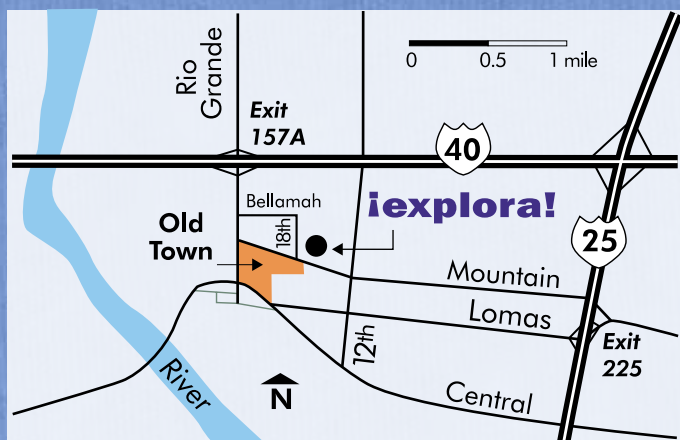
**Educators receive a 10% discount
on their purchases at
Ideas, the Store at Explora year round.**

We offer quality classroom resources, and materials and tools related to science, technology, and art. Ideas carries a wide selection of items that provide hours of hands-on learning, like science kits, nature explorations, books, optics, and intriguing puzzles.

School checks and purchase orders are welcome, and purchases over \$200 get a 20% discount. Special orders are welcome.

Call Ideas at 505-224-8349 for more information.

Explora is a 501 (c)(3) non-profit. Purchases are tax-free and proceeds help fund our programs and exhibits.



Explora, 1701 Mountain Rd. NW, Albuquerque, NM 87104
505-224-8341 or 505-224-8300

www.explora.us