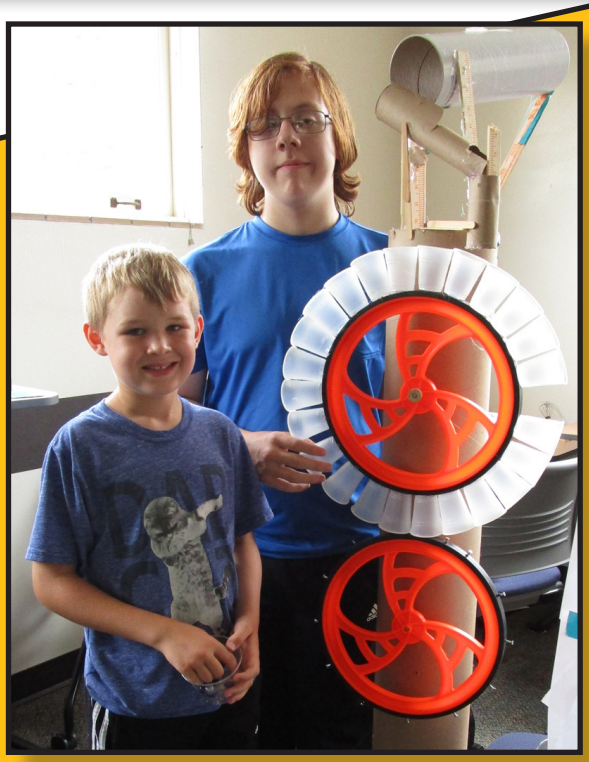
The Center for Gifted ~ Midwest Torrance Center for Creativity

Summer Wonders 2020

For bright, motivated students entering grades PK - 6 seeking new challenges and fresh inspiration.



Lincolnshire

Session I: July 6-10

Session II: July 13-17

Session III: July 20-24

Session IV: July 27-31

in partnership with

LINCOLNSHIRE • PRAIRIE VIEW SCHOOL DISTRICT 103

AM, PM, and Full Day Options • Before and After Care

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Joan Franklin Smutny, Founder and Director

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Igniting Imaginations Since 1983!

Course Offerings

Session I: July 6-10

3D Math (1-4)
Amusement Park Physics (3-6)
Bringing Out the Goodness (K-3)
Boom, Bang, Fizz! (K-3)
Bugs and Other Creepy Crawlies (K-3)
Checkmate (K-6)
Chemistry of the World (4-6)
Computer Lab (3-6)
Computer Lab without Boys (3-6)
Creative Writing (3-6)
Escher Illusions and Tricks of the Eye (3-6)
Fables, Fairy Tales, and Folklore (K-4)
Nurture Nature and Investigate Science PK-K
Science, or Magic? (K-6)
Solution Set (How to Solve Mathematical Puzzles) (3-6)
Stories and Art: The Caldecott Winners (PK-K)
The Olympics (2-6)

Session II: July 13-17

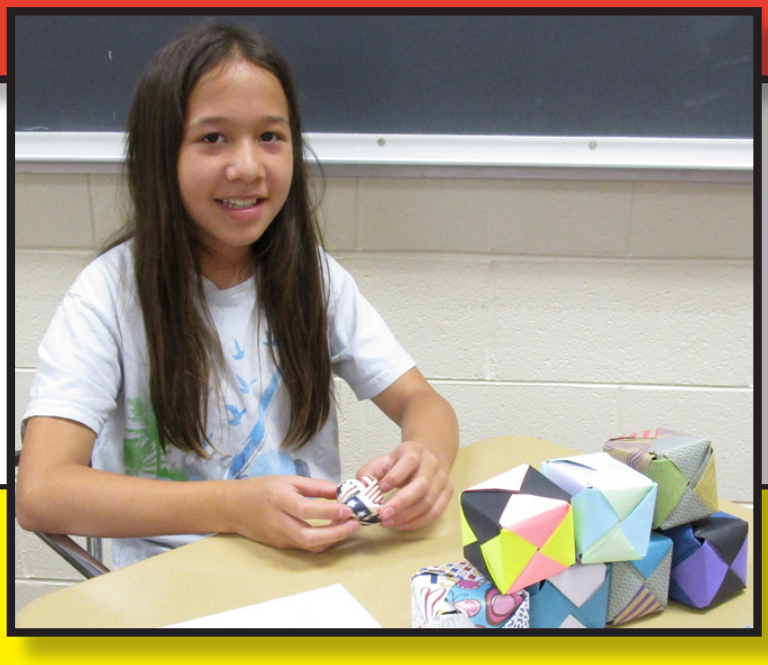
Coding with Scratch (3-6)
Coding with Scratch without Boys (3-6)
Create Lego Stop Motion Movies (K-4)
Dream Big! Where Creativity and Innovation Meet!
Harry Potter Explains U.S. Law (3-6)
Homemade Musical Instruments (PK-K)
Improv and Theater Games (1-6)
Math Unfolded (4-6)
Motionscape (K-2)
Quiz Bowl Junior (3-6)
Race to the Moon 2024 (2-6)
Readers Theater (3-6)
Science Fiction Writing (3-6)
Science, Nature and Wonderment (PK-K)
Superhero Science (4-6)
Superhero-Ology (K-3)
The Art of Math (K-4)
The Building, Blending, Sizing, Changing Ways of Art: (3-6)
Your Art, Your Way (K-3)

Session III: July 20-24

All About the Farm (PK-K)
Art is Simply Fun (K-3)
Blender 3D Simulations (3-6)
Creative Writing (3-6)
Design Studio (K-4)
Drama and the Monologue (3-6)
K'Nex Explorations (K-3)
K'Nex Explorations without boys (K-3)
Lego WeDo Robotics (K-4)
Math Mania (2-6)
Theater Club (K-6)
Slime, Flubber, and Other Fun Polymers (K-6)
Soaking Up Science (PK-K)
The Mathematics of Wordplay (4-6)
The Physics of Flight (3-6)
Westward Movement! Gold Rush and Wagon Trains (2-6)
Word Cloud Art (3-6)

Session IV: July 27-31

Best by Test (3-8))
Crime and Puzzlement (3-6)
Dry Ice Explorations (K-3)
Dry Ice Science (4-6)
Forces and Motion (3-6)
Junior Inventors (K-3)
Let's Build a City (K-4)
Mad Scientists Loose in the Kitchen! (PK-K)
Magnificent Measurements (K-2)
Makey Makey (3-6)
Mathematical Patterns (3-6)
Musical Theater (K-6)
Puzzles, Puzzles, Puzzles (3-6)
Readers Theater (3-6)
School for Spies (K-4)
Simple Machines (K-3)
String is the Thing (3-6)
The 3 R's and Creativity: The Art of Repurposing (PK-K)
The Art of Science (3-6)
The Science of Star Wars (3-6)
Twisted Thruway (3-6)



Location
Laura B. Sprague School
2425 Riverwoods Road
Lincolnshire

Hours
Full Day: 9:00-3:00
Morning: 9:00-11:40
Afternoon: 12:20-3:00
Extended Care: 7:30-9:00 and 3:00-6:00

Tuition

Per Session
Full Day: $440
Half Day: $220

Fees
Non-refundable application fee: $10
Morning extended care: $15 per day
Afternoon extended care: $10 per hour
Lab fees as indicated in course descriptions

See “Details” link on our website (upper left margin, under “Summer downloads for parents”) for more information, including eligibility, program format, application, placement, refunds, lunches, etc.

Please feel free to contact us anytime with questions, at: www.centerforgifted.org, or 847-901-0173. We’re always happy to hear from you.

Program Structure and Course Descriptions

Students select their favorite courses from the offerings below. All courses are offered both mornings and afternoons. Each half day, students in courses offered to grades within K-6 enjoy two 80-minute classes, while courses for "PK-K" offer a 160-minute interdisciplinary classroom experience. Note that, for courses that span several grade levels, students are placed in classes with their age peers.

3D Math: Explore math in the third dimension! From cubes to dodecahedra, challenge and develop your spatial sense and imagination as you build a variety of 3-D figures. (1-4)

All About the Farm: Imagine that you lived on a farm raising cows, horses, sheep, or llamas, or growing corn, soy beans, or apples. Experience life on different kinds of farms through stories, music, and science. (PK-K)

Amusement Park Physics: Why do you get the "butterfly" sensation when a roller coaster plunges you downward? It's all in the way Newton's Laws of Motion collide with your adrenaline. Physics plays an essential role in the exhilarating rides at amusement parks. How do they slow down? What happens when rides get stuck? Discover how inertia, kinetic and potential energy, mass, and centripetal and centrifugal forces influence your carnival experiences. Experiment with time, distance, and speed. Design and build your own ride to discover the feats you can accomplish by strategically employing the laws of physics. (3-6)

Art is Simply Fun: Create projects using different media, methods, and muses, such as clay, paint, paper-mâché, etc. (K-3)

Blender 3D Simulations: Blender is a powerful 3D computer graphics software toolset used to create animated films, physics simulations, video games and much more. With it, you can create an impossible scene by controlling and animating physics; quickly build a tower just to knock it down, and watch how it falls from any angle; pour water into a glass cup and get the perfect, photo-realistic picture as it splashes out; write your name in big 3D letters, then hit it with a wrecking ball, smashing it into a million pieces. Computer creativity and imagination are all you need to produce endless animated possibilities. (3-6)

Best by Test: The Science Behind Consumer Reports: Come explore the scientific world of consumer products. Employ the scientific method to do quantitative and qualitative analyses of some of your favorite consumer products, like popcorn, sports drinks, bubble gum, and orange juice. Is it all about the taste? Or are nutrition and cost the secrets to success? (3-8))

Bringing Out the Goodness: Use paints, oil pastels, colored pencils, ink, markers, and more to ease the flow of your creative juices. Explore drawing, painting, and stamping techniques to facilitate the free expression of your ideas. (K-3)

Boom, Bang, Fizz! Work through a range of scientific challenges to create cool, colorful, chemical reactions. Prepare for your curiosity and creativity to be ignited! (K-3)

Bugs and Other Creepy Crawlies: How many legs does a millipede actually have? What's going on inside a butterfly's chrysalis? Don't let little things bug you; learn about them, instead! Discover fun facts about your favorite insects and arachnids, observe them in their natural habitats, and teach your friends and family about the myriad creatures living right under your feet. (K-3)

Checkmate: Explore exciting strategies, sneaky openings, and skillful end games. Incorporate them into your own chess game and watch your skills and confidence improve. (K-6)

Chemistry of the World: Experiment with solutions, suspensions, acids, and bases as you travel the world exploring chemistry. (4-6)

Coding with Scratch: Learn the basics of coding with Scratch, a free and easy-to-use coding language developed at MIT. Assemble lines of code and work toward creating your own projects. (A free Scratch account is required; we will register accounts on the first day. Visit scratch.mit.edu for more information.) ($10 lab fee) (3-6)

Coding with Scratch Without Boys: Exactly the same as Coding with Scratch (above), but with no boys allowed. ($10 lab fee) (3-6)

Computer Lab: What interests you the most? Coding? Stop motion? Drawing? Photo editing? Explore and develop your e-passion in this student-centered class. ($10 lab fee) (3-6)

Computer Lab Without Boys: Exactly like Computer Lab (above), but with no boys allowed. ($10 lab fee) (3-6)

Create Lego Stop-Motion Movies: Using a digital camera, movie software, and Legos, create your own movies! Experiment with special effects, sound, and titles. Share your movies with family and friends. ($15 lab fee) (K-4)

Creative Writing: Do you like to originate literary ideas, create characters, design plots, and express yourself through writing stories and poems? Using various catalysts, such as posters, paintings, books, music, and class discussions to inspire you, share your creativity through writing—in whichever genres suit your style. (3-6)

Crime and Puzzlement: Unravel mysteries! Employ your powers of deduction to gather evidence and clues. Will you convince your peers of your conclusions, or will the perplexities remain forever unsolved? (3-6)

Design Studio: Identify a problem, then brainstorm, design, test and evaluate solutions. Did your design solve the problem? What changes can improve your design? When engineers solve problems, their first solutions are rarely their best. They try different ideas, learn from their own as well as others' mistakes, and try again. Discover how it works for you! (K-4)

Drama and the Monologue: You CAN love monologues! Discover how to use your voice and body to create a character in a monologue, to be funny, sad, dramatic, or bad. Have fun playing theater games with your classmates. (3-6)

Dream Big! Where Creativity and Innovation Meet! Are you inventive? Do you have your own ideas that you would like to try? Come flex your building and engineering skills to create new designs of your own making. (3-6)

Dry Ice Explorations: Explore for yourselves hands-on (generally speaking) this bubbly, smelly, steamy, versatile and ultimate symbol of fun science! (K-3)

Dry Ice Science: When science (especially chemistry) is depicted in movies or on TV, we almost always see dry ice bubbling away in a colorful liquid. Delve into this wonderfully useful substance and discover for yourself its many principles and uses! (4-6)

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Escher Illusions and Tricks of the Eye: Create an Escher inspired metamorphosis composition. Learn how to create the illusion of never-ending stairs. Draw circles that look three-dimensional. Draw, paint, sculpt, or build optical illusions of your own design to trick your friends or even fool your parents. (3-6)

Fables, Fairy Tales, and Folklore! The Origins of Storytelling: Who wrote the original Cinderella? Was Count Dracula based on a real person? Dive deep into fables, fairy tales, and folklore that span cultures, and shine the light of reality on the origins of some of the most popular. (K-4)

Forces and Motion: Newton's second law of motion states that a force; acting on an object; will change its velocity by changing either its speed, direction, or both; for example, when your basketball rolls into the street and is hit by a bike. Investigate and experiment to discover and explain the motion of physical objects and systems. (3-6)

Harry Potter Explains U.S. Law: With a lawyer as your instructor, explore U.S. laws metaphorically, allegorically and actually, through comparisons with the Harry Potter books. Costumes may be worn, if desired. (3-6)

Homemade Musical Instruments: Instead of buying instruments at the store, how about inventing and assembling your own instruments to make music? Enjoy five musical days of discovery, ingenuity, creative expression, and performance. (PK-K)

Improv and Theater Games: Do you like to think on your feet? Try acting through improvisation. Explore the fundamentals of improvisation—the basic tools, rules, and philosophy—through theater games, drills, and simple scenes. Have a great time improvising with your classmates in a supportive and noncompetitive atmosphere. (1-6)

Junior Inventors: Got any ideas for new inventions? Bring them to life! Investigate great inventors from the past, like Galileo or the Wright brothers. Prepare your own innovations to present at your class' Invention Convention. Who wants to be the next Tony Stark? Ready, set, invent! ($15 lab fee) (K-3)

K'Nex Explorations: Using the fun K'Nex toy system of colorful rods and connectors, join other young explorers like you, and play to discover! Build models of levers, wheels and axles, fixed pulleys, movable pulleys, inclined planes, bridges, and much more! (K-3)

K'Nex Explorations Without Boys: Exactly like K'Nex Explorations (above), only with no boys allowed. (K-3)

Lego WeDo Robotics: Select your favorite robot, such as an alligator, goalie, or airplane. Follow its building plans to bring it into shape using Legos, motors, gears and sensors. Connect to a laptop to program your robots' actions and sounds. ($15 lab fee) (K-4)

Let's Build a City: What would your ideal city look like? Map out your city and create a model. Design parks, shopping districts, skyscrapers, and more. How about a zoo? You're in charge! (K-4)

Mad Scientists Loose in the Kitchen! Discover the amazing chemical phenomena happening in your pantries and refrigerators all the time, even while you sleep. Explore sundry science through hands-on experiments. (PK-K)

Magnificent Measurements: Experiment with balance scales and spring scales, graduated cylinders and measuring cups. Discover the math, science, and fun of exploring weights and measurements of the various and sundry objects in your environment. (K-2)

Makey Makey: Create game controllers, instruments and other fun projects using Scratch and Makey Makey boards, with cardboard, wire and other household materials. (A free Scratch account is required; we will register accounts on the first day. Visit scratch.mit.edu and makeymakey.com for more information.) ($15 lab fee) (3-6)

Questions?

Call 847.901.0173

Math Mania: Tackle logic puzzles, ponder math riddles, solve sequencing secrets, create your own number tricks, and baffle your peers. (2-6)

Math Unfolded: Start with a piece of flat paper, make a few (or more) folds, and suddenly you have a landscape of mountains and valleys, shadows and light! Learn how to persuade paper to embody the beauty of mathematics as you unfold the wonders of origami. (4-6)

Mathematical Patterns: Discover patterns in ordinary things, as well as in art and nature, and use mathematical concepts to describe them. See what designs and products you can create using patterns. (3-6)

Motionscape! Physics Through Motion: Explore the relationships among position, velocity, and acceleration, through movement. (K-2)

Musical Theater: Do you like to sing and dance? Ever dream of making it onto the stage? Here is your opportunity! Rehearse with your peers for a live performance on the final day. (K-6)

Nurture Nature and Investigate Science: What can we find outside in nature to create things inside that are naturally beautiful? How is science part of our everyday lives? Bring your curiosity and your questions. (PK-K)

Puzzles, Puzzles, Puzzles: Are you intrigued by puzzles? Test your brain in general, critical thinking skills in particular, and patience, by tackling puzzles of all types, from logic puzzles, brain teasers, and jigsaw puzzles; to math puzzles, ciphers, and cryptic codes. (3-6)

Quiz Bowl Junior: Do you like trivia or game shows like Jeopardy, or Who Wants to be a Millionaire? Whether you are on a Scholastic Bowl team or just like to have fun, join our group to grow your treasury of common and uncommon knowledge. (3-6)

Race to the Moon 2024: Why go to our moon again? What do we hope to gain? What improvements have been made to rockets, orbiters, and moon landing designs since the first landing? What is NASA's Orion MPCV? What are the best sites for the moon landing? (2-6)
Readers Theater: A unique opportunity for readers, writers, and/or actors. Have great fun doing a play, and not having to memorize anything. Most literature breathes new life when read aloud, but when vocal expression—even of the movement, costumes, narration, and settings—is the only means for the audience to understand the story, the quality of drama coming forth from the stage is singular and wonderful. (3-6)

School for Spies: Investigate the intrigue and espionage of the secret world of spies. Discover how realistic 007's spy gadgets have become over time, how to crack codes, snoop out and identify clues, and solve a mystery. Uncover undercover spies and how they hide their identities, then try disguising your own. Explore the amazing ways spies have operated throughout history. (K-4)

Science Fiction Writing: Analyze what makes a story science fiction. Explore some of the best science fiction classics for inspiration. What makes them so great? Become a science fiction author, yourself. (3-6)

Science, Nature and Wonderment: Experiment with chemical concoctions that pop, crackle, ooze, or squish. Explore different habitats and the wonder of nature all around you. (PK-K)

Science, or Magic? Explore tricky science as you experiment with secret potions, disappearing ingredients, inexplicable reactions, objects and acts that defy the laws of gravity, and much more. (K-6)

Simple Machines: Simple machines are devices with few or no moving parts that make work easier. Learn about the six types of simple machines (wedge, wheel and axle, lever, inclined plane, screw, and pulley) in the context of your construction of a pyramid, gaining high-level insights into tools that were in use in ancient times and are still in use today. (K-3)

Slime, Flubber, and Other Fun Polymers: Experiment with different recipes for slime. Create other slippery, stretchy polymers in the slime family. Explore the properties of polymers. How far can you stretch it? How thin can it become? What makes it hold together? Play with your peers as you ponder the perplexities of your polymers. (K-6)

Soaking Up Science: Swish, squish, and splash as you experiment with everyday items to discover and understand the science and nature. (PK-K)

Solution Set (How to Solve Mathematical Puzzles): Puzzle-solving is an acquired skill; a bit of experience and a few tips can go a long way. Can you know, just by looking at a puzzle, the process or strategy you will use to solve it? Decipher and solve various kinds of puzzles, and create some of our own to puzzle your peers. (3-6)

Stories and Art: The Caldecott Winners: What makes a book a Caldecott winner? How does the art express the story? How does the story inspire the art? What do you think of Caldecott stories and illustrations? Investigate artistic styles found in the superbly illustrated winners of the Caldecott Medal, and let them inspire you to create illustrations of your own. (PK-K)

String is the Thing: From art to science and everything in between, string serves hundreds of useful purposes. String comes in various thickness, plies, materials, colors, lengths and strengths. What can you create with it, and what can your creation do? (3-6)

Superhero Science: The Avengers, DC and Marvel heroes have battled to save Earth from countless villains, human and alien. They do this, of course, with the help of superpowers, such as Iron Man's suit, super-healing powers, Captain America's indestructible shield, super speed, and many others, plus innovative technology. How scientifically sound are these powers? Do any of them hold up under the laws of chemistry and physics? Could Ultron be accidentally created in real life? Search for the science behind these supernatural abilities and technologies and discover how engineers are replicating these today. (4-6)

Superhero-Ology: Explore the superpowers of real people and animals. Unmask how science and technology have given us the power of flight. Create your own secret identity, probe the science of invisibility and acquire x-ray vision. Discover your superpowers and of course use them to stop crime and save the world. (K-3)

The Olympics! Its 2020 and time for the Olympics. Explore the history of the Olympics. Participate in the Summer Wonders Olympics. What country will you represent? Be prepared for physical, mental and strategy competitions. Get in the running for the Gold. Discover the joy of playing the game--medal or not. (2-6)

The 3 R's and Creativity: Discover the art and science of repurposing: How can we use stuff again instead of throwing it out? How can we re-purpose it in a fresh, new, innovative way? Reduce, reuse, recycle, and create, build, and imagine with things we have or use every day. (PK-K)

The Art of Math: Explore geometric patterns and puzzles; create, construct, and experiment with stuff like paper, string, straws, toothpicks and marshmallows. (K-4)

The Art of Science: Calling all whimsical scientists to create artistic masterpieces! Create imaginative works of art while exploring fascinating scientific concepts and investigating topics such as gravity, density, cohesion, centrifuge and viscosity. This is the perfect excuse to get messy and create something unique. Grab your lab coat or smock, and join us! (3-6)

The Building, Blending, Sizing, Changing Ways of Art: Build structures using straws, craft sticks and cotton swabs to display strength in construction. Explore blending of paint colors, blending of objects that create sound, and blending of materials that make art move. The use of sizing helps artists see their world in a variety of ways; they can magnify items to create larger-than-life pictures or shrink them to miniatures. Grids can be used to take a drawing and increase it to mural size. Discover how metamorphosis in nature has influenced how artists display change in their works and styles. (3-6)

The Mathematics of Wordplay: Ambigrams are words that can be read correctly when viewed from different directions, perspectives, or orientations. Word lovers and puzzle enthusiasts solve crossword puzzles every day, but how much does math underly the process of constructing a crossword puzzle? Even wordplay jokes are mathematical, and also very punny. Come join us on the fun side of math! (4-6)

The Physics of Flight: How and why do things fly? Investigate insects, birds, even mammals that fly; frisbees, balls, flarbles, modern planes, rockets and helicopters. Experiment hands-on with the principles of these flying wonders. What have humans borrowed from nature in creating things that fly? Can you create one, too? (3-6)

The Science of Star Wars: Learn from many of the technical secrets and principles behind, for example, invisible cloaking, light sabers (build one!), tractor beams, light speed, ships (like Millenium Falcon), droids, fusion, lasers, weightlessness (zero gravity), then try reconstructing them. Simulate beaming someone or something to a planet. Investigate how many of these ideas are currently being researched in the real world. (3-6)

Theater Club: Experience the exhilarating world of live theater! Develop characters as you play theater games and rehearse scenes, culminating in a live performance for family and friends on the last day. (K-6)

Twisted Thruway: Explore the wonder and perfection of the Mobius strip, the trefoil knot and other mathematical curiosities that are fundamental to the study of different branches of mathematics (3-6)

Westward Movement! Gold Rush and Wagon Trains: What was it like to travel the American West in covered wagons banded together? Or to be part of the Gold Rush? Why did the settlers go West? What challenges did they face? How did “iron dragons” transform travel? (2-6)

Word Cloud Art: Creativity is required! Design amazing and unique word clouds--visual representations of text data used to visualize free form text. Create beautiful graphic designs while customizing words, shapes, and fonts. ($10 lab fee) (3-6)

Your Art, Your Way: Why do people paint,? draw? sculpt? Try your hand at evoking ideas and feelings through art. Anything can be a catalyst! What will you create? What materials will you use? What methods will best serve your ideas? (K-3)

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