

SUMMER CAMP 2019

STEAM WORKS STUDIO
125 Washington Valley road, Suite 2A, Warren NJ



Grade 1-2

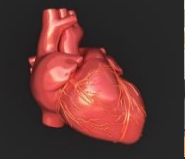
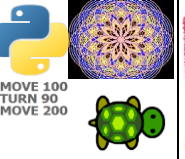
9-12p Morning Session	June 24-28	July 1-3	July 8-12	July 15-19	July 22-26	July 29-Aug 2	Aug 5-9	Aug 12-16	Aug 19-23	Aug 26-30
	Minecraft	Party in the USA	Forensic Files	Star Wars	Space Travel	Director's Cut	Sport Bots	Ancient Egyptians	Creature Craze	I am an Architect
	Obsessed with Minecraft? Join Minecraft camp to create your own games & animations! Learn to code using SCRATCH's easy "drag and drop programming". All projects are with Minecraft as the theme for the week. Coding helps young kids learn to think creatively, reason systematically, & work collaboratively.	Celebrate the birth of our country during the July 4th week at our "Party in the USA" mini camp! For 3 days campers will craft patriotic projects including simple electronics (LED lights, Magnets), animation and coding, art and crafts, rocketry, and LEGO robotics! This camp is sure to be a blast!	Somebody's stolen the President's rubies! The FBI needs your help to catch the thief! Learn all about forensics, fingerprinting, code breaking, and more to solve clues leading to the criminal's arrest. Campers become problem solvers and also learn to work in a team while having endless fun looking for this crafty thief!	Send your younglings off to Star Wars camp to train as Jedi Knights! We will learn to program robots similar to R2D2, craft clay aliens to use in stop motion animation, create galactic paintings, and build LED lightsabers! This camp is sure to get kids thinking about technology that is out of this world!	Space is the place! In this camp students are challenged to make a Lunar Base while learning robotics, science and engineering skills. They will use LEGO bricks, sensors, motors, gears, and block coding to prep their rover for an outerspace expedition! They will think and create projects about energy, water, food, air, transport on the moon!	Lights, camera, action! In Director's Cut, campers call the shots. Using Stop Motion Animation they will create their own mini movie masterpiece! From crafting clay characters to painting backgrounds, from editing to script writing, these budding "Spielberg's" will learn all there is about movie making.	Design & program a robot that can do Push-Ups And Pull ups. Design & learn to code an entertainer-Psy-Gangam style dancer bot to dance with music. A Biker robot that can cycle, balance and move. Test different gear combinations to make the bike go faster. Design and program to row a boat with a machine, and called it "Row-Bot". Let's join a Ski Race with our own	This summer...travel to ancient Egypt! Build your own Lego pyramid complete with sensor activated secret passages, hidden rooms, and a pharaoh's chamber! Laser-print your name onto a wooden plate in ancient hieroglyphics! Learn more about electronic circuits by crafting a mummy with light-up LED eyes! Even 3D print a sphinx!	Embrace your love of animals at our Animal Planet camp! We will be learning more about our favorite species through a multitude of projects including stop motion animation, LED circuits, robotics, art, and coding amongst others. Problem solving and creativity have never been this fun when you see your own robotic creature come alive and respond to you!	Build a detailed model of the New York City Skyline, including the Statue of Liberty! If you have a child with an interest in architecture, this camp is a must. Learn about domes from across the world! From igloos to Bucky Fuller's minimalist structural frames, this amazing shape has many uses. Building an Eiffel tower model & and much more!
	LUNCH (12-1p) + (Stretches & Physical Activities!)									
1-4p Afternoon Session	Pottery	Party in the USA	The Jungle Book	Crazy Chemistry	Avengers	Jurassic Park	Little Doctors	Acrylic Painting	Crazy Chemistry	Star Wars
	Create your own ceramic bowls, ornaments, figurines, and more at Pottery Camp! Practice your motor skills whilst throwing and sculpting clay, then create, paint, glaze, and fire gorgeous unique pieces you get to take home! This is one camp you don't want to miss.	Celebrate the birth of our country during the July 4th week at our "Party in the USA" mini camp! For 3 days campers will craft patriotic projects including simple electronics (LED lights, Magnets), animation and coding, art and crafts, rocketry, and LEGO robotics! This camp is sure to be a blast!	A Robotics program with a Jungle book theme! Think Mowgli™ and his animal friends! Monkey around using motors, gears, pulleys, and sensors to create fun Jungle themed missions! Campers will learn about simple machines like gears to create motion. It's problem solving & logical thinking with block coding!	Embrace your inner mad scientist at our Crazy Chemistry Camp! Conduct zany, safe experiments to learn all about elements, chemical properties, and reactions! Make oobleck and eat exothermic ice cream! Like the combination of baking soda and vinegar, this camp is sure to be a blast!	Assemble Avengers! Use your powers for good in this superhero themed camp! Craft an LED Ironman that really lights up! Grow kryptonite crystals, learn to draw your favorite Avengers characters, and animate your favorite characters! Don't miss out on this camp. It's going to be SUPER!	Obsessed with dinos? Sign-up for our Jurassic Park camp where campers will learn all about dinosaurs, how they evolved, where they roamed, what they ate, and why they're now extinct. Participate in an excavation to uncover mysterious fossils & build your own dinosaur out of laser-cut parts! Build a LEGO robotic moving dino!	Little Doctors camp presents medicine, science, and the importance of health & hygiene in an entertaining & fun way! Role play with tools doctors use in the real world to learn how the body works. Study cells and even grow bacteria! This camp is sure to inspire our little doctors of tomorrow!	Exploring acrylic painting techniques is a wonderful way to get used to the medium. Any time students play with an art material, they become more comfortable with it & they will approach future projects with confidence. We use small canvases so that artwork can be taken proudly home!	Embrace your inner mad scientist at our Crazy Chemistry Camp! Conduct zany, safe experiments to learn all about elements, chemical properties, and reactions! Make oobleck and eat exothermic ice cream! Like the combination of baking soda and vinegar, this camp is sure to be a blast!	Send your younglings off to Star Wars camp to train as Jedi Knights! We will learn to build & program robots similar to R2D2, craft clay aliens to use in stop motion animation, create galactic paintings, explore the planet Tatooine (and the Sand people) and build LED light-sabers! This camp is sure to get kids thinking about technology that is out of

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Grade 3 - 5

	9-12p Morning Session									
	June 24-28	July 1-3	July 8-12	July 15-19	July 22-26	July 29-Aug 2	Aug 5-9	Aug 12-16	Aug 19-23	Aug 26-30
	EV3 Battle Bots	Red, White & Blue	Home Bots	Animal Safari	Space Engineers	Going Green	Wearable Electronics	Stop Motion	Med Bots	EV3 Mars Mission
										
	Campers learn robotics, engineering, and coding to build a fighting robot! Students can make their own custom design and accessorize them! Utilize LEGOs, gears, and sensors to create a robot that responds to your command! EV3 Battle Bots is an excellent way to motivate children to get deeper into robotics while enhancing their creativity, logical thinking, and social skills.	Join us in celebration of the 243rd birthday of the United States of America! Spend 3 days crafting patriotic projects including red, white, and blue smokers, a flag toting robot, and light-up LED fireworks! Can we use some magic code to make our fireworks to come alive? Learn simple electronics, CAD & 3D Printing and a little about our nation's history too!	Kick back and relax while robots do the work for you! Learn to build and program robots that will fold your clothes, feed your pets, sweep LEGO pieces and clean your room, and even alert you to intruders! How about a self-balancing 2 wheeled butler! This camp is sure to enhance students' engineering and programming skills while having incredible fun!	Go wild at Animal Safari camp! Learn more about your favorite animals through STEAM activities! Design clay animal characters to star in a stop motion film you direct! Make a 3D LED light-up anglerfish, create a Cheetah animation! We as a team will make the perfect and sustainably designed Safari park complete with lights, cardboard layouts, water park and animals!	Campers use the engineering design process & team work to create a satellite. These satellites will have to survive a fall from 1m as well as a straw rocket launch without losing any parts. Campers will be using science & math. They will be presented fun & challenging NASA activities they're sure to love.	In a world where we are rapidly running out of resources, sustainability is key! Learn all about green technologies and clean energy. This is a very hands-on camp where students will build solar powered phone chargers and robots that can water house plants. They will also spend time outdoors planting milkweed to aid pollinators.	Make a fashion statement with electronics you can wear! Craft your own light-up LED crown, program a flashing wearable safety light, make your own laser glove, and more! Make a moving LED light wearable bracelet, Kaleidoscopic LED ring Goggles or a LED Backpack! We will use conductive threads, LEDs, simple electronics and some coding as required!	You see stop motion animation all the time on TV and in movies even if you don't realize it. This camp offers children the chance to create their own original stories. Throughout the week they will craft clay characters, design backdrops, and learn to edit their films. Be your own movie director, plan, story board, think about props and actors as well as music and sounds.	Build robots that can change and save lives! Medical Robotics! Robotics is helping mankind overcome many medical conditions. Learn to create a prosthetic arm or a Cyborg Arm, program a bed-side bot that responds to your voice, even craft a robot to build bone! Use your design, coding skills! Have fun and learn invaluable skills at Med Bot camp!	In EV3 Mars Mission campers learn to build and program a Mars rover! They must work as a team to overcome a series of challenges including craters and uneven terrain. This camp prepares students for LEGO competitions of a similar nature. Campers will learn sensor control, programming, testing and engineering design!
LUNCH (12-1p) + (Stretches & Physical Activities!)										
	1-4p Afternoon Session									
	Escape Room	Red, White & Blue	Stop Motion	Little Doctors	EV3 Mars Mission	Pottery	Masterpiece Art	Locomotion	Python Art	Cooking & Chemistry
										
	Will you escape? Use problem solving skills and team work to escape a "locked" room. Complete electrical, coding, programming, and other challenges to find your way to freedom! This camp is sure to enhance students' engineering, logical and creative thinking skills. Learn CAD & 3D Print a special key that sets you free!	Join us in celebration of the 243rd birthday of the United States of America! Spend 3 days crafting patriotic projects including red, white, and blue smokers, a flag toting robot, and light-up LED fireworks! Can we use some magic code to make our fireworks to come alive? Learn simple electronics, CAD & 3D Printing and a little about our nation's history too!	You see stop motion animation all the time on TV and in movies even if you don't realize it. This camp offers children the chance to create their own original stories. Throughout the week they will craft clay characters, design backdrops, and learn to edit their films. Storyboard, make a plot, identify actors and props to use. You are the director of your own movie!	Interested in health, medicine, and the human body? Sign-up for our Little Doctors camp! Diagnose patients & look at your very own cells from underneath a microscope! Collect bacteria and grow it in a petri dish. Learn how to sew stitches & 3D print a model of the heart. Campers design a stethoscope & a cool microscope to take home!	In EV3 Mars Mission campers learn to build and program a Mars rover! They must work as a team to overcome a series of challenges including craters and uneven terrain. This camp prepares students for LEGO competitions of a similar nature. Campers will learn sensor control, programming, testing and engineering design!	Get your hands dirty at Pottery camp! Learn how to throw clay on a wheel to make bowls, mugs, vases, and more! Craft figurines and make holiday ornaments. Have fun learning to paint, glaze, and fire pieces you get to take home at the end of the week! Highly creative camp that teaches a variety of art and social skillsets!	Study the styles and techniques of world famous artists such as Van Gogh, Degas, Picasso, Warhol, and Da Vinci. Learn from the masters and enhance your own artistic skills. Try your hand at a plethora of mediums from canvas painting to charcoal, and digital to watercolor. Unleash your creativity at Masterpiece Art camp!	Campers look at the nature and study many forms of locomotion like Geckos, Snakes, Scorpions and then apply the engineering design process to design and build Robots with Suction Cups to climb walls or move using serpentine action or use multiple legs. This Camp is surely going to encourage students to observe the marvels of nature and think deeper about mechanical movements!	Python Art camp teaches children to create art from coding! Learn to create stunning colorful mandalas from simple algorithms! Your creations are sure to WOW! Learn basics of this simple but powerful language and its language constructs like loops, conditionals, lists. Employ graphics libraries using Turtle & tKinter & make beautiful simple games!	Learn life-long skills used in cooking while learning science at our Cooking & Chemistry camp! Discover colloids, look at yeast under a microscope, make rock salt ice cream & grow candy crystals! Science has never been so sweet! Baking & cooking with hands-on Chemistry & live projects will leave sweet memories of this Camp!

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Grade 6 - 8

	9-12p Morning Session									
	June 24-28	July 1-3	July 8-12	July 15-19	July 22-26	July 29-Aug 2	Aug 5-9	Aug 12-16	Aug 19-23	Aug 26-30
	Java Boot Camp	Maker Lab	DIY Smart Car	Unity Programming	Blender 3D	Coding with Python	Sustainable Science	Electronics w Soldering	VEX ROBOTICS	Wearable Tech.
	A Jumpstart to Coding! Begin with a quick programming orientation using the Eclipse environment. Campers will learn to program using best practices and understand what makes JAVA unique and so powerful. JVM, Objects & Classes, Data Types, Arrays, Decision Structures, File I/O & Graphics are introduced!	CAD, 3D Printing, Soldering & Electronics, Cheap microcontrollers ex. Arduino/Raspberry Pi and coding... What can you create/invent and take home? You can use our maker lab and tools, project ideas, step by step guidance from experts and create your own invention!	Learn the fundamentals of electrical engineering. Explore autonomous robotics code with Arduino microcontroller and its sensor, motor eco-system. Understand & learn to write code for line tracking, obstacle avoidance, IR remote control & Bluetooth control with app on phone. Take your autonomous car home!	We will discuss the very basics of coding, including variables, functions and classes and how to use them. We will also discuss using the most common of Unity's built in functions and when to use them and when to write our own. When this session is finished, we will be able to start the introductory project Roll-a-ball, and then onto more advanced projects like "Space Shooter" and "Nightmares".	Blender is a free and open source 3D creation suite. It supports the entirety of the 3D pipeline —modeling, rigging, animation, simulation, rendering, compositing & motion tracking. Thanks to high quality rigging and animation tools, Blender is used for numerous short films, ads, TV series and feature films now.	Python is a powerful, expressive programming language that's easy to learn and fun to use. We build cool Graphics & Games during the course. We use IDLE as a development tool as well as common Libraries that help with Graphics and Game building like tinkert and pygame to explore the power of Python language!	Sustainable Science is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Ex. Generating Microbial fuel cell for electricity, make an emergency light powered by fire and water, making a water powered battery, a self watering plant and more.	Learning how to solder is quite easy and, with a little practice, you will be soldering your own electronics circuits. You can create something new that never existed before. Campers in this class learn about electronics circuits to build LED flashers, a radio transmitter, a touch sensing lamp, a 555 IC tone generator.	Build a fully autonomous robot using the included programmable VEX ARM® Cortex® based Microcontroller & various sensor types. Students learn programming skills such as Robot-C, Robot Design and engineering process. Students can get ready and join teams to participate in VEX competitions organized widely across the nation	What if your clothing could change color based on mood or respond to your racing heartbeat? Welcome to the world of shoes that can dynamically shift your height, jackets that display when the next bus is coming, and neckties that can nudge your project partner across the room. Build your own Wearable!
LUNCH (12-1p) + (Stretches & Physical Activities!)										
	1-4p Afternoon Session									
	Anime & Cartooning	VEX ROBOTICS	Electronics w Soldering	Green Technology	Coding for the Web	Synthetic Biology	VR/AR Workshop	Unity Programming	Java Fundamentals	Coding with Python
	What is the difference between the two Art styles? No matter how you look at it, an anime is a cartoon! The main difference is that an anime is considered a Japanese style of cartoon. Get deeper into this fun art class & learn from the basics to where you can take it using instructor led techniques for both forms!	Build a fully autonomous robot using the included programmable VEX ARM® Cortex® based Microcontroller & various sensor types. Students learn programming skills such as Robot-C, Robot Design and engineering process. Students can get ready and join teams to participate in VEX competitions organized widely across the nation	Learning how to solder is quite easy and, with a little practice, you will be soldering your own electronics circuits. You can create something new that never existed before. Campers in this class learn about electronics circuits to build LED flashers, a radio transmitter, a touch sensing lamp, a 555 IC tone generator.	Campers will get a great introduction to Green sustainable technologies by building a Simple Solar Charging Station for mobile phones or other devices, an amazing Solar powered Flashlight, a zero cost working Solar Water Pump, Solar powered bag packs and a Wind Turbine design! Campers will absolutely love this useful camp!	Learn Database (MySQL) and the full Web stack for creating useful data driven Web Sites. Learn HTML5, Javascript, CSS, MySQL with step by step easy to understand examples. You will create multiple end-to-end applications that will make you a confident Web Site developer for school or advanced home projects!	In this Camp, you will learn the fundamentals of synthetic biology in a hands on way. CRISPR-Cas9 is a genome editing tool that is creating a buzz in the science world. It is faster, cheaper and more accurate than previous techniques of editing DNA and has a wide range of potential applications. You will do live Gene editing!	Oculus is a hardware platform consisting of a headset & earphones that allows people to experience virtual reality. Learn how to use the Unity® engine and tackle the unique design challenges that arise when building for Virtual Reality. We then go and apply our skills to create two live Augmented Reality applications!	We will discuss the very basics of coding, including variables, functions and classes and how to use them. We will also discuss using the most common of Unity's built in functions and when to use them and when to write our own. When this session is finished, we will be able to start the introductory project Roll-a-ball, and then onto more advanced projects like "Space Shooter" and "Nightmares".	A Jumpstart to Coding! Begin with a quick programming orientation using the Eclipse environment. Campers will learn to program using best practices and understand what makes JAVA unique and so powerful. JVM, Objects & Classes, Data Types, Arrays, Decision Structures, File I/O & Graphics are introduced!	Python is a powerful, expressive programming language that's easy to learn and fun to use. We build cool Graphics & Games during the course. We use IDLE as a development tool as well as common Libraries that help with Graphics and Game building like tinkert and pygame to explore the power of Python language!

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Camp Details

Morning Session: 9 AM - 12 PM

Lunch: 12 PM - 1 PM (Please provide packed Lunch from home)

Afternoon Session: 1 PM - 4 PM

Early care (8:00am onwards) \$75

After care (until 6:00pm) \$100

Both (AM & PM) \$150

Pricing

Grade 1-2, 3-5 - Half Day \$225, Full Day \$450

Grade 6-8 - Half Day \$250, Full Day \$500

For Questions Contact us:

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