STEM World
2019-2020
School Year Calendar

August 19

Su	M	Tu	W	Th	F	Sa
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September 19

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October 19

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November 19

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December 19

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January 20

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March 20

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April 20

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May 20

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June 20

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July 20

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August 20

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September 20

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LEGEND

Workshop Sessions

- Session 1 (9/9/19 - 11/3/19)
- Session 2 (11/4/19 - 1/19/20)
- Session 3 (1/20/20 - 3/15/20)
- Session 4 (3/16/20 - 5/24/20)

School Closed - Holiday

STEM World Camps

Thanksgiving Camp (11/25 - 11/27)
Winter Camp 1 (12/23, 12/26, 12/27)
Winter Camp 2 (12/30, 1/2, 1/3)
Spring Camp 1 (3/30 - 4/3)
Spring Camp 2 (4/6 - 4/10)
Summer Camp (6/8 - 8/14)

Please check our website for more information about our workshops and camps. Sign up for our mailing list to stay up-to-date about STEM World programs, products, news, events, and more!

www.stemworld.net
FB/IG/Twitter: @stemworldlabs

STEM World Workshop 2019-2020 Calendar

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
(Available for makerspace, meetups, adult classes, teacher training - email us to inquire)	**Course Info** ROBOTICS (Apprentice) STEM School Grade: 3-5 10:00 - 11:00	**Course Info** ROBOTICS (Scholar) STEM School Grade: 6-8 10:00 - 11:30	**Course Info** STEM CORE (Apprentice) STEM School Grade: 3-5 10:00 - 11:00	**Course Info** PROGRAMMING (Apprentice) STEM School Grade: 3-5 10:00 - 11:30	**Course Info** SCIENCE LABS STEM Kidz Grade: K-2 10:00 - 11:00	(Available for makerspace, meetups, adult classes, bday parties - email us to inquire)
	Course Info PROGRAMMING (Apprentice) STEM School Grade: 3-5 11:15 - 12:45	**Course Info** BIOLOGY (Scholar) STEM School Grade: 6-8 11:45 - 01:15	**Course Info** ENGINEERING (Scholar) STEM School Grade: 6-8 11:15 - 12:45	**Course Info** BIOLOGY (Master) STEM School Grade: 9-12 11:45 - 01:15	**Course Info** JR PROGRAMMING STEM Kidz Grade: K-2 11:15 - 12:15	
	Course Info ENGINEERING (Scholar) STEM School Grade: 6-8 01:15 - 02:45	**Course Info** ROBOTICS (Master) STEM School Grade: 9-12 01:30 - 03:00	**Course Info** PROGRAMMING (Scholar) STEM School Grade: 6-8 01:15 - 02:45	**Course Info** ROBOTICS (Master) STEM School Grade: 9-12 01:30 - 03:00	**Course Info** JR ROBOTICS STEM Kidz Grade: K-2 12:30 - 01:30	**Course Info** AVIATOR SCHOOL STEM Teens Ages: 12-17 01:00 - 04:00
	Course Info SCIENCE LABS STEM Kidz Grade: K-2 03:15 - 04:15	**Course Info** ROBOTICS (Apprentice) STEM Labs Grade: 3-5 03:15 - 04:15	**Course Info** JR ROBOTICS STEM Kidz Grade: K-2 03:15 - 04:15	**Course Info** BIO & CHEM (Apprentice) STEM Labs Grade: 3-5 03:15 - 04:15	**Course Info** ROBOTICS (Scholar) STEM Labs Grade: 6-8 02:00 - 03:30	
	Course Info ENGINEERING (Apprentice) STEM Labs Grade: 3-5 04:30 - 06:00	**Course Info** BIO & CHEM (Apprentice) STEM Labs Grade: 3-5 04:30 - 06:00	**Course Info** ENGINEERING (Scholar) STEM Labs Grade: 6-8 04:30 - 06:00	**Course Info** STEM GIRLZ STEM Girlz Grade: 3-6 04:30 - 06:00	**Course Info** PROGRAMMING (Apprentice) STEM Labs Grade: 3-5 04:00 - 05:30	

STEM GIRLZ	Our girls-only sessions feature the best of our science labs, only with no boys allowed! We provide options for single or multiple day sessions. Our curriculum is thoughtfully designed to cover all skill levels - so, with or without experience, students are sure to be challenged! We provide engaging hands-on activities - fostering curiosity through exploration, discovery and doing. This is at the heart of what we do to inspire future scientists.
STEM KIDZ	For our youngest future scientists, grades K-2, STEM Kidz focuses on fun and exploration! Students engage in hands-on activities designed to foster their fascination and curiosity, through popular topics that capture the imagination. Students will grow in confidence as they develop the fundamental scientific skills of observation, testing, and teamwork.
STEM LABS	STEM Labs is our after-school 8-week program for students grades 3 and up. Sessions include weekly classes in core topics such as robotics, engineering, computer programming, biology and chemistry and more! Most importantly, we've designed our curriculum to cover all skill levels. Apprentice programs cover students grades 3-5, Scholar is meant for grades 6-8 and Master is meant for grades 9-12. No matter the grade level, students are sure to be engaged in our uninque brand of after-school STEM classes!
STEM SCHOOL	Our program specifically designed for homeschooled students, ages 8-18, is offered in progressive, 8-week sessions in core topics such as biology, chemistry, physics, engineering, robotics, programming and more. Our curriculum is carefully designed to compliment state standards, but with our own, unique approach that emphasizes hands-on activities and "three dimensional" learning - giving students a more practical, relevant perspective of science. Our curriculum also covers all skill levels – so, with or without experience, students are sure to be challenged!
TEEN LAB	Workshops that truly inspire creativity & Innovative spirit (Drone Academy, Cinema Lab, Aviator Lab)

Course	Program	Level	Description
STEM CORE	STEM Kidz	Kidz (Gr K-2)	For our youngest future scientists, we focus on fun and exploration! Students engage in hands-on activities designed to foster their fascination and curiosity, through popular topics that capture the imagination. Students will grow in confidence as they develop the fundamental scientific skills of observation, testing, and teamwork. Each session focuses on one subject. Each 8-week block features a selection from our core range of STEM fields: chemistry, biology, astronomy, physics, inventor/creator (engineering), geology, paleontology, archaeology, geography, environmental science, robotics, and programming.
PROGRAMMING	STEM Kidz	Kidz (Gr K-2)	The Scratch course introduces coding concepts to the young imaginative minds. Kidz coders learn basic commands including moving sprites forward and turning left/right, then build their own fun stories and characters through sequences, loops, conditionals. Students are encouraged to construct creative games and detail the steps to bring their imagination to reality. We believe that every child should be given the opportunity to learn how to code. Scratch is a preparatory step for young children to learn how to think sequentially, explore cause and effect, and develop design and problem-solving skills.
ROBOTICS	STEM Kidz	Kidz (Gr K-2)	In Jr Robotics, students learn to explore, build, code and test robots and use them for engaging STEM challenges. Students will enjoy learning about motors, sensors, gears and more. No prior robotics experience required. Students will also learn about programming through the Lego programming interface. There are levels 1 - 3 in this course so your student can enjoy this class multiple times. Students will start by making beginner robots and progress to advanced robotics with advanced programming.
STEM CORE	STEM Girlz	Apprentice (Gr 3-6)	Over an 8-week block, our most popular Biology and Chemistry workshops are featured alongside a taste of our Inventor/Creator Lab, and other selected STEM subjects, including Robotics, Environmental Science, Astronomy, Paleontology, and more!
STEM CORE	STEM School	Apprentice (Gr 3-5)	We focus on fun and exploration! Students engage in hands-on activities designed to foster their fascination and curiosity, through popular topics that capture the imagination. Students will grow in confidence as they develop the fundamental scientific skills of observation, testing, and teamwork. Each session focuses on one subject. Each 8-week block features a selection from our core range of STEM fields: chemistry, biology, astronomy, physics, inventor/creator (engineering), geology, paleontology, archaeology, geography, environmental science, robotics, and programming.
BIO & CHEM	STEM Labs	Apprentice (Gr 3-5)	Students get an overall introduction to biology and related chemistry through our proven, hands-on activities.Students will explore the living world, including learning to use microscopes to examine a variety of plant and animal specimens, begin to understand the periodic table and experiment with a variety of chemical interactions.

Course	Program	Level	Description
ENGINEERING	STEM Labs	Apprentice (Gr 3-5)	Machines are at the heart of nearly every engineering project. In this series, younger students will learn the major types, how they work and how to build and utilize a variety of simple machines each week, including pulleys, levers, wheels and axles, inclined planes, screws and wedges, all to understand concepts of mechanical advantage, friction, conservation of energy and more!
PROGRAMMING	STEM Labs STEM School	Apprentice (Gr 3-5)	JavaScript is a simple and easy-to-learn programming language. The course allows young coders to complete engaging programs, solve challenging puzzles, and build their own games in JavaScript. They will gain confidence in the basics of programming logic and computational thinking, and demonstrate a strong understanding of JavaScript syntax.
ROBOTICS	STEM Labs STEM School	Apprentice (Gr 3-5)	For robotics newbies or enthusiasts, this is the perfect program to introduce them to robotics or foster further interests for those with some experience. Students will develop technical skills and understanding, learning both the engineering aspects of robotics along with coding, all while also learning about related science concepts, math, and how robotics is part of our world. Get them off to the right start in robotics with this integrated STEM approach.
BIOLOGY	STEM School	Scholar (Gr 6-8)	Middle schoolers get hands-on in biology with a variety of labs and experiments designed to challenge and inspire their thinking about the living world! They'll engage in experiments each week and learn proper microscope use, how to make slides, molecule identification, cell differentiation, photosynthesis and much more! All of our STEM School series classes are designed to compliment state standards being taught at home.
ENGINEERING	STEM Labs STEM School	Scholar (Gr 6-8)	We teach students the principals of engineering, applied physics, along with 3D design/printing, then have them engage in various engineering projects, including bridges, vehicles, levers, pulleys, gears, drives, and more! They'll take what they've learned over the first six weeks to then invent, build and compete in creative projects in the final two weeks!
PROGRAMMING	STEM School	Scholar (Gr 6-8)	Python is a great and friendly language to use and understand the basic components of computer programming. This Python course includes hands-on exercises to help you understand the components of Python programming while incrementally developing more significant programs.The projects in this course will be based on assignments which will relate to real-world problems. No previous programming knowledge needed. Join us to start your computer science journey!
ROBOTICS	STEM Labs STEM School	Scholar (Gr 6-8)	This is more than just a robotics workshop. Our carefully-designed program integrates science concepts, as well as math and engineering skills, and shows the relevance of robotics to our everyday lives. This is a real STEM experience. Students of all experience levels will be engaged by an exciting four-week project that takes them right the way through the process of building and programming their own robots. Each eight-week course offers a fresh topic, meaning your budding robotics engineers can come back time after time to continue to develop their skills and expertise.
BIOLOGY	STEM School	Master (Gr 9-12)	High schoolers get hands-on in biology with a variety of labs and experiments designed to challenge and inspire their thinking about the living world! They'll engage in experiments each week and learn proper microscope use, how to make slides, molecule identification, cell differentiation, photosynthesis and much more! All of our STEM School series classes are designed to compliment state standards being taught at home.
ROBOTICS	STEM School	Master (Gr 9-12)	Experienced students learn everything they need to build and program their own multi-tasking Arduino robot! Throughout the course, students design, build and program their own robotic platform with Arduino and Robot C programming language, using various sensors and micro-controllers. In addition, they learn how to perform "simulation" - an important tool in engineering design. For the true robotics engineer, this course allows students to plan their own projects, use creative engineering and scientific tools, and program with a powerful programming language! Prerequisite: Programming and robotics experience preferred. Ability to follow complex instructions required.
TL - AVIATOR	Teen Labs	(Gr 6-12)	Our version of "flight school." Our expert FAA certified helicopter flight instructor (with 11,000+ flight hours and lots of "war stories") will cover the principles of aerodynamics and flight, mechanical systems, rules/regulations, communications, weather and maps/navigation. In additional to flying several missions on virtual computer simulators, each student will also get several sessions on a professional flight simulator using realistic aircraft controls on our large HD screen, as well as other realistic training, ending with a field trip to a local airstrip! Bring your flight suit future pilots/astronauts and be ready to have fun!