



In association with Edison Board Of Education

2 week summer program at Menlo Park School



Jul 10-Jul 14	1-2 Grade	1-2 Grade	3-5 Grade	3-5 Grade	3-5 Grade	3-5 Grade	6-8 Grade	6-8 Grade	6-8 Grade
Morning	NANO BOTS - Animal Antics	Amazing World of Cells!	EV3 - MARS MISSION	PYTHON JR	Crazy Chemistry	3D PRINTING & CAD	RASPBERRY PI	Arduino	JAVA FUNDAMENTALS
Afternoon	Silly Circuits	CRAZY CHEMISTRY	JAVA MINECRAFT	FLIGHT SCIENCE	ROBOT OLYMPICS - EV3	ELECTRONICS LAB	Python	ELECTRONICS & SOLDERING	3D PRINT QUADCOPTER

Jul 17-Jul 21	1-2 Grade	1-2 Grade	3-5 Grade	3-5 Grade	3-5 Grade	3-5 Grade	6-8 Grade	6-8 Grade	6-8 Grade
Morning	NANO BOTS - MILO the Engineer	CRAZY CHEMISTRY	ELECTRONICS LAB	3D PRINTING & CAD	OPTICS & LASERS	FLIGHT SCIENCE	Python	ROCKET SCIENCE	ELECTRONICS & SOLDERING
Afternoon	Silly Circuits	NANO BOTS - SHOOT FOR THE STARS	EV3 - ART BOTS	Crazy Chemistry	3D PRINTING & CAD	PYTHON JR	Arduino	JAVA FUNDAMENTALS	RASPBERRY PI

1. 3hr Camp Duration for all Camp sessions
2. No Kit sharing. All students get to have the full experience! Laptops/Kits/Parts.
3. Camp Price - **FULL DAY = \$295, HALF DAY = \$195** (5% sibling discount)
4. Some programs (highlighted in GREEN) need outdoor/ground facility

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Program Details for grades 1-2

		10 Jul - 14 Jul		17 Jul - 21 Jul	
MORNING (9-12 PM)	Grades 1-2	Grades 1-2	Grades 1-2	Grades 1-2	Grades 1-2
	<p>ANIMAL ANTICS</p> <p>Enhance students' curiosity and science and engineering skills with a wonderful introduction to ROBOTICS with LEGO Bricks, Tilt and Motion Sensors, Motors and gears, Block coding. Children will be buiding these fun Animal Robots with and then sensing and controlling them using block coding. Develop spatial thinking, motor skills, creative and logical problem solving!</p>	<p>Amazing World of Cells!</p> <p>A hands-on Biology class where kids will enjoy observing and learning via compound microscope screen projectors animal and plant cells celery leaf, corn stem, lotus root, cabbage leaf, pumpkin ovary, ginger root, honey bee antenna, butterfly wings, sunflower pollen. Research is Yeast alive? Test for proteins, cell structure & Osmosis, extracting DNA from your own cells.</p>	<p>MILO THE ENGINEER!</p> <p>Enhance students' curiosity and science and engineering skills with a wonderful introduction to ROBOTICS with LEGO Bricks, Tilt and Motion Sensors, Motors and gears, Block coding while MILO pretends to be a super engineer lifting tables, dragging and cleaning up spaces. Block coding is super easy and fun while developing creative & logical problem solving skills!</p>	<p>CRAZY CHEMISTRY</p> <p>Practical Chemistry is lots of fun! Learn about the chemistry that you encounter every day in your house and at school. Experiment hands-on with real chemical reactions and test different liquids, salt, vinegar and learn about chemistry. Create your own chromatography applied Tshirt to take home. What is Elctrolysis? Make and eat exothermic ice cream!</p>	
LUNCH TIME (12:00 - 1:00 PM)					
AFTERNOON (1-4 PM)	<p>SILLY CIRCUITS</p> <p>Learn about Electronics while doing fun crafts. Add LED lights, Motors, Sound to your paper circuits ex Greeting Cards, Paper crafts, Origami projects. Explore the fun world of electronics! Squishy circuits are fun Play Dough based circuits with Lights, Sound and movement like a glowing LED light clay Frog or a mean looking Octopus that makes sounds!</p>	<p>CRAZY CHEMISTRY</p> <p>Practical Chemistry is lots of fun! Learn about the chemistry that you encounter every day in your house and at school. Experiment hands-on with real chemical reactions and test different liquids, salt, vinegar and learn about chemistry. Create your own chromatography applied Tshirt to take home. What is Elctrolysis? Make and eat exothermic ice cream!</p>	<p>SILLY CIRCUITS</p> <p>Learn about Electronics while doing fun crafts. Add LED lights, Motors, Sound to your paper circuits ex Greeting Cards, Paper crafts, Origami projects. Explore the fun world of electronics! Squishy circuits are fun Play Dough based circuits with Lights, Sound and movement like a glowing LED light clay Frog or a mean looking Octopus that makes sounds!</p>	<p>SHOOT FOR THE STARS</p> <p>A LEGO Robotics program with a SPACE theme. Think STAR WARS™ and Lunar Landers and Mars Rovers! Campers will have a blast using motors, gears, pulleys and motion sensors to create fun space themed LEGO builds! Campers will learn about simple machines like gears to create motion! Develop problem solving and logical thinking with block coding!</p>	

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Program Details for grades 3-5

10 Jul - 14 Jul				17 Jul - 21 Jul			
MORNING (9-12 PM)							
EV3 - MARS MISSION	PYTHON JR	CRAZY CHEMISTRY	3D PRINTING & CAD	ELECTRONICS LAB	3D PRINTING & CAD	OPTICS & LASERS	FLIGHT SCIENCE
Learn about the challenges of creating and operating robots beyond our planet. Build Robots with Infrared, touch and color sensors and overcome terrain obstacles by applying engineering design and cool programming techniques! Applied robotics programs are great for engaging children in math, science, engineering, design, collaboration!	Python is a powerful, expressive programming language that's easy to learn and fun to use. Python for kids easily brings kids into the world of programming. Turtle graphics and tKinter allow students to enjoy making fun graphics, create music and game and animation projects while learning Python language basics. A fun way for a young child to get introduced to coding!	Practical Chemistry is lots of fun! Learn about the chemistry that you encounter every day in your house and at school. Experiment hands-on with real chemical reactions and test different liquids, salt, vinegar and learn about chemistry. Create your own chromatography applied Tshirt to take home. What is Elctrolysis? Make and eat exothermic ice cream! Make OOBLEK and bouncy balls!	The CAD and 3D Printing camp introduces students to 2-D sketching and basic 3-D modeling. Primitive shapes, measurement, hollow objects, assemblies Students learn the tools needed to design exciting projects. The last day is for coming up with your own complete design. Students keep the 3-D printed printed models that they make! Save all your work and continue learning more!	Young makers can explore this exciting and popular field by learning the basics of electronic circuits and how electronic components work, which they can then apply to an idea of their own. They will be able to create their project using everyday materials. Students will use breadboards and will learn to build circuits that blink, squeak, tick and whirl.	The CAD and 3D Printing camp introduces students to 2-D sketching and basic 3-D modeling. Primitive shapes, measurement, hollow objects, assemblies Students learn the tools needed to design exciting projects. The last day is for coming up with your own complete design. Students keep the 3-D printed printed models that they make! Save all your work and continue learning more!	This practical Physics program demystifies concepts in Optics (Light as waves, mirrors, lenses, Snell's laws, how do lasers work, communication with light etc. with a hands-on learn by making approach. We build projects like Periscopes, Galilean telescopes, Projectors, Virtual Reality Goggles, Laser experiments, optical illusions and much more!	Design and build a variety of flying machines, then launch them! How high can you go? Think gliders, kites, rocket s, and you are on the way to embracing all the engineering fun to be had! Build a complete R/C airplane from scratch with step by step guidance from the teacher. Last day of Camp is reserved for test flights outside! The final airplanes can be purchased with a parts fee!
LUNCH TIME (12:00 - 1:00 PM)							
JAVA MINECRAFT	FLIGHT SCIENCE	ROBOT OLYMPICS - EV3	ELECTRONICS LAB	EV3 - ART BOTS	CRAZY CHEMISTRY	3D PRINTING & CAD	PYTHON JR
A unique opportunity for young students to learn Java in an exciting & meaningful way. For every item, block or creature they want to add, kids first design the graphics, armor, skin and then add or modify JAVA code to quickly program their new features or change surroundings or character's behavior. Students can then take what programs they build home!	Design and build a variety of flying machines, then launch them! How high can you go? Think gliders, kites, rocket s, and you are on the way to embracing all the engineering fun to be had! Build a complete R/C airplane from scratch with step by step guidance from the teacher. Last day of Camp is reserved for test flights outside! The final airplanes can be purchased with a parts fee!	Learn about sport mechanics, construction for competition and control design. Build robots to compete in races, obstacle courses, and other competitions. This camp teaches a whole set of engineering techniques and design as well as programming with Mindstorms Robots to control Robots using various Sensors and the infra red remote control!	Young makers can explore this exciting and popular field by learning the basics of electronic circuits and how electronic components work, which they can then apply to an idea of their own. They will be able to create their project using everyday materials. Students will use breadboards and will learn to build circuits that blink, squeak, tick and whirl.	Learn about the color spectrum and human vision. Build spin art machines, drawing robots and kinetoscopes (moving pictures). Each day of the camp is a completely new fun Robot building and block coding challenge with art or music in mind. Learn about light, color, touch sensors and controlling your robots while building fun robots!	Practical Chemistry is lots of fun! Learn about the chemistry that you encounter every day in your house and at school. Experiment hands-on with real chemical reactions and test different liquids, salt, vinegar and learn about chemistry. Create your own chromatography applied Tshirt to take home. What is Elctrolysis? Make and eat exothermic ice cream! Make OOBLEK and bouncy balls!	The CAD and 3D Printing camp introduces students to 2-D sketching and basic 3-D modeling. Primitive shapes, measurement, hollow objects, assemblies Students learn the tools needed to design exciting projects. The last day is for coming up with your own complete design. Students keep the 3-D printed printed models that they make! Save all your work and continue learning more!	Python is a powerful, expressive programming language that's easy to learn and fun to use. Python for kids easily brings kids into the world of programming. Turtle graphics and tKinter allow students to enjoy making fun graphics, create music and game and animation projects while learning Python language basics. A fun way for a young child to get introduced to coding!

MORNING (9-12 PM)

AFTERNOON (1-4 PM)

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Program Details for Grades 6-8

		10 Jul - 14 Jul			17 Jul - 21 Jul		
		Grades 6-8	Grades 6-8	Grades 6-8	Grades 6-8	Grades 6-8	Grades 6-8
MORNING (9-12 PM)							
	RASPBERRY PI	ARDUINO	JAVA FUNDAMENTALS	PYTHON	ROCKET SCIENCE	ELECTRONICS & SOLDERING	
	Learn computer hardware fundamentals like RAM, I/O buses, CPU, Cores and computer organization, Operating Systems while assembling a fully functional Raspberry PI Computer. Build and control LED blinking lights, proximity sensors, a Musical organ and many other fun and educational projects. Coding will be conducted in Python.	Build fun & practical applications using the famous but inexpensive Arduino processor. Smart phone door openers, an Electronic kaleidoscope, wireless dog or home security camera that streams videos. There are endless applications for Arduinos in Home Automation & the world of Internet of Things! Learn both programming & applied electronics together!	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. Basics about JVM, Objects & Classes, Data Types, Arrays, Decision Structures, File I/O, and SWING Graphics will be introduced!	Python is a powerful, expressive programming language that's easy to learn and fun to use. Python for kids easily brings kids into the world of programming. 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 tkinter and pygame to explore the power of Python language!	The scientific, technological, engineering and mathematical foundations of rocketry provide exciting opportunities for authentic hands-on, minds-on experimentation. Learn prediction, data collection and interpretation, teamwork, problem solving, and history of rocketry. Campers engage in building paper/straw rockets, air pressure powered rockets and rocket engine.	Learning how to solder is quite easy and, with a little practice, you will be soldering your own electronics circuits. Soldering is very rewarding and satisfying. You can create something new that never existed before. Campers in this class learn about electronics circuits and various components typically used to build LED flashers, a radio transmitter, a touch sensing lamp, a 555 IC based tone generator and much more!	
LUNCH TIME (12:00 - 1:00 PM)							
AFTERNOON (1-4 PM)							
	PYTHON	ELECTRONICS & SOLDERING	3D PRINT QUADCOPTERS	ARDUINO	JAVA FUNDAMENTALS	RASPBERRY PI	
	Python is a powerful, expressive programming language that's easy to learn and fun to use. Python for kids easily brings kids into the world of programming. 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 tkinter and pygame to explore the power of Python language!	Learning how to solder is quite easy and, with a little practice, you will be soldering your own electronics circuits. Soldering is very rewarding and satisfying. You can create something new that never existed before. Campers in this class learn about electronics circuits and various components typically used to build LED flashers, a radio transmitter, a touch sensing lamp, a 555 IC based tone generator and much more!	Learn principles of flight, what makes things go up against the air and why, basics of 3D Printing and CAD. As an application build a load bearing fully functional Quad Copter which can fly using remote control & as an add-on you can make your copter take aerial photos. Learn the electronics required, principles of flight, programming the controller. KIT SOLD SEPARATELY	Build fun & practical applications using the famous but inexpensive Arduino processor. Smart phone door openers, an Electronic kaleidoscope, wireless dog or home security camera that streams videos. There are endless applications for Arduinos in Home Automation & the world of Internet of Things! Learn both programming & applied electronics together!	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. Basics about JVM, Objects & Classes, Data Types, Arrays, Decision Structures, File I/O, and SWING Graphics will be introduced!	Learn computer hardware fundamentals like RAM, I/O buses, CPU, Cores and computer organization, Operating Systems while assembling a fully functional Raspberry PI Computer. Build and control LED blinking lights, proximity sensors, a Musical organ and many other fun and educational projects. Coding will be conducted in Python.	

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