

Home School at Explora

Spring 2010 Class Activities

Grades 5-7



Classes begin the week of January 25 and end the week of May 3.

There are no classes the week of March 15-19 due to Explora Spring Break Camp.

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

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

2. "Energy Transformers" 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," use pendulums to shoot baskets, and build wind turbines that produce electricity.

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

3. "Go with the Flow" 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 students' natural curiosities and connect them to the world.

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

4. "Facts of the Matter" 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.

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

5. "Plasma Scrutiny" 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 plasma balls and use spectrosopes to identify the types of gas based on their colors.

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM I, PS 7-4

6. "Motion Picture Math" Explore persistence of vision and 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!

Science Strand I, Standard I, BM I, II

Math: Measurement Strand

7. "Yucca, Yucca, Yucca" 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.

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

8. "Mobius Twist" Experiment with ways to stretch, compress and bend shapes into new ones using various materials. Investigate topology and geometry as you explore Mobius strips and use such shapes to build twisted roller coasters.

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

Math: Geometry Strand

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9. "Looking Up Close" 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.

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

10. "Very Small in the Universe" Is poking around in the dark science? It is when you are studying things you can't see. Scientists use their other senses all the time, and they infer from there. Students use bicycle wheels, diapers, water and their own senses to learn about atoms and other small particles.

Science: Strand I, Standard I, BM I, II and Strand II, Standard I, BM I, PS 8-1

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

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

12. "Chance or Lucky Guess" By flipping coins, rolling dice, picking marbles from a jar and collecting data on candy, students generate data, analyze it, and develop a hypothesis on the probability of a specific outcome for both dependent and independent events.

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

Math: Data Analysis and Probability Strand

13. "Water Filtration" Students experiment with a variety of filtering 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.

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

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

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

Information and Registration

For more information or registration, call 505.224.8341, or e-mail inquiries to: reservations@explora.us.

Para información en español, llame al 505.224.8323.

All registrations must be accompanied by full payment. We accept cash, checks, VISA, MasterCard, Discover and American Express. Please make all checks payable to Explora. For mail-in registration, complete the registration form available online at www.explora.us (Programs/Homeschool), and send it with payment to: Explora, 1701 Mountain Rd. NW, Albuquerque, NM 87104.

Cancellation Policy

If a cancellation is received at least 5 business days before the first class, a refund will be issued for the amount minus a 15% administration fee. Cancellations received fewer than 5 business days before the first class will not be refunded. Full fees will be refunded if Explora cancels a program.