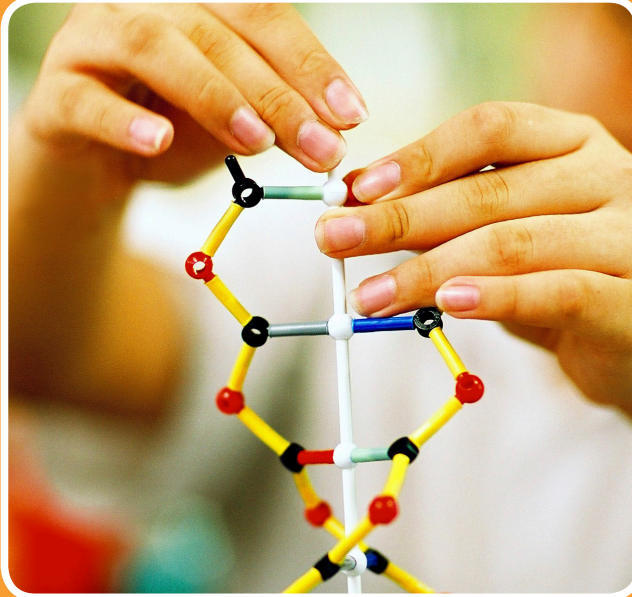


SCIENCE CAMPS



ELEMENTARY SCHOOL CAMPS

Gizmos, Gadgets and Goop June 20-24: Science and imagination join forces to explore electricity, energy and light. Experience the thrill of building electronic gadgets while learning basic principles of electricity. Build an electroscope and a magnetic field detector. Make glow-in-the-dark slime to amaze your family. Design and build a tower to test gravity and tension. Explore the science behind batteries, bulbs and buzzers. Enter the Invention Dimension to design and create motorized K'Nex racers, roller coasters, helicopters, planes and more.

Space & Rocketry June 27-July 1: Explore the moon and beyond! Build your own high-flying, reusable, solid-fueled rocket for Launch Day and watch it return to Earth. Learn about aerodynamics, gravity and energy. Make a working telescope and build a light-up model of our solar system. Navigate the solar system and learn the secrets of Mars, the Red Planet, as you create a motorized K'Nex Mars Rover and fiber optic constellations in this unforgettable outer space adventure!

Creatures, Critters and Creepy Crawlies July 5-8 (extended day) or August 1-5: Explore the wild kingdom of bugs, birds, and animals. Dissect an owl pellet, make a crocodile, and discover the life cycle of a frog. Embark on an animal adventure and uncover what makes each group of vertebrates wild! Next, take a tour of the human body and discover the science behind keeping fit. Mix a sports drink, build a working model of a muscle and test your lung power as you discover how the body works from the inside out. Learn about dangerous creatures from bugs to raptors to reptiles. Swim with the sharks. Design a snake. Build a working electric ray and a heat seeking croc-thermometer as we discover if these creatures are really dangerous... or just misunderstood? Take a daring look at these "outlaws" of nature as we take a bite out of biology.

Robot Factory July 11-15 or August 8-12: Build, customize and battle one of the greatest inventions, the Buggy-Bot! Create a giant insect motorized walking K'Nex robot. Investigate what makes a robot tick as we take a robot's-eye view in 3-D, listen with electronic ears, and prepare to compete in the Robo-Olympics. Stay all day and build a robot model with robot technologies, make a crazy invention, and discover how robots are changing the face of our world. Power up for fun and discover the secret lives of these extreme machines. Experience robotics, optics, machines, physics and mechanical systems.

Mad Scientist Adventure July 18-22: Investigate a mysterious disappearance using the science of forensics, chromatography, chemistry, and fingerprint analysis. Next, find out what happens when an experiment goes completely wrong as you take a look at some of the greatest science blunders, and how with a little imagination, they were turned into amazing discoveries. From electric circuits to dinosaur bones, some of the best science happens when you least expect it. Then, learn the science secrets of some well-known toys. Explore touchable bubbles, create instant snow, make racing slime and discover the secret formula that puts the fizz in soda. Finally, you'll travel from pole to pole and dig deep into the amazing and extreme science of Earth from the processes that make Earth shake and quake to tornadoes and volcanoes.

Fantastic Physics Challenge July 25-29: Explore Newton's three laws of motion as you build, test, and learn solid science fun. Explore the power of molecules and machines. Blast a fizz rocket, build dragsters and catapults, throw magnetic darts, and hurtle parachutes through the air. Make slick moves with skateboard racers and slime sport shoes. Serious mini-scientists will learn how physics properties relate to the body, sports and self-guided contraptions. This physics challenge will be your camper's biggest adventure.

MIDDLE SCHOOL CAMPS

Motion, Models and Machines July 11-15: Experience fundamental physical science concepts including matter, energy and their interactions as you build up to 30 different K'Nex models using levers; fixed, movable, compound and block and tackle pulley systems; wheels and axles with the force applied to both the wheel and the axle; inclined planes, screws and wedges; spur, crown, sprocket, rack and pinion, transmission and differential gear systems. Investigate potential and kinetic energy, and identify the differences between energy associated with position and condition. Build 11 different K'Nex roller coaster designs each demonstrating math and physical science concepts.

Engineering Marvels July 18-22: Learn principles of design and engineering as you build dozens of models using K'Nex and other materials. Explore the design process, modeling, motion and energy transfer, and construction technologies as you build nine models. Study compression, load and force, cantilever construction, suspension technology as you build seven 5'-6' long replicas of famous bridges each demonstrating different design and engineering concepts. Apply principles of physics, architecture, and engineering as you build classic amusement park rides including a roller coaster with clothoid loop, carousel, Ferris wheel, pirate ship, scrambler, swing and boom rides, plus half pipe and inclined plane ramp systems.

Spark Imagination with Science Solutions July 25-29: Foil the mysterious messages being sent to the Curious Cypher Club™ as you design and build a clubhouse, crack puzzling codes, and use deductive reasoning to trace their source. In Bounce: An Atomic Journey™ explore chemistry and physics from atoms, molecules, mixtures, and compounds to discover the science behind balls, and create polymers to make a bouncy ball. Wondrous Innovations and Living Designs™ examines how cuttlefish, beetles and geckos are alike using bioengineering and biomimicry to investigate the most innovative survival traits on the planet! Apply magnetism and nanotechnology to invent prototypes inspired by nature. Learn about the patent process in the Invention Connection™ as you use reverse engineering to create simple and multi-step machines.

Discover the Super Powers of Science August 1-5: Explore buoyancy and engineering to build prototypes and navigate the oceans investigating clues to locate long-lost Viking treasure. In Comic Book Science™, discover the science behind super powers including advanced materials, aerodynamics and genetics while creating a comic book. Create launching devices using simple machines. Learn about friction and physics while building the ultimate land sled then putting it through its paces in an X-treme obstacle course! Transform a broken machine into an invention in the Invention Workshop™.

Explore Physics and Forensics August 8-12: Design and construct buildings to demonstrate domes, planes and joints. Use tons of tape and create a command center in Tape to Your Leader™. Investigate Newton's Laws of physics in to craft vehicles to safely deliver important documents over land, sea, air and in outer space! Use forensics in Solve It: The Missing Inventor's Log™ to recreate a crime scene and become a detective investigating clues to solve this exciting mystery. Take apart a broken appliance in Edison Workshop™ and upcycle its gears and gadgets to invent a machine that you design and build.

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