

## Challenge Camp



A Summer of Fun and Learning, too!

**This is our Challenge Camp class schedule for Summer 2022. 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 2021** for class selection.
- 3) There are over 100 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 projects.
- 5) If you need assistance or have any questions, please email [info@challengecamps.com](mailto:info@challengecamps.com) or call the camp office on 914-779-6024.

## Challenge Camp – Summer 2022

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

Get ready for a wondrous experience as we learn the science behind phenomenal experiments! We will explore scientific principles as we experiment with thunder and lightning in a bottle, make eggs bounce, craft frozen silly putty, keep paper underwater dry, create glowing slime, pierce a straw through an apple and much more. Young scientists will hypothesize, draw conclusions and develop problem solving skills. Grab your lab goggles and get ready for spectacular science fun!

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

We all wonder how the important inventions and modern conveniences in our lives seem to work. How can a person's ideas be harnessed into a very useful invention? What are the mechanisms involved in a combination lock or a bicycle? Why does a magnet attract or a battery create energy? How do every day items like a piano, a remote control, a fire extinguisher, or all of that sunscreen that our parents make us wear actually work? These questions will be explored and basic scientific principles of physics, motion, inertia, velocity, force will be introduced. Campers will participate in a team design challenge called "Junk in the Box." The goal is to create a useful engineering marvel out of your team's box of junk. You will test, experiment, invent and present to the class how your invention "works."

**3) Adventures in Art** **Session 2** **9:00** **Grades K-2**  
**Instructor: Anne O'Connor**

This class is for children who love to experiment with art materials. We will emphasize techniques that create surprising and exciting effects and rich textures, such as marbling, monoprints, painted-paper collages, melted-crayon drawings, scratchboard and more. We will draw, paint, sculpt, squirt, swirl, roll and stamp and let the element of discovery enhance our creativity. By creating animations with some of our drawings and collages, we will see our art in motion!

**4) Pixicade Game Maker** **Session 2** **9:00** **Grades 2-3**  
**Instructor: STEM STAFF** **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 and then watch your doodles magically come to life as playable games. Campers will learn and use the exciting new Pixicade App and all of it's 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**

### **5) The Artist's Palette**

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

**Instructor: Lida Zimmerman**

An art palette is full of life! Red roars, blue whispers, and yellow yells about the possibilities and appreciation of color you can achieve. Create rainbows, jungles, landscapes and still life with your new understanding of color theory as a means of self expression. Our art projects will include various mediums such as paint, crayons, colored pencils, cut paper and pastels. We will look at the works of great artists, highlighting Picasso, Pollack, Van Gogh and Monet to explore how their unique ways of using color have made their works special. There will be an exhibition to showcase the children's art. Remember Da Vinci produced his first masterpiece at age 18... so you will have a head start!

### **6) This is Olivia**

**Session 1 10:30 Grades K-1**

**Instructor: Lida Zimmerman**

Join us in a discovery of friendship and adventure as we explore the brilliant tales of Olivia the Pig. Created by Ian Falconer, his beautiful books explore the themes of caring, friendship, adventure and excitement among Olivia, her best friends, parents and two brothers. Discover what happens when Olivia saves the circus, goes to Venice, goes to school, becomes a spy and ballerina. We will use various art materials including paint, yarn, paper, fabric and decorations to recreate the characters we love and imagine some new adventures of our own!

### **7) Mermaids and Manatees**

**Session 2 9:00 Grades 1-3**

**Instructor: Lida Zimmerman**

Let's go under the sea and explore the colorful ecosystems of unique and delightful fish, plants, mammals and mythical creatures who will come to life in this imaginative art class. Using an array of materials, paint and decorations, students will create their own works of art including shellfish, plants, jellyfish, octopus, mermaids, starfish and more!

### **8) If Picasso Went to the Zoo**

**Session 2 10:30 Grades K-2**

**Instructor: Lida Zimmerman**

Everyone loves a day at the zoo and books about animals! Our artists will design their own classroom zoo by making 3Dimensional animals like elephants, giraffes, zebras, bears, and tigers. The campers will create an original space for them to live in using paper, paint, foam, feathers. Their imagination and this celebration of animals will be unforgettable.

### **9) Dr. Goodbody**

**Session 1 9:00 Grades 2-3**

**Instructor: Al Pearlman**

**10:30 Grades K-1**

Your body is an incredible machine composed of thousands of working parts. In this class we will explore all of the different ways your body functions to keep you alive. You will learn life science: bones (an adult has 206) and how they keep you standing, muscles, nervous, circulatory systems and more. Understand why you get dizzy when you spin around, check your blood pressure and see how you fare in our senses, lung capacity and reflex challenges. Make your own model of edible internal organs. We will schedule an exciting ambulance tour (complete with EKG machine, stretchers, blood pressure and bandaging) as part of our emergency medical experience.

**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? Explore 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: Michelle Hessing**

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

Use Legos as the inspiration to construct, investigate and communicate like little Einsteins. Students will use models to predict, observe, measure and collect data, experiencing forces, motion, energy, mechanisms and magnetism first hand. They will develop complex problem solving skills and understand the interaction between forces and motion, measurement, energy, speed (velocity) and weight (mass). This course is will introduce campers to simple machines concepts while building teamwork and communication skills. They will discover basic physical science concepts such as gears, pulleys, levers, and wheels and axles through observation, reasoning, prediction, and critical thinking.  
**\* Lego Fee: \$25**

**12) LEGO Tech**  
**Instructor: Michelle Hessing**

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

Do you want to know how things work? Do you ask the question “why” often? Do you dream of tomorrow? Then come and enjoy “Lego’s Simple and Motorized Mechanisms.” This course is designed to give campers an understanding of machines, mechanisms, structures, and mechanical advantage. You will explore the world of technology by studying and building projects that use renewable and alternative energy sources such as wind, solar power, water and your own body. You will investigate energy supply, transfer, accumulation, conversion and consumption through hands-on activities and exciting real life models. You are the engineer, you design, you build, you turn your dreams into reality.  
**\* 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 else’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: STAFF**

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

An introduction to the exciting world of chess. Chess enables children to develop and enhance their skills in discipline, concentration and patience. Students will learn basic opening, middlegame, and endgame strategies and how to achieve a proper coordination of pieces. Students will learn useful skills such as pattern recognition, calculating and analyzing. Chess notation will be taught in order to review games. Interactive instruction will focus on lecture, discussion and basic strategy.

**15) EZ Math**  
**Instructor: Vaibhavi Gala**

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

EZ Math is a program that makes math easy to understand that enables campers to enjoy learning math. The lessons focus on building confidence, igniting curiosity & inspiring a love for math – making a long term impact on your child’s academic growth. We help your child develop skills that extend far beyond the classroom. Get ready for an enlightening math experience as you learn tips and tricks to make math easy and fun!

**16) Art Loves Math**  
**Instructor: Vaibhavi Gala**

**Session 2 10:30 Grades 1-3**

If you can't decide what you love more, math or art, then do both at once! Do you have patience and a love of color and design? We will combine the best of both as we generate tessellations, quilt patterns, games of artistic solitaire, string art and 3-dimensional puzzles. Experiences in these visualizations and constructions lead to greater appreciations of both mathematics and art. Campers will make Individual projects illustrating their art and math creativity.

**17) The Descendants**  
**Artistic Director: Anne Pasquale**  
**Musical Director: Regina Talbot**

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

It's present-day, and in the kingdom of Auradon, all of Disney's beloved heroes and royalty are living happily ever after, safe from the terrifying villains and no-good sidekicks they have banished to the magic-free Isle of the Lost. That is until Ben, the son of Belle and the Beast, and the troublemaking children of Maleficent, the Evil Queen, Cruella De Vil, and Jafar all find themselves attending school together. Now entering a completely new world and way of life, the four Villain Kids have a difficult choice to make: should they follow in their parents' wicked footsteps or learn to be good? Our exciting musical numbers include "Rotten to the Core," "Evil Like Me" and "Good is the New Bad." At the end of the session there will be a spectacular production.

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

**18) Kid Frankenstein**  
**Artistic Director: Anne Pasquale**

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

Frankie and Irving are science fanatics who have an unusual idea for the upcoming Science Fair! When Doctor Frankenstein's secret book arrives from Transylvania, the friends are whisked into a sci-fi adventure. Irving and Helga sneak into the science lab to grab a monkey brain for Frankie's new monster but it gets mixed up with the brain of little Fluffy, a sweet puppy dog...imagine the excitement and laughter as Frankie and his crew present a surprising creature to the Fair! Highlighted with synch dances and videos to such horrible hits as Thriller/Feed Me Melvin and Monster Mash this is a sure Summer Shocker!

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

**19) Minecraft City Builders**  
**Instructor: Sydney Sullivan**

**Session 1**      **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.

**20) Edison Robotics**  
**Instructor: Sydney Sullivan**

**Session 2**      **9:00**    **Grades 2-3**  
**10:30**   **Grades 4-5**

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**

**21) Where in the World...**  
**Instructor: Rathi Gulati**

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

Help us crack the case! Global Investigators Inc. needs your help solving a mystery. An infamous underground art collector has stolen a precious artifact from the Egyptian Museum in Cairo and we need your help tracking down the thief! Join us on a fun adventure as we travel around the world, finding clues and learning about different countries along the way. Get ready for a multi-sensory adventure, where we will listen to music, taste new flavors, learn a few steps of a dance, admire the beautiful art, and read a bit of poetry or literature from each of these countries. Students will be encouraged to research their own cultural heritages and share what they have learned by bringing in an "artifact" that has special meaning to them. Join us on this adventure and help us crack the case!

**22) Dash Robotics**  
**Instructor: Sue Laramie**

**Session 1**     **9:00**     **Grades 4-5**  
**10:30**     **Grades 2-3**

Woohoo, meet Dash, a real 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 — doing more with robotics than ever possible. 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**

**23) Architecture and Design with 3Dux**  
**Instructor: STAFF**

**Session 2**     **9:00**     **Grades 4-5**  
**10:30**     **Grades 2-3**

Join us in this illuminating architecture and design class. Using a 3Dux Design kit designed for Challenge Camp, the campers will focus on physics, geometry, problem solving, and complex spatial thinking to build modern structures. You can construct a futuristic city, or a towering castle complete with a neighboring farm. Create prototypes for your inventions, or collaborate with a friend to create new ideas to develop and expand. We will also discuss electrical engineering concepts as we light up our projects. The possibilities are endless!

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

**24) Code Central: Javascript Animation and Design**  
**Instructor: Neil Grand**

**Session 1 & 2**     **9:00**     **Grades 3-6**

Learn coding basics while having fun creating animation, games and sketch art. We will be using a version of Javascript known as p5.js. Javascript is the most widely used computer programming language and the backbone to most web pages. p5.js makes coding fun and easy for artists, designers and beginners. In less than 15 lines, you will be able to create an arrow shooting across the screen or a waterfall of balloons of different sizes and colors bouncing around the screen (and needing to be popped!) p5.js is great for visual learners. You will learn how to create variables, loops and algorithms.

**25) Photo Finish**  
**Instructor: Liz Steger-Hartzman**

**Session 1 & 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 best work.

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

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****Session 1 10:30 Grades 4-9****Instructor: Sid Jain**

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'll be challenged from concept to generation of a product or service including marketing and advertising. After honing your analytical, logical and communication skills, you'll 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. Entrepreneurs will also brainstorm ideas for the Challenge Cares Carnival. The money raised will be used for the charitable entity chosen by Challenge Camp.

**28) Drone Flight School****Session 2 9:00 Grades 4-9****Instructor: Grace Cantwell / Tony Reid****Session 1 & 2 10:30 Grades 4-9**

Our beginning drone class will explore the various uses of drones. They can be used for delivery, surveillance and security, aerial photography, filmmaking and more. We will discuss safe and responsible drone operation and local laws that apply. Campers will then fly their pre-assembled drones using Line of Sight (LOS) techniques. With practice, our new drone pilots will fly through obstacles and learn advanced flying techniques. Each camper will take home their own fully-functional drone.

**Drone Fee: \$300****29) The Art of Architecture****Session 1 9:00 Grades 4-9****Instructor: Ana Saura**

In this beautiful architectural drawing and painting class we will learn how to use perspective and style in artwork. We'll discuss how measurement, dividing spaces and vanishing points on canvas help to create a more realistic cityscape or panoramic view. Using mixed media, colorful acrylics and 3D plaster work on a double canvas, we will paint original or well known structures like the Eiffel Tower, London Bridge or the Freedom Tower with our own creative architectural flair using size, detail and nearby objects as visual effects.



**30) Creative Clay Sculpting****Session 1 10:30 Grades 4-9****Instructor: Ana Saura**

Sculpture is three-dimensional artwork that includes adding material to get a shape and carving is scraping away material to create another effect. Sink your hands into this clay and wire sculpture class as we use both techniques to create fanciful mother nature inspired flower vases. The finished vases designed, shaped and painted by you will have faces and personality to hold flowers or decorate your room!

**31) Craft Your Happiness****Session 2 9:00 Grades 4-9****Instructor: Vaibhavi Gala**

Get crafty in this fun hands on class where we will explore a variety of mediums and create art that makes us happy! From fiber arts to mixed media projects to paper layering to making drip mandalas, we will be making a lot of art and a lot of fun!

**32) Fantastic Beasts****Session 2 10:30 Grades 4-9****Instructor: Anne O'Connor**

Create characters using a variety of art materials, including felted wool (great for making soft cuddly animal buddies), paper-mache, clay, and more. Then learn how to make them come to life and fly, walk, run or swim using stop-motion animation techniques. Work with your friends or on your own to film your beasts' adventures. This class will focus on sculpture and painting techniques in addition to the animation projects.

**33) The Illusionist 2****Session 1 & 2 9:00 Grades 4-9****Instructor: Joseph Fields**

Would you like to perform like Criss Angel, David Blaine, and David Copperfield? If you do, 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****34) Podcast Kidz****Session 1 9:00 Grades 3-5****Instructor: Sean Hardy Rivera****10:30 Grades 5-9**

Learn how to tell stories about your favorite topics ranging from sports, news, fashion, books, comedy, video games to discuss "on-air". You can choose topics that go from serious to silly, from fun to frightening and everything in between. We will learn how to write, improvise, interview, and edit your own recording in our podcasting studio. We will discover the various podcasting platforms to allow you to share your broadcasts with friends and family all over the world.

**35) Digital Film Academy****Instructor: Tony Ely****Session 1****9:00 Grades 6-9****10:30 Grades 4-5**

Let's make movies! In this interactive digital movie making class students will participate in the full creative process of developing an original professional short film. With a professional Director leading the production, campers will be part of a high quality collaborative team effort to brainstorm ideas and costumes, write, location scout, shoot, direct, act and edit their film. Campers will gain an enhanced understanding of digital media while learning appropriate and responsible use of technology to become good digital citizens. We can't wait to see the premiere!

**Film Fee: \$50****36) Escape Room****Instructor: STAFF****Session 2****9:00 Grades 4-9****10:30 Grades 4-9**

Trapped in a room with a group of friends and one way out, you must search for clues and solve several kinds of puzzles and riddles to plot your great escape. When the challenge has been mastered, you will be guaranteed laughter, a sense of accomplishment and a new respect for your classmates and their abilities. Groups will complete a series of escape room challenges together and will then design their own escape room models and games for others to solve. This is an experience that will be remembered for a lifetime... assuming you ever make it out!

**37) Engineering Design Thinking****Instructor: STAFF****Session 2****9:00 Grades 3-5****10:30 Grades 5-9**

Design thinking and the spirit to solve problems are a critical 21<sup>st</sup> century skill. We will complete engineering design thinking challenges using Tinkercad 3D design software. Our design lab will have hands-on projects and materials for discovery and inspiration.

**38) Challenge Makerspace****Instructor: STAFF****Session 2****9:00 Grades 5-9****10:30 Grades 3-5**

Are you eager to create and experiment in engineering? A makerspace provides a hands-on, creative way to encourage students to design, experiment, build and invent as they engage in science, engineering and tinkering. In this project based STEM class campers will work in a collaborative setting and build invaluable problem solving skills. Examples of the fun engineering based projects may include building catapults, electric boats, a flashlight, pendulums, pneumatic machines, and a solar car.

**Maker Fee: \$100****39) Forensic Files****Instructor: Michael Nathenson****Session 1****9:00 Grades 5-9****10:30 Grades 3-5**

Explore the Challenge Camp crime lab as we investigate various capers around camp! In this class, we will be looking at the methods and techniques used by scientists as we perform our own experiments to determine the nature of the crime! We will make our own cardboard microscope and use it to analyze biological material. Use luminol to find hidden blood stains, and learn to perform fingerprint analysis. All of your observation skills will be needed as you collect and record evidence and draw scientific conclusions.

**40) Radical Chemistry****Instructor: Danielle Spano****Session 1****9:00 Grades 3-5****10:30 Grades 5-9**

In this course we will learn about how chemistry plays a role in our everyday life. We will learn about crystallization by studying rock candy, exothermic reactions by making elephant's toothpaste and acid base reactions by blowing up a balloon with a water bottle. We will also learn about physical phenomena such as diffusion and osmosis, optical inversion, chromatography and density by observing chemical reactions. Join us in the lab for an enlightening, hands-on experience and learn science that is totally radical!

**41) Adventures in the Lab****Instructor: Danielle Spano****Session 2****9:00 Grades 3-5****10:30 Grades 5-9**

Do you know what it takes to be a good scientist? Join us for an adventure into the scientific world where we will perform hands-on chemistry experiments! We will learn about different chemical compounds, conduct demonstrations to observe different chemical principles, and make science come alive! We will learn about exothermic reactions by making elephant toothpaste, experiment with polymers by making bouncing balls, the principles of buoyancy using common household materials, and attempt to fool our friends with some science magic! See the world with amazement and wonder as we embark on our lab adventures!

**42) Forces and Motion Makers****Instructor: Michael Nathenson****Session 2****9:00 Grades 5-9****10:30 Grades 3-5**

Explore the interactions between force, mass, acceleration and momentum. We will use magnets, motors and circuits to make items float, launch and move in a variety of hands on experiments to illustrate the key principles of physics. As a final project, campers will combine the principles of mechanics, motion, electricity and aerodynamics to make their own air hockey table!

**43) Speakers Corner****Instructor: Rathi Gulati****Session 2****9:00 Grades 4-9**

Learn the art of persuasion in this writing and public speaking course. We'll work on organizing your thoughts and conveying them in a way that grabs attention and leaves a strong impression. We will brainstorm ideas on topics to consider, for example: If you could make one major change to your school or community, what would it be and why? The class will divide into groups to compare the pros and cons and develop a strategy for their preferred option. Through persuasive speaking methods we will develop the skills to put together a convincing argument. Various presentation tools such as Keynote, poster boards will be used for creative ways of presenting a position. We will help boost confidence by focusing in on key aspects of good public speaking: eye contact, facial expressions, body language, and even tackle how to deal with nervous energy. At the end of the session students will present their individual ideas and have group final presentations.

**44) Agency X**  
**Instructor: Rathi Gulati**

**Session 2      10:30   Grades 4-9**

Ever wondered what it would be like to run your own advertising agency? Well, here's your chance! Students will be divided into groups to create their own mini advertising agency. They will come up with a name for their agency, design a logo, and create a mission statement. The campers will gain an in-depth understanding of the entire advertising process, from initial client briefing, identifying key targets, performing research, insight mining, concept creation and final presentation of concepts. The client for this summer will be an organic cotton luxury children's clothing line start up. At the end of the session there will be a competition, and the founder of the company will choose the winning team.

**45) Outside the Box Engineering**  
**Instructor: Hudson Apotheker**

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

Think outside the box in this exciting and ambitious engineering class. Projects include designing and building a mini electromagnet using a D battery. Campers will use their magnets to solve various electrical and mechanical engineering challenges. As a class project we will build a massive electromagnet to test its capabilities doing tasks such as lifting heavy weights and measuring effects on electronic devices and how they interact with ferrofluids! Other activities include creating a potato launcher, vortex cannon, and many other educational and fun experiments.

**46) 3D Printing Lab**  
**Instructor: STEM Staff**

**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: \$350**

**47) APP Developer**  
**Instructor: Sid Jain**

**Session 1      9:00   Grades 5-9**

We have all heard "there's an APP for that"... Great apps start with a tangible idea that can grow into something ground-breaking, clever or useful. We will explore exactly how apps work, what features they include as our programmers use the Shopify platform to develop their product. Our app expert will discuss factors that should be integrated into your business model: What do people want or need in an app? How do I make sure it works well? Are there competitors in the marketplace? And most importantly how do I launch my app? This is a modern business focused class for motivated campers. There will be an additional platform fee, if the camper launches their app on IOS or Android,

**\* App Hosting & Development Fee: \$200**

**48) FPV Drone Builder****Session 1 9:00 Grades 5-9****Instructor: Grace Cantwell / Tony Reid**

In this exciting technical course we will build a First Person View (FPV) Racing Drone. Building and programming are taught as an important part of this assembly process. Campers will learn how to fly from a FPV, as if you were in the cockpit and practice flying and racing techniques, including races of our own! We will address safe and ethical uses of drones and learn to be responsible drone operators and owners. Each camper will assemble and keep their own fully-functional drone and FPV goggles.

**\* Drone Fee: \$500****49) Code Central: Introduction to Java****Session 1 & 2 10:30 Grades 4-9****Instructor: Neil Grand**

This course aims to teach the basics of one of the most powerful and wide spread programming languages—Java. You will learn about variables, loops, control structures (if/then logic), arrays and how to write classes. You will learn to think both algorithmically and creatively. We will use Java to calculate PI, and solve problems – for example, did the Indians 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 capital, and how to convert English into Pig Latin. There are no prerequisites other than a desire to learn.

**50) Code Central: Python****Session 1 9:00 Grades 4-9****Instructor: Sydney Sullivan**

This course aims to teach the basics of Python, an object oriented programming language. Perfect for beginning programmers or budding technologists to squeeze programming power and fun out of their computer, Python uses a simple syntax and has an easy learning curve. Learn about variables, loops, decision statements, and other basic programming concepts using this easy-to-read programming language. The coding principles will provide the building blocks to learn programming languages in the future. There are no prerequisites other than a desire to learn.

**51) Minecraft: Challenge Camp Edition****Session 1 & 2 9:00 Grades 4-9****Instructor: Geoffrey Byrne**

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 of primitive mechanical devices, electrical circuits, and logic gates built with an in-game material 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. Many 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**

**52) PC Builders Academy**  
**Instructor: Geoffrey Byrne**

**Session 1      10:30   Grades 5-9**

Ever wonder what it takes to actually assemble a personal computer? In this course we will learn about each component by understanding how to tear down and rebuild a used PC, then we will build our own from soup to nuts! Starting with a bare case, to the motherboard, to the operating system and software involved, you will fully assemble, operate, tweak, and in the end use your new blazing fast PC! This PC can replace that aging desktop at home. Campers will have an option to upgrade their processor for an additional fee.

**Computer Fee: \$750**

**53) Cybersecurity 101**  
**Instructor: Geoffrey Byrne**

**Session 2      10:30   Grades 5-9**

In this rapidly evolving technology environment, everyone needs to be cognizant of cybersecurity and its impact on all aspects of daily life. Cybersecurity focuses on protecting computers, networks, and information from unauthorized access or attacks. Through hands-on activities we will learn to be good digital citizens, best practices for staying safe online and what the future holds for this incredibly popular industry.

**54) Blender 3D Simulations**  
**Instructor: Dan Tepper**

**Session 1      9:00   Grades 5-9**

Blender is a powerful 3D computer graphics software toolset which is used to create animated films, physics simulations, video games and so much more. Using Blender, 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 and then hit it with a wrecking ball - smashing it into a million pieces! Computer creativity and imagination is all you need to produce endless animated possibilities.

**55) VR Explorers**  
**Instructor: Dan Tepper**

**Session 1      10:30   Grades 5-9**

Come explore the fascinating world of Virtual Reality through interactive and immersive coding techniques creating your own 3D space. Design a custom VR environment with CoSpaces adding objects, structures, landscapes and characters allowing you to experience your own historical scene or futuristic world as if you were standing in it. Use VR viewers to experience and perfect your world while helping classmates to improve theirs. The fun continues as you take home your own cardboard VR viewer, plus access to your CoSpaces account and the virtual experience you created... one that anyone can explore with the CoSpaces app!



## Afternoon Challenge Course Selections

### 1) AMERICAN CHEF - INTENSIVE

Designed for campers with experience in the kitchen. In this advanced cooking class, we will cook our way from California to Maine while learning about the culture, terroir, and ingredients from various regions of the United States. In addition to cooking regional desserts and entrees, we will learn to cook updated versions of recipes incorporating diverse ingredients reflecting our changing culinary landscape. Campers will learn to cook more intuitively to spark creativity in the kitchen with delicious results.

- **American Chef Fee: \$200**

**\*\* This class is a double period intensive elective**

### 2) ANIME-TION

The art of cartooning is full of creative expression, humor and fun. Join us to learn techniques of cartooning including sketching and use of color. You will learn to draw familiar faces such as Spiderman, Mickey Mouse and the Simpsons. Next, we will dive into the ultra modern art of Japanese anime. The wildly popular anime characters have larger than normal eyes, exaggerated expressions and a stylized type of design. Your original anime illustrations will reflect your own personality, imagination and artistic style!

### 3) ARDUINO APPLICATIONS

What is a robot without a brain? Why is a smart phone so smart? How do you make your computer turn a motor? All of these are a result of microcontrollers, the next step in computing and technology. Here is an opportunity to learn how to use microcontrollers using the Arduino platform. Learn the basics of electrical engineering and programming as we build a number of projects using a basic starter kit and your imagination!

- **Arduino Kit Fee: \$75**

### 4) ART ON THE MOVE

So much fun for our littlest campers! 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.

### 5) AWESOME ILLUSIONS & PUZZLES

More than meets the eye! In this awesome workshop, inspired by New York City's Museum of Illusions, students will explore how neuroscience explains different optical illusions. We will use scientific principles to create our own using color, light and patterns. In this workshop campers will create puzzles and illusions that will both inspire and boggle the mind! Campers will create deceptive and misleading brain images like impossible waterfalls, visual paradoxes, mind-bending patterns, mirror illusions and create trick photography to provide a boost of brainpower and ignite your logic skills!

### 6) BASKETBALL

Campers will learn the FUNdamentals of basketball. Through drills and instruction campers will have a great time practicing dribbling, shooting, jumping and game play that emphasizes teamwork and sportsmanship.

### 7) BOLD Pop Dance

This vibrant dance class blends the energy, freestyling, storytelling and power of hip hop and breaking, with jazz technique, while embracing the creativity of the dancers. Students will develop musicality,



choreographic skills, strength, teamwork and confidence both onstage and off. A signature of all BOLD Arts programs is that each person's individual strengths and personality shine through the work we create together. All students will have the opportunity for a virtual performance at the end of the session. *Taught by BOLD Arts.*

### **8) CAINE'S ARCADE**

Inspired by the documentary film *Caine's Arcade* this class will be amazing, creative and fun. We will use cardboard and a variety of found and recycled objects to create our own carnival games style arcade. Campers will develop an understanding of the physics and engineering behind their creations. The finished projects will be used in conjunction with the Junior Entrepreneur "Care"-nival to raise money for this year's charity.

### **9) CLOSING BELL**

In this introduction to Wall Street class, students will build a virtual stock portfolio and compete for the "best stock picker" bragging rights. After examining the activity at the NYSE and NASDAQ each day, we will learn analytical and operating aspects of the stock market. We will begin by evaluating and comparing stocks. We will review our portfolios daily and debate our purchases while learning to use tools to assist in our decisions to buy, sell or hold individual companies. By understanding how the stock market works, we will know the pros and cons of investing and how to buy low and sell high!

### **10) CODE CENTRAL: EXCEL VBA**

Excel is the most widely used technology platform in the world. Knowing Excel is one of the most critical skills any worker or student can have. VBA (Visual Basic for Applications) is the programming language embedded in Excel and is used widely in all fields, especially the business and financial worlds. In this course, students will get an introduction to Excel plus a deep dive into the VBA programming language. They will learn how to create variables, loops, control structures (if/then logic) and arrays. We will use this knowledge to create a chess board, a boggle board, dice games, a Yahtzee game and other games of our campers' imagination.

### **11) CODE CENTRAL: SCRATCH GAME CREATORS**

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 work like whirling spirals, planets circling around the sun in the solar system, and spin art.

## **12) CODE CENTRAL: SCRATCH JR**

In this class, young campers will be introduced to coding basics using the Scratch Jr. software. Scratch Jr. is a visual programming language that enables students to create games and animated projects. Using visual code blocks, Scratch Jr. guides you through programming concepts – such as loops, conditional logic, sequencing, and algorithmic thinking. Unleash their creativity, innovation, and curiosity as they develop coding skills.

## **13) CODE CENTRAL STATION: PYTHON**

This course aims to teach the basics of Python, an object oriented programming language. Perfect for beginning programmers or budding technologists to squeeze programming power and fun out of their computer, Python uses a simple syntax and has an easy learning curve. Learn about variables, loops, decision statements, and other basic programming concepts using this easy-to-read programming language. The coding principles will provide the building blocks to learn programming languages in the future. There are no prerequisites other than a desire to learn.

## **14) CURIOUS CHEF**

In this class, campers will learn the basics of cooking and healthy eating. Cooking is math, science and an art. Chefs will learn kitchen organization, following directions, measuring and preparing ingredients to complete a recipe from start to finish. Experience making simple foods from scratch and create the foundation to be good chefs and more informed eaters.

- **Curious Chef Fee: \$100**

## **15) DANCE A STORY**

In this class, young dancers will bring books and stories to life. Children will dance along and be given a prompt to create their own choreography, using the story. Cha Cha and Tango with *Giraffes Can't Dance*, create flashlight solos with *Firenze's Light*, dive into a painting with *Flyaway Katie*, and more! This class is active, interactive, and filled with opportunities to create. *Taught by BOLD Arts.*

## **16) DIGITAL COMICS**

Digital graphic comics and stories are extremely popular with campers of all ages! In this engaging digital storytelling class we will read, write and illustrate our own comics and designs. You don't have to be an artist as there is themed art from you to pick from, incredible animation and loads of templates to start story building with! If you have an idea, you can quickly create visually dazzling content for your story. Create and animate your characters, word balloons, sound effects and bring your original stories to life on screen!

## **17) DUNGEONS & DRAGONS**

If you can imagine and think of lands and magical creatures, then you can play Dungeons and Dragons. Think of yourself as a character in a book. Imagine magical places and items – many surprises lie ahead. For campers with significant D&D experience, this year we have created a separate Advanced section.

## **18) ESPORTS ARENA**

Esports and casual competitive electronic gaming is a billion-dollar industry, and high schools and colleges are responding to the growth of this field by creating programs that can lead to career pathways. Esports provides a sense of community, children learn to create and follow strategies, work cooperatively with teammates and can foster digital citizenship skills and good sportsmanship.

Join us in the arena as we delve into a variety of age appropriate Esports titles and genres including Rocket League, Fortnite, Among Us, League of Legends, Starcraft and more!

- **Esports Fee: \$50**

## **19) FENCING**

En garde! Learn the exciting Olympic sport of fencing! Parry, cut, and lunge, as you improve strength, coordination, focus, balance and more. Fencing is a high-speed, exhilarating sport that relies on quick wits and cunning, and engages the entire body along with the mind... most importantly, it's FUN!

- **Fencing Fee: \$100**

## **20) FIBER ART**

In this hands-on course we will discover traditional and innovative fiber arts approaches. This class will be filled with fun & learning but also will be a relaxed space for participants to create and chat together. We will hone our weaving, stitching and felting skills in a variety of projects as we make including key chains, pot holders, and dream catchers.

## **21) GALAXY QUEST**

Drawing inspiration from the Mars Rover and Webb Telescope, during this course, we will discuss the development of humanity's understanding of the solar system, examining contributions by Aristotle, Ptolemy, Copernicus, Galileo, Newton, Einstein and others. What makes Earth different from all other planets? What has NASA discovered about Mars' suitability for life? What are super moons, eclipses, asteroids and comets? the Hubble Telescope and the Kepler Mission revealed over 2000 exoplanets around stars other than the sun. Create your own solar system incorporating our knowledge of the Milky Way, planets, moons, stars and other galaxies. We will debate if life really can exist on other planets and when humans will be able to visit them!

## **22) GRAPHIC DESIGN STUDIO**

In this class, we will explore the methods which graphic designers use to communicate their ideas with impact, including playing with positive and negative space, scale (size,) color, typography and much more. Explore fun activities that will stimulate our creative problem-solving skills. We will discuss examples of creative work by professional designers, get our ideas flowing by making drawings and collages and then work to complete our designs. Projects will include T-shirt designs, posters, and animated graphics.

- **Graphic Design Fee: \$50**

### **23) INDIE GAME MAKER**

Calling all aspiring video game developers! Using the Unity game engine, students will create a 2.5D platformer using various 2D, 3D, & Sound assets. The main goal of this course is to have students design a game that's appealing and fun but also gives them a solid foundation in programming. Students will be able to create their own C# scripts that control behavior of the objects on screen as well as modify pre-written code provided by the instructor. Whether you have experience in coding or not, all that is required is a little bit of creativity and a passion for video games.

### **24) IT'S A SMALL WORLD**

Through music and songs, we will discover many countries and their musical culture: Korea, France, Ireland, Africa and the United States. You will build a likembe, also called kalimba and make your own "one of a kind" instrument out of recycled materials.

### **25) JUNIOR VARSITY**

Specifically designed for 5-7 year olds, this sports activity and recreational games program is a wonderful introduction to the world of sports. All activities are designed to enhance and develop motor skills, coordination and sportsmanship through active play and instruction. Some of these activities include: running games, parachute challenges, throwing, catching, kick ball and more.

### **26) KITE RUNNERS**

Kite flying is a very popular pastime in many countries including China where they were invented and which hosts the largest international kite festival on Earth. Colorful designs often emulate flying insects, birds and other animals. Campers will build artistic Chinese inspired life size and decorative kites to fly in the Challenge Camp sky.

### **27) K'NEXplorations**

This is a hands-on building experience designed to promote creativity and problem solving skills. Mathematical and Science design projects will be integrated to develop skill in construction using Rods and Connectors.

### **28) LEGO MINDSTORMS**

Bring the fascinating world of robotic technology alive with Lego Mindstorms EV3 Robots! This robotics course teaches the students the principles of assembling and operating an interactive Lego Robot. Mathematical standards will be addressed as well as hands on building of mechanical and electrical systems in robotics. Accurate measurement, geometric relationships, problem solving and reasoning skills will be stressed for success. Students will bring science to life utilizing many possible Lego designs in addition to their own creations.

### **29) LEGO SPIKE PRIME**

We are excited to introduce you to LEGO SPIKE PRIME! This new innovative system integrates Engineering, Robotics and Computer Science and promotes critical thinking through playful learning. Using LEGO bricks, the programmable multi-port Hub, and a coding language based on Scratch will help you build confidence, teamwork and solve complex problems with real world relevance. SPIKE Prime will help campers develop the essential 21st century skills needed to become the innovative minds of tomorrow.

### **30) LEGO WEDO ROBOTICS**

Introduce robotics and computer programming with the award winning Lego WeDo! This is a hands on, challenging and fun way to learn about robots! This class will expose students to engineering, logical thinking, computer programming and team working skills. Campers will build a variety of robots with Lego's and program their models to complete challenges, enhancing creativity and problem solving abilities.

### **31) LE PETITE PRINCE**

Visual, audio and tactile stimuli are all intertwined to build literacy skills in French language. Celebrate French children's books by reading and performing dialogues and songs based on the stories. Characters we will meet include Madeline, Caillou, Petit Ours Brun, Oui-Oui and Le Petite Prince.

### **32) LOGIC PUZZLES**

Train your brain as we tackle logic puzzles and other similar challenges. Develop your deductive reasoning skills as we learn Cryptograms, Nonograms, Syllogisms and Sudoku puzzles. We will even create our own puzzles to stump our family and friends.

### **33) MAGIC: THE GATHERING**

Back by popular demand! A game battle in which you and your opponent represent powerful sorcerers attempting to drive each other from the lands of Dominia. Your deck holds your tools: creatures, land, spells and artifacts.

### **34) MATH TESTING TIPS & TRICKS**

With standardized tests on the horizon for many of our campers, in this class we will learn tips and tricks for approaching math tests. Arm yourselves with strategies that allow you to determine the best approach to figuring out the solution while avoiding the traps set by the questions. Sharpen your pencils and your math skills!

### **35) MECHANICAL MARVELS**

A Rube Goldberg machine is a deliberately over-engineered machine that performs a very simple task in a very complex fashion, usually including a chain reaction. In this class, dominoes may knock over a marble into a pegboard activating a pulley triggering a golf ball into a zip line starting a toy truck that eventually grabs a tissue! You will investigate the fundamental concepts of engineering and construct wildly imaginative group mechanical marvels. Our inventors will be able to view a video of their wacky creation online to show to family and friends. Learn more at [www.rubegoldberg.com](http://www.rubegoldberg.com).

### **36) MINDFUL ART**

Campers will create works of art that encourage and facilitate a relaxed peaceful state of mind. In a friendly, creative, judgment free zone campers will be encouraged to tap into and connect with their mind, body, and soul that they will express through visual arts. Campers will experience working in many mediums including color pencil, paint, collage, and more. They will explore making mandalas, gratitude jars, dream catchers, dream paintings and beyond.

### **37) MINI NINJAS**

In this active class designed for younger campers, they will have fun exploring movement through creative elements. Utilizing props and obstacle courses, all will be physically challenged in a multitude of ways helping them gain body awareness and coordination. Campers will explore a range of movements including dynamic jumping, leaping and running as well as more controlled balance and stretching.

### **38) MIX MASTERS: THE ONES & TWOS**

Have you ever wanted to be the life of the party? In this workshop, campers will spin into the fast and exciting world of DJing. We will explore software that will enable you to cultivate an epic playlist, and perform in front of a crowd. By learning the fundamentals of cutting and transitioning music tracks to have a cohesive flow, you will become a party rocker!

- **Mix Master Fee: \$50**

### **39) NINJA WARRIOR**

In this active class, campers will have fun exploring movement through creative elements. Utilizing props and obstacle courses, all will be physically challenged in a multitude of ways helping them gain body awareness and coordination. Campers will explore a range of movements including dynamic jumping, leaping and running as well as more controlled balance and stretching. Speed and endurance will be improved as well as elements of engagement and focus. The goal of this class is to build body confidence and have fun.

### **40) ORIGAMI**

The term origami comes from the Japanese words “Oru” meaning “folded” and “Kami” meaning “paper.” It is an ancient art form spanning over 1000 years that has evolved into an international creative pastime! Through literature and folktale, we will learn the exquisite art of paper folding. Using a single (or several sheets) of decorative paper there are infinite creative possibilities and you will be amazed at the results of folding and manipulation! Part sculpture, part paper folding and all rigorous engineering. Origami today, embodies animals and fantasy figures in an array of dimensions.

### **41) PICKLEBALL**

This fast growing sport combines the elements of badminton, tennis and ping pong. Played on a court with paddles and wiffle balls, pickleball is easier than tennis and fun to play with your friends.

### **42) PINBALL WIZARD**

Construct your own PinBox Pinball machine with two interchangeable playboards that you will design. For makers, creative thinkers and game designers, the PinBox 3000 is a tabletop cardboard pinball kit that artfully integrates mechanical engineering, physics, sculpture, product design and performance! Light up your play board and be ready to “Tilt the Future!”

- **Pinball Kit Fee: \$50**

#### **43) PIXICADE GAME MAKER**

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 and then watch your doodles magically come to life as playable games. Campers will learn and use the exciting new Pixicade App and all of 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**

#### **44) POKEMON TCG**

Pokemon TCG is an exciting and longtime favorite card game of strategy and skill where campers collect, train, and battle the cute Pokemon characters that inhabit their world. Beginning and experienced players will take on the role of a Pokemon Trainer and play another Trainer to knock each other's Pokemon out of the battle! Your camp Pokemon deck will be supplied and booster packs await the masters!

- **Pokemon Fee: \$25**

#### **45) POP ART**

Enter the world of Andy Warhol and Roy Lichtenstein in this multi media painting class. We will use papers, magazines, plastics and more to complete your pop art paintings! Made on canvas, these inspired, bright and modern works of art will allow you to spark your imagination and creativity!

#### **46) PROJECT RUNWAY**

Budding designers can create paper doll international wardrobe designs for tops, jeans, dresses, gowns and even shoes. Students will develop their own stylish textile designs from a variety of materials including fabric, gauze, cotton, tulle, silk, cardboard, linen, paper and feathers. Their runway collection will be stored in their stylish designer trunk of haute couture clothes collages in petite sculptures.

#### **47) ROCKET UNIVERSITY**

Students will train to be real "rocket scientists" and "aerospace engineers" in this inspired offering. In "Rocket University" you will learn about the history of rockets from ancient Chinese fireworks, to modern day spacecraft and military applications while discovering principals of launching, trajectories, thrust, navigation, flight paths, altitudes, orbits, recovery methods, safety and more! Students will receive their individual rocket kits and assemble them while applying what they have learned to their design and construction. You will launch your rockets and record data.

- **Rocketry Fee: \$100**

#### **48) SKATEBOARD DECK DESIGN**

Skateboarding is about having fun and expressing your own individual style. Explore the world of pop and graffiti art by designing, sketching, drawing and painting to create your own brand of skateboards, logos, and all things skater! Your canvas is a skateboard, and campers will leave with their personally designed skateboard deck protected with clear coat, perfect for hanging as wall art or ready to add hardware for skating! Think of the possibilities and make your skateboard the coolest one on the block!

- **Skateboard Fee: \$100**

#### **49) SOCCER**

Soccer is the most popular team sport in the world. Learn the strategies for playing offense and defense and improve your dribbling, passing and shooting skills in this fast paced, action packed class.

### **50) STAGE DOOR**

Enter the world of theatrical production! Learn the art of costume and set design. Under the guidance of our artistic director, we will research, measure, design and create original costumes for the musical theatre productions of “The Descendants” and “Kid Frankenstein”. Costumes / scenery will be constructed of fabric, paper, foam board, paint and other materials. This imaginative behind the scenes process will bring our production to life and provide an awareness of the importance of stagecraft and design skills to the production. Participants from the theatrical cast are encouraged to join and other non-performers are all welcome!

### **51) STOP MOTION LABORATORY**

Whether you love drawing, painting and sculpture or whether you would like to write stories or act out dramatic scenes, you will have fun exploring the possibilities of animation. Spend a little time learning the basics of handling the camera setup and stop-motion app, then let your imagination take off as you bring your drawings to life, or create your own 3-D characters with modeling clay. You can also use small toys, or even animate real people in your films. Students will receive a digital copy of their films.

### **52) STRETCHING & MINDFULNESS**

Campers will move through a fun and active yoga flow. They will learn how to utilize different breathing techniques to help calm down, cool down, and find their center. We will explore several different stretching and mindfulness activities to help campers stay present, positive, and happy. Balance body and mind by developing both strength, flexibility and mental well-being to help campers create their own harmonious flow. Throughout the session, campers will keep a notebook so that they can continue to practice stretching, breath work, and mindfulness activities beyond their camp experience. Proper exercise clothing required: loose pants, T-shirt and yoga mat or towel.

### **53) SURVIVOR 2.0**

Orienteering, wilderness survival and emergency preparedness is about more than just lighting a fire and pitching a tent. Survivor 2.0 has been reimaged to inspire both new and returning campers. Campers can build a water filter from found objects, use emergency signaling methods, build shelter, find food, make emergency fires more than 5 different ways...even with a cell phone. First aid simulations, scavenger hunts, and geocaching challenges will teach campers valuable life skills. Our session will end with a “wild marshmallow” hunt, s’mores, stories and songs.

### **54) SWEET & JOYFUL BAKING**

In this baking class, we'll whip up a variety of different cookies and other sweet treats and focus on cookie decorating with amazing colors and styles! This class will offer artistic creativity while incorporating elements of math and science as it relates to baking. Campers will delight their families with the delicious goodies they will bring home to share.

- **Baking Fee: \$100**



## **55) SWIM & SPORTS**

Campers will learn to swim and have an introduction into the world of sports in this combination class. Swim instruction will occur on Mondays, Wednesdays and Fridays in the Iona athletic center indoor pool. On the alternate days, campers will participate in sports activities designed to enhance and develop motor skills, coordination and sportsmanship through active play and instruction. Campers must provide a swim suit, towel, goggles and Ziploc bag for wet items on swim days.

## **56) SWIMMING**

Learn to swim and have a splashing good time in the wonderful indoor pool this summer. Swim instruction and free swim time will be held on campus each day in the Iona athletic center! Campers must provide a swim suit, towel, goggles and Ziploc bag for wet items.

## **57) TURBO TRUCKS**

How would you like to race a remote control truck on the Challenge Speedway? In this class you will have the chance to race a fully ready Traxxas Rustler known for fun and durability and with more power, smoother control, better grip, and performance that makes it one of the fastest electric trucks available. Race around outdoor courses that you design with cones, ramps and more. Campers will take home their car/equipment in this action packed driving and racing class. With Traxxas' exclusive waterproof electronics, your Rustler can blast through dirt, puddles, mud and even snow, your R/C adventures are limited only by your imagination. See your car at <https://traxxas.com/products/models/electric/37054-1rustler>

- **Truck Fee: \$200**

## **58) VIVE LA FRANCE!**

Hop aboard the TVG and travel to Paris and the provinces of France. Discover the French countryside and Versailles. Traverse the Loire River, villages, food, and music. Students pack their suitcase and travel with a real boarding pass and train tickets from the SNCF. This is a very interactive program including role-plays to allow students to learn the basics of the French language. Allons-y!

## **59) WIX WEB DESIGN**

Creating interesting, dynamic Websites begins with knowing how to use the tools of Web design. We will be mastering Wix, an online software tool that will allow campers to create professional looking content. Through exploration of design concepts such as layout, contrast, readability, and interactive elements we will develop an understanding of what makes a great user experience. Campers will create websites on a variety of topics including movie reviews, game history, favorite musical genre, "how to..." and more. We will develop documentation skills through digital photography, explore proper digital citizenry and etiquette, and create interactive Web sites that will showcase campers interests.

## **60) ULTIMATE FRISBEE**

Ultimate Frisbee is an exciting, non-contact team sport that is played throughout the world and whose popularity continues to rise. Ultimate is a unique mixture of Frisbee, football and soccer, providing an exhilarating workout. The spirit of the game stresses sportsmanship and fair play.