



TMSC Summer of STEM Adventures 2026

Week 1: June 22 - June 26

(K-2) Girls Rock! Have you dreamed of being a scientist? Fun and engaging activities focus on discovery skills and hands-on experiences - from rock IDs to biology labs to chemistry experiments. Highlights from all areas of STEAM are designed to build confidence and show that girls rock!

(K-2) Robotics: SPIKE Prime: If you love robotics, this is the program for you! Assemble and program LEGO® SPIKE robots to tackle a variety of contests and challenges. Teamwork, perseverance, and programming skills will all be put to the test.

(3-5) Paleontology: Become a time traveler as we learn about the history of the Earth! Identify fossils, study how volcanoes formed, and explore the asteroid impact that killed the dinosaurs. Includes a field trip to Dinosaur State Park to see real dinosaur footprints! (\$50 field trip fee included in tuition)

(3-5) MicroSafari: Want to learn more about the little critters that run the world? Join us for a "microsaferi" to get hands-on experience with insects, crustaceans, reptiles, plants, and more! You will do plenty of fun crafty projects, explore the miniature world of pond water, and learn to safely handle our unusual class pets. You'll get to search the outdoors to find creatures, and examine them back in the lab.

(3-5) STEM in Motion: Get ready to strengthen your mind and muscles in this class! Movement lessons and activities will be paired with STEM concepts to give everyone a challenge - and a workout. You'll test your heart rate, create a larger-than-life circulatory system obstacle course, and even play some math tag! Don't miss this opportunity to make your body and brain stronger while participating in a wide variety of physical education lessons.

(3-5) Geocaching: Treasure Hunt: Geocaching is high-tech hide-and-seek, a modern scavenger hunt. There are hidden treasures waiting to be found in mountains, forests, cities, and parks near you! Around the world, teams have hidden "caches" of items, and it is your job to find them. Learn GPS, create your own caches, and find caches on our campus. Includes a field trip to a nearby park to test your searching skills! (\$50 field trip fee included in tuition).

(6-8) Anatomy and Physiology: If you want to know how our bodies work, this course is for you! Learn about bones, muscles, and cells - of humans and other creatures. You'll get to test your strength, listen to your heart, and explore skeletons. It doesn't get more hands-on than building models and doing dissections! Includes a field trip to the UConn Health Center in Farmington (\$50 field trip fee included in tuition).

(6-8) App Design Lab: Step into the world of app creators and turn ideas into real, working mobile apps! In this fast-paced, hands-on week, students become digital inventors as they design, build, and customize apps that can live right on their own devices. Using an intuitive coding platform, they bring features to life; buttons that react, screens that change, sounds that play, and data that responds to user input. Along the way, students will learn the fundamentals of user-centered design: what makes an app useful, clear, fun, and safe. They experiment, test, problem-solve, and refine their creations before sharing a favorite app in a final showcase. It's a dynamic blend of creativity, coding, design, and innovation; all in your pocket.

Week 2: July 6 - July 10

(K-2) LEGO® Science: From cars to catapults, from motors to robots, you can explore science and technology with LEGO®. Bring your creativity as you compete in challenges to create bridges, towers, and other contraptions. There is a world of possibilities when using LEGO® bricks!

(K-2) Crazy about Cats: Join us for a purrfectly fun program, all about our feline friends! Discover the science of cats, including their anatomy and unique abilities. Travel through time to learn about the history of cats, domestication, and their role in mythology. Unleash your creativity in cat-themed art projects. Create toys and collect food to donate to a local cat rescue! We're not kitten around, you'll have a pawsome time!



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(3-5) Magic of STEM Calling all witches and wizards: Come explore the science, technology, engineering, and mathematics of the magical world! We'll study plants, potions, animals, numbers, and more, and even see if we can turn things invisible. It's sure to be a spellbinding time!

(3-5) Natural Disasters: Put yourself (safely!) in a hair-raising lightning storm! Set off simulated volcanoes, earthquakes, and tornadoes. Learn about some of Earth's wildest natural disasters and place yourself right in the action with our green screen!

(3-5) 3D Printing: 3D printers have opened up a world of do-it-yourself design and manufacturing, from game pieces to prosthetics. Using CAD programs and our suite of Prusa printers, you'll be able to design and print your very own gadgets and 3D models to take home!

(3-5) Claymation: Create animated stop-motion stories with your own clay creations. You'll work independently or in a team to write a story, set up a stage, move your characters, and create an original video of their adventures!

(6-8) Arduino Engineering: Want to get under the hood of today's electronics? Build circuits that can be used to power gadgets, games, and robots? You'll create cool stuff using an Arduino project board, LEDs, sensors, and motors (\$50 fee for the SparkFun Arduino Tinkerkit included in tuition, which you will take home!)

(6-8) DNA Detectives: Learn about what makes you, YOU! Featuring DNA themed crafts and games, DNA extraction, transcription/translation, Punnett squares, and even use our very own PCR and Gel Electrophoresis equipment to solve a "who-done-it" genetic mystery.

Week 3: July 13 - July 17

(K-2) Astro Adventures: Discover our solar system! Craft a constellation, eat a comet, and learn about space in our very own planetarium. The sun, moon, and planets wait to be explored!

(K-2) Claymation: Create animated stop-motion stories with your own clay creations. You'll work independently or in a team to write a story, set up a stage, move your characters, and create an original video of their adventures!

(3-5) Marine Science: From coral reefs to the deep sea to nearby Long Island Sound - there is so much of the ocean to explore! You will learn about geology, watersheds, tides, sea monsters, shells, and even dissect some squid. Includes a field trip to Hammonasset Beach State Park for a visit to Meig's Point Nature Center, ocean observations, and catch-and-release of some cool creatures! (\$50 field trip fee included in tuition)

(3-5) Robotics: SPIKE Prime: If you love robotics, this is the program for you! Assemble and program LEGO® SPIKE robots to tackle a variety of contests and challenges. Teamwork, perseverance, and programming skills will all be put to the test.

(3-5) Science of Sports: Ever wonder how pitchers make balls curve, knuckle or drop? Why and how basketball players put back spin on their shots? How do kayakers do a back deck roll? How do athletes build muscle and maintain their strength? We will explore these mysteries and many more - with hands-on attempts to answer the questions!

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(6-8) Raspberry Pi: It's not dessert - learn how to assemble and program your very own RaspberryPi computer! It runs RaspberryPi OS and can connect to a keyboard, mouse, monitor, or TV. Experiment with Java, Wolfram Mathematica, GIMP graphics, and Minecraft! Please bring your own microSD card (\$50 fee for the RaspberryPi 2GB single-board computer included in tuition, which you will take home!)

Week 4: July 20 - July 24

(K-2) Kitchen Chemistry: There's plenty of cool chemistry you can do with everyday materials from home - and we'll show you how! You'll experiment with acids and bases, make chemical reactions, and create colorful works of art - all with things right off the kitchen shelf!

(K-2) Kid Coding: Everyone can learn to code, even you! Using iPads, you'll get to make your own games and graphics, tackle challenges, and use your imagination. Coding is fun for everyone!

(3-5) Computer Animation: Through hands-on paper crafts and digital lessons, learn the fundamentals of animation, and discover how to bring your imagination to life! Our animated adventure will include guided drawing lessons, classic cel animation, stop-motion, and 2D computer animation.

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(3-5) Green Engineering: How can the wind power your house? How can we harness the energy of water? Can you cook with sunshine? Switch on to wind, water, and solar energy! Switch on to wind, water, and solar energy and learn how to tap into nature for power!

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(6-8) Reach for the Stars: Explore the wonders of the solar system and beyond! Journey through the cosmos in our planetarium, see the sun like never before, and fit the moon in your pocket. From crafting constellations to lunar landings, anything is possible when you reach for the stars. Students will create and perform the weekly planetarium show for the entire summer program! Includes a family voucher for a fall skygazing event using our telescopes.

Week 5: July 27 - July 31

(K-2) Robotics: SPIKE Prime: If you love robotics, this is the program for you! Assemble and program LEGO® SPIKE robots to tackle a variety of contests and challenges. Teamwork, perseverance, and programming skills will all be put to the test.

(K-2) Eco Explorers: Amazing plants and animals are everywhere - and it's your job to find them! Discover life around us as you explore our mountaintop ecosystem. You'll get to catch bugs, hike in the



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woods, and identify plants. Pond water, plant life cycles, class pets, and crafty projects are waiting for you!

(K-2) Pirate Science: Set sail on a science-filled adventure! All aspiring buccaneers are welcome during this week of ocean-themed fun. Build boats, make maps, design your own pirate hat, and hunt for buried "treasure". Arrrrrr you ready for an exciting week?

(3-5) Creative Coding: Learn to code with fun programming apps that let you create graphics, solve problems, and use your imagination! All apps used are open-source or freeware that you can use after the program.

(3-5) LEGO® Engineering: LEGO® bricks aren't just for play! Use them to explore simple machines and gear systems. Design, build, and test structures like dams and water wheels. Create your own candy dispenser. Wait until you see what all you can do with these little plastic bricks!

(3-5) Claymation: Create animated stop-motion stories with your own clay creations. You'll work independently or in a team to write a story, set up a stage, move your characters, and create an original video of their adventures!

(6-8) Marine Science: From coral reefs to the deep sea to nearby Long Island Sound - there is so much of the ocean to explore! You will learn about geology, watersheds, tides, sea monsters, shells, and even dissect some squid. Includes a field trip to Hammonasset Beach State Park for a visit to Meig's Point Nature Center, ocean observations, and catch-and-release of some cool creatures! (\$50 field trip fee included in tuition)

(6-8) Electromagnetism: Learn to harness the invisible forces all around us! Get struck by "lightning" with a Van de Graaff generator, create gravity-defying magnetic illusions, play with fire, bend light, and uncover the fundamental laws that govern our universe. This hands-on program brings physics to life through unforgettable experiments and demonstrations.

Week 6: August 3 - August 7

(K-2) Dinosaurs!: Join us for a dino-mite week of discovery as we journey back in time to the world of dinosaurs! Become a paleontologist and dig for fossils, recreate dinosaur skeletons, and learn what life was like millions of years ago. Includes a field trip to Dinosaur State Park to see real dinosaur footprints! (\$50 field trip fee included in tuition)

(K-2) Future Engineers: Are you an inventor at heart? Do you like to face challenges and solve problems? You will get to build cool stuff, compete in design contests, and create your own new inventions. You're on your way to becoming an engineer!

(3-5) Cool Contraptions: Engineering, problem solving, and creativity - all in one! Build chain-reaction contraptions to perform tasks, using a wide variety of supplies. You will get to tinker, create, and collaborate - and learn some physics and engineering along the way.

(3-5) Wild and Crafty: Discover your creative talents using materials found in nature. Experiment with natural dyes, plants, shells, and more! Create fairy houses with nature's colors and textures. What you make is yours to keep!

(3-5) Game Design: Explore the world of computer games by building your own! Work on several platforms and game tools to create original characters, stories, and worlds. You'll end up with your own game to play and share with your friends!

(3-5) Science Takes Flight: What goes up must come down - eventually! Learn about how things stay aloft, both natural and manmade. See how birds and insects have inspired modern designs of airplanes,



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rockets, and other flight vehicles. You will get to design, build, and launch your own rockets! Includes a half-day field trip to a nearby park for rocket launches (\$30 field trip fee included in tuition).

(6-8) Computer Animation: Through hands-on paper crafts and digital lessons, learn the fundamentals of animation, and discover how to bring your imagination to life! Our animated adventure will include guided drawing lessons, classic cel animation, stop-motion, and 2D computer animation.

(6-8) Robotics: SPIKE Prime: If you love robotics, this is the program for you! Assemble and program LEGO® SPIKE robots to tackle a variety of contests and challenges. Teamwork, perseverance, and programming skills will all be put to the test.

Week 7: August 10 - August 14

(K-2) Earth Explorers: You live on Earth, but how much do you really know about it? Here's your chance to explore the world from our mountaintop. Learn about water cycles, rocks and minerals, fossils, the sky, and weather. You'll get to crack a geode, perform in front of a green screen, make fossil imprints, and so much more!

(K-2) Physics is Fun! The way things look, move, and sound - are all due to physics! Experiment with motion, rockets, roller coasters, light, rainbows, and sound waves. Every action has a reaction, and every week of physics is fun!

(3-5) Robotics: SPIKE Prime: If you love robotics, this is the program for you! Assemble and program LEGO® SPIKE robots to tackle a variety of contests and challenges. Teamwork, perseverance, and programming skills will all be put to the test.

(3-5) Cool Contraptions: Engineering, problem solving, and creativity - all in one! Build chain-reaction contraptions to perform tasks, using a wide variety of supplies. You will get to tinker, create, and collaborate - and learn some physics and engineering along the way.

(6-8) AI: Friend or Foe?: Dive into the fascinating world of artificial intelligence! Through hands-on activities, engaging discussions, and creative projects, students will explore how AI works, its role in our daily lives, and the ethical questions it raises. From coding simple AI programs to debating its potential benefits and challenges, you will develop critical thinking and tech skills while imagining the future of AI. Join us to uncover whether AI is a friend, a foe, or something in between!

(6-8) Nature Collecting: Learn how to find and catalogue nature like a real scientist! Using museum standards, you'll spend the week creating an herbarium collection and an insect collection. On our mountaintop campus you will find plants and insects - and back in the lab you'll identify, preserve, and label them. Includes a field trip to the UConn Biodiversity Research Collections and Greenhouses (\$50 field trip fee included in tuition).

(1-3 and 4-6) Camp Invention - Spark! This year's exciting new program inspires curiosity and helps kids build essential STEM skills through collaboration with friends and one-of-a-kind creative problem-solving experiences. Students explore hands-on challenges and open-ended adventures designed to encourage new discoveries and bring big ideas to life! This year's theme, Spark, involves solving super mysteries, robotic capybaras, space lab rovers, and aquatic design challenges. See the Camp Invention website for videos and more details about what's in store!

<https://www.invent.org/programs/camp-invention>