

Challenge Camp



A Summer of Fun and Learning, too!

This is our Challenge Camp class schedule for Summer 2025. The schedule is subject to change for compliance with State and County Health Department guidelines.

- 1) **A full day of camp consists of 5 classes and is from 9am – 4pm.** Morning Workshops are 90 minutes (9:00 and 10:30), and Afternoon Classes 60 minutes (1:00, 2:00 & 3:00) are a mixture of sports and enrichment options as campers are encouraged to challenge both their minds and bodies.
- 2) We use camper's **CURRENT GRADE as of September 2024** for class selection.
- 3) There are over 140 STEM & Arts Enrichment Options for you to customize a schedule based on your child's interests. Everything at Challenge Camp is elective, your camper takes the classes you select for the entire 4 week or 3 week session.
- 4) Certain courses may have a materials fee listed. These are typically for class kits or materials used in camper projects.
- 5) If you need assistance or have any questions, please email info@challengecamps.com or call the camp office on 914-779-6024.

Challenge Camp – Summer 2025

1) Science Magic **Session 1** **9:00** **Grades K-1**
Instructor: Michael Donovan **10:30** **Grades 2-3**

Get ready for a wondrous experience as we discover the magic of science through amazing hands-on experiments! Explore scientific principles as we create a fire tornado, put an egg inside a jar without touching it, make a candle suck up water, create glow-in-the-dark slime, make elephant toothpaste, explode a watermelon with rubber bands and more! Little scientists will learn how to think creatively, problem solve and draw conclusions independently through magical experiments they can touch, see, and feel.

2) How Things Work **Session 2** **9:00** **Grades K-1**
Instructor: Michael Donovan **10:30** **Grades 2-3**

We all wonder how important inventions and objects all around us seem to work. Join us as young inventors and curious thinkers explore the secrets behind everyday engineering! What are the mechanisms involved in a combination lock or a bicycle? Why does a magnet attract and how is a battery like your very own micro power plant? How does a piano, zipper, and all of that sunscreen that our parents make us wear actually work? Campers will be introduced to concepts like force, motion, energy, and mechanics in a way that's practical and fun. We'll even play "Junk in the Box", where your goal is to create an engineering marvel out of your team's box of random materials. You will test, experiment, innovate, invent and present to the class exactly how your invention "works."

3) Curious Creators **Session 1** **9:00** **Grades 2-3**
Instructor: Tamara Vazquez **10:30** **Grades K-1**

Get ready to build, create, and explore! This hands-on class combines the best of art and engineering, giving campers the opportunity to bring their wildest ideas to life. Campers will explore landscape architecture models and create models of their favorite places in the world including the study of various buildings including gardens, pond, town square and playground. Explore simple mechanics by creating moving parts and gadgets to build bridges, towers, and other exciting structures using recycled materials. Practice teamwork and critical thinking to solve fun engineering challenges. This class is perfect for young inventors and artists who want to create something extraordinary.

4) Art of Science **Session 2** **9:00** **Grades 2-3**
Instructor: Tamara Vazquez **10:30** **Grades K-1**

Calling mad scientists to create artistic masterpieces! Campers will have great fun creating imaginative works of art while exploring fascinating scientific concepts. We will make creations that ooze, fizz, drip, and spin by investigating topics such as gravity, density, cohesion, centrifuge and viscosity. Make nebulae out of glue, grow beautiful crystals, capture rainbows on paper, use flowers to make paint, create your own tie dye with Sharpie markers and more! This class will engage and inspire young artists to develop a lifelong interest in the amazing world of science. Grab your lab coat and your smock and join us!

5) Nature's Palette
Instructor: Shauna Lane

Session 1 9:00 Grades K-1

Discover the beauty of nature through art! This enchanting art class invites young children to explore the beauty of the natural world through hands-on, nature-inspired art projects. Campers will connect with the vibrant colors of the environment while using natural materials and themes to create unique masterpieces.

6) Paint & Create
Instructor: Diana Capasso

Session 1 10:30 Grades K-1

Let your creativity flow with brushes and paint! In this hands-on class, young artists will experiment with colors, shapes, and textures while creating masterpieces they will be proud to share. With step-by-step guidance and self-expression, campers will leave with a smile—and a canvas!

7) Art on the Move
Instructor: Linda Andrews

Session 2 9:00 Grades K-1

This energetic and imaginative class combines art and movement to engage young campers in self-expression and fun. Perfect for active and creative children, each session blends physical activities with hands-on art projects inspired by the joy of movement. We will begin each class with a themed dance such as "Hawaiian Luau" or "Animal Safari" and then create an art piece related to our dance using clay, colored pencils, cut paper and more.

8) Splash of Color
Instructor: Art Staff

Session 2 10:30 Grades K-1

Celebrate summer with art projects inspired by sunshine, swimming, ice cream, and all things summer! Campers will create playful and colorful crafts that capture the joy of the season. Perfect for little hands ready to dive into the world of art and imagination.

8a) Collage Corner
Instructor: Ana Saura

Session 1 9:00 Grades K-2

In this fun and dynamic art class, students will embark on a creative journey to bring their favorite subjects to life using both paint and collage! Whether it's landscapes, portraits, still life, or animals, young artists will start by drawing their own unique designs, then learn the basics of acrylic painting on canvas. From mixing colors to mastering brush techniques, students will explore how to use color, design, and shape to make their artwork pop! Using colorful paper scraps and magazine cut-outs to add exciting collage elements to their painting to create a masterpiece.

9) Dino Detectives
Instructor: Al Pearlman

Session 1 **9:00** **Grades K-2**
10:30 **Grades K-2**

Journey back in time to the age of dinosaurs in this fun and interactive class! Our paleontologists will discover fascinating facts about different dinosaur species, learn how fossils are formed, and explore the world they lived in millions of years ago. Through hands-on activities like fossil digging, dinosaur crafts, and creating their own dino dioramas, campers will ignite their imaginations while building knowledge about these incredible creatures. Perfect for curious minds and dinosaur enthusiasts, this class is a roaring good time!

10) DNAmazing
Instructor: Al Pearlman

Session 2 **9:00** **Grades 2-3**
10:30 **Grades K-1**

Why do you look like your Mom or Dad? Discover your genetic code through exciting hands-on investigation. Your biotech lab will lead you to uncover the blueprints of life. Experiment with a tomato to extract and play with its ooey, gooey DNA. Construct, split and replicate a DNA ladder. Grow germs and make them glow a brilliant florescent green. Create a family tree and see what traits you share. Assemble DNA models out of candy (yum!). Learn how Mendel discovered traits with pea plants. Analyze DNA evidence to solve a crime. Understand the mysteries of these and other fascinating elements of genetics and how DNA is the building block of all of us.

11) LEGO Tech Junior
Instructor: Reuben Bridges

Session 1 & 2 **9:00** **Grades K-2**

Use Legos as the inspiration to construct, investigate and communicate like little Einsteins. This interactive and educational course introduces young minds to basic scientific and engineering principles through the fun of LEGO. Students will use models to predict, observe, measure, and collect data, experiencing forces, motion, energy, mechanisms, and magnetism firsthand. They will develop complex problem-solving skills and understand the interaction between forces and motion, measurement, energy, speed (velocity) and weight (mass). Campers will construct and experiment with models of simple machines - levers, pulleys, and gears, learning how these fundamental mechanisms make our daily lives easier.

* **Lego Fee: \$25**

12) LEGO Tech
Instructor: Reuben Bridges

Session 1 & 2 **10:30** **Grades 2-4**

Are you curious about how things work? Discover the power of engineering with Lego's Simple and Motorized Mechanisms. This course is designed to give campers an understanding of machines, mechanisms, structures, and mechanical advantage. Campers will use LEGO to build dynamic models that showcase how renewable energy sources like wind, water and solar power can be harnessed. We will investigate energy supply, transfer, accumulation, conversion and consumption through activities and building exciting real-life models. Campers will explore scientific principles and engineering concepts by creating motorized LEGO machines, gaining an understanding of how these technologies can lead to a more sustainable future.

* **Lego Fee: \$25**

13) The Illusionist
Instructor: Joseph Fields

Session 1 & 2 10:30 Grades 1-4

Have you ever wanted to make a coin disappear, read someone's mind, make solid objects pass through each other or cause a rope cut in two to magically restore itself? Learn how to do this and much more by joining renowned magician Joseph Fields to uncover magic's biggest secrets, fool your friends and be the life of the party. The delightful art of balloon sculpture will also be taught. Transform yourself into an illusionist with a personalized magic briefcase full of tricks!

*** Magic Fee: \$40**

14) Checkmate
Instructor: Chris O'Keefe

Session 1 & 2 9:00 Grades K-2
Session 1 & 2 10:30 Grades 1-4

Embark on a journey of strategy and critical thinking in the exciting world of chess. Chess enables children to develop and enhance their skills in discipline, concentration, and patience. Campers will learn fundamental opening, middlegame, and endgame strategies and how to achieve a proper coordination of pieces. Through interactive lessons focused on lecture, discussion and practice games, children will develop problem-solving skills, patience, pattern recognition, and sportsmanship. Chess notation will be taught in order to review games. This class is perfect for building a strong foundation in chess, setting the stage for future growth and enjoyment in this classic game of skill and intellect.

15) Konnichiwa – Introduction to Japan
Instructor: Gen Katano

Session 1 9:00 Grades K-2

Embark on an exciting journey to Japan in this interactive class. Through fun activities, games, and hands-on projects, students will learn basic Japanese phrases, numbers, and greetings while exploring the rich and fascinating culture of Japan. We will learn origami, write in calligraphy (kanji) and make mini-Zen gardens as we learn about celebrations, festivals and traditions through stories and crafts.

16) Pixicade Game Maker
Instructor: STEM STAFF

Session 2 9:00 Grades 2-3
10:30 Grades K-1

Have you ever wanted to create your own video game? Do you like to doodle or draw? In this class you will learn how to make your very own video games using Pixicade! All you need to do is draw, then watch your doodles magically come to life as playable games. Campers will learn to use the exciting new Pixicade App and all its editing and Power-Up features! This exciting class will teach campers game mechanics and concepts through STEAM and literacy exploration and mini drawing lessons. At the end of the session campers will have a collection of games they created from the stories, characters, goals, worlds, hazards, and game challenges developed in class.

*** Pixicade Kit Fee: \$30**

17) Willy Wonka **Session 1** **9:00** **Grades 1-4**
Artistic Director: Anne Pasquale **10:30** **Grades 4-9**
Musical Director: Regina Talbot

Enter the whimsical world of Willy Wonka and bring the magic of his chocolate factory to life in this fun and creative theater class. Performers will explore acting, singing, and storytelling as they recreate iconic scenes and characters from *Charlie and the Chocolate Factory*. Through engaging activities, students will learn stage presence, character development, and teamwork while letting their imaginations run wild. The class culminates in a magical performance where the campers share their own "scrumdiddlyumptious" spin on this timeless tale. Perfect for aspiring actors and dreamers alike, this class is a golden ticket to creativity and fun!

*** Script, score, costume and materials fee: \$50**

18) Cinderella **Session 2** **9:00** **Grades 1-4**
Artistic Director: Anne Pasquale **10:30** **Grades 4-9**

Step into the enchanting world of Cinderella as performers bring this classic fairy tale to life. Campers will learn acting, singing, and storytelling skills as they recreate the magic of Cinderella's journey from the ashes to the royal ball. Develop confidence, teamwork, and creativity while playing beloved characters like the Fairy Godmother, the Prince, and the wicked stepsisters. The class concludes with a sparkling performance where the children showcase their talents and charm an audience with their own happily-ever-after story. It's a dream come true for aspiring actors and princesses alike!

*** Script, score, costume and materials fee: \$50**

19) Architecture and Design with 3Dux **Session 1** **9:00** **Grades 2-4**
Instructor: Jason Pritchett **10:30** **Grades K-2**

Join us in this illuminating architecture and design class, where creativity meets construction! Using a 3Dux Design kit created for Challenge Camp, campers will focus on model design, building, problem solving, and spatial thinking to build modern structures with simple machines. You can construct kooky characters, mini bots using basic motors, a tiny house or zoo with pulleys and levers or a sustainable community using wind turbines and solar power. Older campers will learn basic electrical engineering and circuitry concepts as we light up our projects. Designers will unleash their imagination balancing form and function in this building bonanza of imagination. The possibilities are endless!

*** Architecture Kit Fee: \$50**

20) Art Meets Minecraft: Creative Worlds **Session 2** **9:00** **Grades 1-3**
Instructor: Jason Pritchett **10:30** **Grades 1-3**

Step into a world where imagination knows no limits! In this unique class, artists will first explore traditional techniques—drawing, painting, and sculpting—to create vibrant, colorful works inspired by their dreams, favorite places, and big imaginations. The twist is we will then bring those masterpieces to life in Minecraft Education! Transform artistic visions into digital adventures, designing and building their creations in the immersive world of Minecraft. From whimsical castles and enchanted forests to undersea cities and space adventures, every artwork can become a world to explore! Then campers will share their creations, collaborate with friends, and explore one another's unique worlds. This class blends creativity, technology, and fun—empowering campers to see art in an entirely new way!

21) Around the World
Instructor: Rathi Gulati

Session 1 9:00 Grades 2-4
10:30 Grades K-2

Travel around all seven continents in one camp session! The trips are planned, and your tickets have been purchased, but where in the world are you going? Follow the clues on our map to help us get to our destination. You will make your own passport and board a plane to explore each country as you solve the riddles that lead you to them. At each destination you will sample the food, listen to the music, play the games, enjoy the stories, create the art and celebrate the holidays of that country. If you have always wondered about life in faraway lands, then pack your bags as we take a memorable trip around the world!

Passport Fee: \$25

22) Minecraft City Builders
Instructor: Christina Murphy

Session 1 9:00 Grades 1-3
Session 1 & 2 10:30 Grades 1-3

How are cities planned? Who decides what a building looks like and where it should go? What role do parks and other public spaces play in a city? What are the integral components of cities that they need to function? Campers will plan, design and build a city using Minecraft Education edition! Minecraft will be used to enhance creativity, problem-solving, self-direction, and collaboration skills.

23) Little Fashionistas
Instructor: Linda Andrews

Session 1 9:00 Grades 2-4

Welcome to 'Little Fashionistas', a dazzling fashion class where campers can unleash their creativity and style and learn how to sew in the process. In this exciting course, young designers will learn the basics of fashion design, from sketching and color theory to fabric selection and accessory creation. Through hands-on projects and inspiring activities, they will bring their own fashion ideas to life. Cutting and pinning fabric, threading a needle and tying a knot, and learning different sewing skills will result in the creation of their very own accessory pieces. This class encourages creativity and self-expression while giving budding fashionistas a taste of the glamorous world of fashion design.

*** Fashion Fee: \$40**

24) Sew Cool
Instructor: Christel Araujo

Session 2 10:30 Grades 2-4

Discover the joy of sewing and unleash your inner designer. Campers will learn the basics of sewing, including how to thread a needle, make simple stitches, and use patterns to create their own unique projects. We will explore fashion design by choosing fabrics, colors, and styles to bring their ideas to life. From crafting accessories like tote bags and headbands to designing their first piece of clothing, this class is perfect for aspiring fashionistas and creative thinkers. Campers will build confidence, develop new skills, and create wearable works of art that debut at our class fashion show.

*** Fashion Fee: \$30**

25) Photo Finish**Instructor: Liz Steger-Hartzman****Session 1 10:30 Grades 3-9****Session 2 9:00 Grades 3-9**

This exciting class will teach the fundamentals of basic digital photography to capture images throughout the camp or home setting. Campers are required to have a fully charged digital camera or cell phone camera. Each day, Liz will teach you all you need to know to develop your photographic eye. Class time will be spent learning technique, shooting pictures and creating your portfolio for weekly contests. Each camper will receive a personal printed portfolio featuring their outstanding work.

26) Fun with Photoshop**Instructor: Liz Steger-Hartzman****Session 1 9:00 Grades 5-9****Session 2 10:30 Grades 5-9**

Have you ever wondered how funny pictures are made? Have you seen a cat's head looking natural on a person's body? What about the imperfect photo made perfect? In this class you will learn about all of the tools to enhance your pictures and make fun photos. Topics include basic image editing, transformation, retouching, enhancement, and compositing taught by a professional photographer. Campers will work on their own portfolios and participate in group projects. We will be working in Photoshop CC and students participating in Photo Finish will learn advanced techniques.

*** Photoshop Fee: \$50**

27) Junior Entrepreneur**Instructor: Sid Jain****Session 1 9:00 Grades 3-5****10:30 Grades 5-9**

Have you ever wanted to run your own small business and make your own design, plan, price and sales decisions? Campers will enter the "shark tank" and become entrepreneurs building an idea from scratch and ending with a business plan. You will generate a product or service and decide how to market and advertise. After honing your analytical, logical and communication skills, you will be able to confidently present your plan to "investors" from Wall Street and raise play-money. Learning practical and operational aspects of the stock market, campers will determine the most viable businesses. With engaging activities, real-world examples, and mentorship, this class empowers young minds to think big and take initiative.

28) Swiftie Studio**Instructor: Diana Capasso****Session 1 9:00 Grades 2-5**

Step into the colorful, creative world of Taylor Swift's eras through this fun and interactive art class! Whether you are a fan of her country roots, enchanted by her whimsical Lover era, or drawn to the dark and moody vibes of Reputation, this workshop is designed to celebrate every chapter of her iconic journey. This is your ultimate creative outlet, enjoy a playlist of greatest hits while we work, setting the perfect vibe. Bring your love of Taylor's music, art, and community to create your own masterpieces using vibrant colors and symbols inspired by her albums.

29) Platform 9 3/4
Instructor: Diana Capasso

Session 2 **9:00** **Grades 4-6**
10:30 **Grades 2-4**

Calling all wizards, muggles, witches, and more! You have been accepted into Hogwarts School of Witchcraft and Wizardry. Before you can sit for your O.W.L. exams, you must create your own owl, snitch, wand, and master the potion required to create "butterbeer." Young witches and wizards will create spellbinding art projects inspired by the beloved series, exploring their creativity while immersing themselves in the magic of Hogwarts.

30) Edison Robotics
Instructor: Christina Murphy

Session 2 **9:00** **Grades 2-4**

Enter the world of robotics and coding with Edison Robotics. The Edison robot is a powerful, engaging tool for teaching children computational thinking and computer programming in a hands-on way. Campers can immerse themselves in a variety of STEM and engineering projects as they learn to build and invent. Using the EdBlocks and EdScratch software, these programmable robots will open up the world of coding and bring computer science to life. Students will take home their kit to continue exploring with Edison.

* **Robot fee: \$75**

31) Dash Robotics
Instructor: Shauna Lane

Session 1 **10:30** **Grades 2-4**

Woohoo! Meet Dash, an innovative robot that will make learning to code fun. Responding to voice, navigating objects, dancing, and singing, Dash is the robot you always dreamed of having. Campers will use Wonder, Blockly, and other apps to create new behaviors for Dash from navigate mazes, to respond to voice commands, and even dance - doing more with robotics than ever possible. Each class is packed with fun and educational activities that not only teach the fundamentals of programming logic but also encourage problem-solving, creativity, and teamwork. Let Dash open a canvas for exploration and collaboration by unleashing your creativity as you program Dash to greet you, deliver a message to a friend, follow you on a journey, and become a true partner in fun.

* **Robot Fee: \$175**

33) The Restaurant Project
Instructor: Rachel Schultz

Session 2 **9:00** **Grades 3-5**
10:30 **Grades 5-9**

In this creative course, campers will dive into the world of hospitality and discover what it takes to turn a delicious idea into a thriving business by designing and building their own restaurant concept! They will learn how to develop a restaurant concept, menu planning, and décor. We will create branding and promotional marketing materials. Whether you're a future chef, entrepreneur, or creative thinker, this class offers a fun and inspiring way to explore the business side of food and an appreciation for the art of hospitality while building teamwork, communication, and innovation skills.

35) Graffiti Art
Instructor: Ana Saura

Session 1 10:30 Grades 4-9

Explore the vibrant world of street art using bold colors and playful shapes inspired by artist Keith Haring, whose lively creations lit up the New York street art scene! Campers will learn his iconic painting techniques and discover his playful style while expressing themselves through their own meaningful and joyful street art.

36) Mixed Media Madness
Instructor: Ana Saura

Session 2 9:00 Grades 4-9

An art palette is full of life-red roads, blue whispers and yellow yells! This dynamic class is perfect for artists who want to break away from traditional painting techniques and experiment with combining different colors, materials, textures, and styles. Campers will learn to use perspective and depth to create collages, landscapes and panoramic paintings in a modern style. Using acrylics, pencil, plaster, foam board, paper and more, students will learn how to blend various mediums to create unique, multi-dimensional and colorful works of art

37) MOMA Painting - Surrealism
Instructor: Ana Saura

Session 2 10:30 Grades 4-9

Surrealism is about exploring the subconscious mind using dreams, imagination, and emotions as inspiration for artwork. In this captivating painting class, you will learn the history and techniques of surrealism, exploring how masters like Salvador Dali and Rene Magritte use symbolism, distortion, and fantastical imagery to create their paintings. Escape reality with an anything is possible art experience will inspire you to paint your own mind-bending masterpieces!

38) Code Central: Scratch Game Creators
Instructor: Neil Grand

Session 1 & 2 9:00 Grades 3-6

Learn coding basics while having fun creating games and animation using the online program known as Scratch. Campers will learn to develop algorithms, use variables, loops and control structures (if/then logic) to create a multi-media experience. Scratch is a drag and drop website which makes programming easy, fun and painless. Campers will create games such as Flappy Birds, Space Invaders, Shoot 'em, Pong, Maze and other games of their own imagination. Your games will have obstacles, dragons, special ghosting and color effects, timers and scoring. Campers will also make beautiful, animated art like whirling spirals, planets circling around the sun in the solar system, and spin art.

39) Escape Room
Instructor: Jennifer Walford

Session 1 **9:00** **Grades 4-9**
10:30 **Grades 4-9**

Unlock the mystery in our escape room class, a unique and exhilarating course designed for campers to search for clues and solve several kinds of puzzles and riddles to plot their great escape. This class blends puzzle-solving, teamwork, and critical thinking, as students work together to solve challenging scenarios and 'escape' from various themed rooms. One of the themes for this summer will be Escape Rooms with a Medieval twist. Campers will research various topics on Medieval life and design a unique escape room experience for their fellow classmates! It is a perfect blend of education and adventure, encouraging students to think creatively and work effectively under pressure... assuming they ever make it out!

40) Digital Film Academy
Instructor: Donell Clark

Session 1 **9:00** **Grades 6-9**
10:30 **Grades 4-5**

Step into the world of filmmaking and bring your creative vision to life in this interactive, digital movie-making course. Students will immerse themselves in every stage of the production process, working alongside a professional director to craft an original short film. From brainstorming story ideas and costume design to scouting locations, writing the script, acting, shooting, and editing, campers will collaborate as a team to create a polished, high-quality film. Along the way, they'll gain valuable skills in digital media and learn how to navigate technology responsibly, becoming savvy digital citizens. Get ready for the red carpet premiere—your film debut is just around the corner!

* **Film Fee: \$60**

41) The Illusionist 2
Instructor: Joseph Fields

Session 1 & 2 **9:00** **Grades 4-9**

Would you like to perform like Criss Angel, David Blaine, and David Copperfield? If you would, this is your chance to discover the magic secrets that these and many other professionals use to baffle audiences worldwide. Join Joseph Fields this summer and learn the secrets, the sleight of hand and the proverbial tricks of the trade that helped make these professionals famous. Imagination, individuality and creativity will be encouraged to develop a personal magical act with polished showmanship. Extraordinary and advanced balloon sculpture techniques will be learned! Advanced magical secrets of illusion, levitation and sleight-of-hand will highlight this course as well as presentation and performance before an audience. Enhance your skills and transform yourself into a master illusionist with your personalized magic briefcase full of tricks.

* **Magic Fee: \$50**

42) Castles and Catapults
Instructor: STEM Staff

Session 2 **9:00** **Grades 1-3**
10:30 **Grades 3-5**

Travel back to the Middle Ages and discover the fascinating world of medieval art and engineering! Creators will explore the artistry behind illuminated manuscripts, stained glass, and castle architecture, while learning about the ingenious engineering behind catapults, drawbridges, and towers. Through hands on projects, students will design their own castles, create medieval-inspired art, and build working models of medieval machines. This class combines creativity, history, and problem-solving for a unique and exciting journey into the past. Perfect for curious minds and budding inventors!

43) Adventures in the Lab **Session 1** **9:00** **Grades 3-5**
Instructor: Natalia Potter **10:30** **Grades 5-9**

Are you fascinated by science? Embark on an exciting journey of discovery in this dynamic science class where we will perform hands-on experiments. We will learn about different chemical compounds, conduct demonstrations to observe different chemical principles, and make science come alive. In this immersive course, young scientists will explore a variety of scientific fields, from chemistry and biology to physics and earth sciences, through engaging and interactive experiments. Each day in the lab is an adventure, as students conduct experiments, analyze results, and learn to think like real scientists. This class not only deepens their scientific knowledge but also fosters critical thinking, curiosity, and a lifelong love for learning and exploration.

44) Atoms, Beakers & Bonds **Session 2** **9:00** **Grades 3-5**
Instructor: Natalia Potter **10:30** **Grades 5-9**

Experience the exciting world of molecules and reactions in our hands-on BioChemistry class. This dynamic course brings the periodic table to life through interactive experiments and engaging lab activities. Campers will explore fundamental concepts like chemical bonding, reactions, and the properties of different elements, all while conducting safe and supervised experiments that illustrate the principles of chemistry in action. We will learn the cell cycle and cell division by making our own microscopic slides, perform DNA extractions, see osmosis in action and use magnets to test our immune system. This is the perfect environment for young scientists to ignite their curiosity, develop practical lab skills, and gain a deeper appreciation for the science that shapes our world.

45) NASA Mission Control **Session 1 & 2** **9:00** **Grades 5-9**
Instructor: Kimberly Whyte **10:30** **Grades 3-5**

Calling all future astronauts, rocket scientists, and space explorers! In this hands-on adventure, campers will explore the wonders of space, the mysteries of faraway planets, and uncover the secrets of the stars. Using engineering and technology skills, we will build and launch rockets, design lunar rovers and simulate a mission to Mars. This course is packed with experiments, engineering challenges, and out-of-this-world fun. Get ready to shoot for the stars as we discover how amazing Earth is and explore the universe!

46) Da Vinci's Workshop **Session 1** **9:00** **Grades 5-9**
Instructor: STEM Staff **10:30** **Grades 3-5**

Step into the mind of one of history's greatest visionaries. Leonardo da Vinci was a master of both art and engineering, and in this hands-on course, students will explore his incredible legacy through creative projects and innovative problem-solving. We will examine his works of art and explore his unique techniques. Learn about his groundbreaking inventions, and how they shaped the future. Campers will create their own masterpieces inspired by Leonardo's style and experiment with designing and building simple mechanical models. We will develop critical thinking and creativity while blending art, science, and engineering. Through interactive activities and a blend of art and STEM challenges, students will leave with a deeper appreciation for the genius of Da Vinci and the confidence to think like a Renaissance innovator.

*** Da Vinci Engineering Fee: \$50**

47) Challenge Makerspace 2.0**Instructor: Natasha Dooley****Session 2****9:00 Grades 5-9****10:30 Grades 3-5**

Are you eager to create and experiment utilizing engineering principles? Challenge Camp Makerspace combines design, engineering, and problem-solving as campers tackle exciting projects that challenge their imaginations and technical skills. One of the featured projects is designing and building a custom lamp, where campers will learn about circuits, lighting, and design principles to create a functional and unique piece of art. Throughout the course, we will explore various tools and materials, while collaborating with peers in a supportive and innovative environment. This class encourages experimentation, critical thinking, and the joy of making something extraordinary with your own hands. Let's build something amazing together!

*** Makerspace Fee: \$75****48) The Great Debate****Instructor: Ellen Feig****Session 2****9:00 Grades 4-9**

Step into the world of persuasive arguments and critical thinking. In this dynamic and interactive course, campers learn the art of constructing compelling arguments, conducting research, and speaking confidently in public. We will tackle a range of topics, from current events to ethical dilemmas, engaging in spirited debates that hone their reasoning and listening skills. This class promotes oratory prowess and fosters a deeper understanding of diverse perspectives, preparing campers for future academic and personal challenges.

49) Model United Nations**Instructor: Ellen Feig****Session 2****10:30 Grades 5-9**

Dive into the world of diplomacy and international relations with our Model United Nations class. In this class, campers will step into the shoes of UN delegates, learning about global issues, international politics, and the art of negotiation and public speaking. Through simulating UN conferences and debates, we will develop skills in research, diplomacy, and collaboration, while gaining a deeper understanding of world affairs. This enriching experience educates students about the complexities of global governance and empowers them to become informed and active global citizens.

50) Sew What?! Sewing Bootcamp**Instructor: Christel Araujo****Session 2****9:00 Grades 4-9**

Do you dream of becoming a fashion designer? In this class, students will be introduced to the process of creating clothes! Sewing students will learn to draft, pin, and cut a sewing pattern, how to use a home sewing machine and even how to take measurements. Students will complete a final project involving the designing and sewing of shorts, pajama pants, or a reversible tote bag. All items will be personalized to show off each camper's unique style at a fashion show!

*** Fashion Fee: \$50**

51) Bling It Up a Notch Jewelry Design**Session 1 10:30 Grades 4-9****Instructor: Linda Andrews**

Focusing on metal stamping and design, this class teaches students how to create beautiful, personalized pieces while learning professional jewelry-making skills. Campers will gain an understanding of tools, materials, and the craftsmanship as we combine stamping with crystals, stones, charms and beads to create jewelry with extra bling. Design and craft unique bracelets, necklaces, and earrings to produce wearable works of art.

*** Jewelry Design Fee: \$40****52) Gelli Printmaking****Session 2 10:30 Grades 3-9****Instructor: Linda Andrews**

Dive into the vibrant and playful world of gelli printmaking. This hands-on course introduces the fun and versatile technique of gelli printing, where campers will use gelatin plates to create unique and colorful prints. They will experiment with textures, patterns, and shapes, learning how to layer colors and forms to produce their own artistic masterpieces.

*** Printmaking Fee: \$30****53) Law & Order****Session 1 9:00 Grades 5-9****Instructor: Ellen Feig****10:30 Grades 3-5**

Learn the basics of the legal system and about how laws shape our world. From figuring out why we have rules to how the legal system works, you'll get to play detective, lawyer, and maybe even a judge! Campers will learn the basics of the legal system through engaging activities like creating their own courtroom, participating in a mock trial, and solving everyday legal puzzles. We will discuss topics like fairness, justice, and why rules matter as we explore real life scenarios. We will explore famous cases, understand our rights, and learn how laws affect everything—from social media to sports. Expect role-playing, lively discussions. Campers will earn a certificate of completion and a mini "law book" they create throughout the class.

54) Drone Flight School**Session 1 10:30 Grades 3-9****Instructor: Drone Cadets****Session 2 9:00 Grades 2-5****Session 2 10:30 Grades 4-9**

Drone Cadets will spark the bright young minds of students of all ages and light up new pathways for further scientific exploration. Drones can be used for delivery, surveillance and security, aerial photography, filmmaking and more! Campers will receive practical, hands-on instruction that gives them the exciting experience of flying a drone through obstacles, while learning the FAA required rules and safety procedures. As their skills progress, they will begin coding autonomous drone flight to promote further STEM learning and provide real-world career insights. Campers will fly and take home their pre-assembled drones.

*** Drone Fee: \$350**

55) Drone Racing Club
Instructor: Drone Cadets

Session 1 9:00 Grades 5-9

Drone Racing is one of the hottest and fastest growing esports. Campers will use a simulator to learn how to fly from a First Person View (FPV) perspective, and practice flying and racing techniques, and compete in our own drone races! We will learn about drone technology as we build microquad drones and transition from flying Line of Sight to FPV which makes you feel like you are in the cockpit! With practice campers will master this advanced flight skill and begin racing in real life. We will address safe and ethical uses of drones and learn to be responsible drone operators and owners. Campers will assemble and keep their own fully functional drone and FPV goggles.

*** Drone Fee: \$550**

56) 3D Printing Lab
Instructor: Frank Cortalano

Session 1 & 2 9:00 Grades 4-9
Session 1 & 2 10:30 Grades 4-9

This course is designed to introduce 3D modeling and printing techniques to beginners. Campers will learn an overview of the components of the printer and how the process works. They will learn how to navigate a variety of 3D design software including the popular TinkerCad, Cura and Meshmixer to develop their own 3D models. In this project-based course the students will learn the possibilities for creativity are endless and will take home a printer and filament to continue inventing.

*** 3D Printer and Filament Fee: \$400**

57) Code Central: Introduction to Java
Instructor: Neil Grand

Session 1 & 2 10:30 Grades 4-9

This course aims to teach the basics of one of the most powerful and widely used programming languages—Java. You will learn about variables, loops, control structures (if/then logic), arrays and how to write classes. Learning to think both algorithmically and creatively, we will use Java to calculate PI, and solve problems – for example, did the Native Americans get a good deal when they sold Manhattan to the Dutch for \$24 in 1626? We will create games like Mad Libs, guess the state capitals, and how to convert English into Pig Latin. There are no prerequisites other than a desire to learn.

58) Minecraft: Challenge Camp Edition
Instructor: Matt Cooke

Session 1 9:00 Grades 4-9
Session 2 9:00 Grades 3-6
Session 1 & 2 10:30 Grades 4-9

Minecraft combines easy to use graphics and game play coupled with multi-player in several different modes accessible to learn at different levels. Journey from simple game play to more complex world creation and server hosting. Campers will work together to create their own computer-generated worlds with an almost infinite combination or primitive mechanical devices, electrical circuits, and logic gates built with an in-game materials known as Redstone. Using teamwork to create a world from the ground up, Minecraft will serve as a gateway to enlighten students how to safely and securely utilize technology involved in game creation. Aspects of the computer science and information systems worlds will be introduced including, but not limited to, software programming, overall concepts and principles of networking and the hardware required in building these seemingly complex systems.

PLEASE HAVE A CURRENT MINECRAFT ACCOUNT PRIOR TO THE START OF CAMP

59) PC Builders Academy
Instructor: Carlos Meder

Session 1 10:30 Grades 5-9

Unleash your inner tech wizard as you dive into the world of PC assembly and customization! In this course, we won't just teach you how to build a computer; we will guide you through the exciting journey of crafting your own cutting-edge PC. From the sleek, blank canvas of a bare case to the heart of the machine – the motherboard – and all the way to fine-tuning the operating system and software, you will be the mastermind behind your very own lightning-fast PC. Bid farewell to that outdated desktop as you upgrade to a personalized powerhouse. Are you ready to build, tweak, and conquer the digital realm?

Computer Fee: \$900

60) Machine Learning and Artificial Intelligence
Instructor: Carlos Meder

Session 1 9:00 Grades 5-9
Session 2 10:30 Grades 5-9

This year Chat GPT has generated headlines, but how do you teach a computer to follow your instructions? Machine learning is the science of getting computers to act without being explicitly programmed. Researchers think it is the best way to make progress towards human-level Artificial Intelligence, and in the past decade, machine learning has given us self-driving cars, practical speech recognition, and effective web search. You will learn to use Teachable Machines software from Google which lets you create computer programs that can make decisions based on setting you "teach". You can use images, sounds or motions to control the outcome using this cutting-edge technology.

61) Super Smash Bros.
Instructor: Carlos Meder

Session 2 9:00 Grades 5-9

Super Smash Bros. is the fastest growing ESports game for high school and college students. Campers will learn strategy, teamwork, and gaming skills through the exciting world of competitive ESports! As one of the most popular and skill-driven games, learn the strategies and teamwork that make competitive gaming so much fun. Explore character abilities, stage dynamics, and advanced techniques to analyze their plays and level up their gameplay. Learn essential esports values - good sportsmanship, communication, and teamwork, how to support teammates, respect opponents, and handle wins and losses with a positive mindset. If they are new to Super Smash Bros. or already seasoned players, every camper will leave with a deeper understanding of the game, improved skills, and the excitement of competing on an esports team.

62) YouTube Content Creator
Instructor: Donell Clark

Session 2 9:00 Grades 6-9
10:30 Grades 4-6

Like and subscribe to this inventive class and show off your creative talent. Campers will develop the tools they need to create a sustainable YouTube or Twitch channel. Campers will learn how to create serialized content about areas that interests them. Topics explored include how to develop an audience and how to generate an on-camera personality. The course will give campers the digital skills of basic video editing and proper green screen use. Media ethics and strategies for staying safe online will be prioritized.

