YOUTH**SCIENCE**CENTER
Inform. Instruct. Inspire

SUMMER SCIENCE DISCOVERY PROGRAM

June 3 - July 5

New Registration Process
Find Descriptions of Classes Online

2019 Summer Schedule
Classes held at Bixby Elementary School

16446 Wedgeworth Dr.,
Hacienda Heights, CA 91745
youthsciencecenter.org

FIRST SESSION (8:30-10:00 am)

Week 1: June 3-June 7

Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
100	Engineer Challenges - Full STEAM Ahead	Engineering	K-1	14	$74	$80
101	Coding for Kids 2019	Computer Science	K-1	12	$78	$85
102-3HR	Art as Science	General Science, Art	K-2	13	$115	$125
103	Rad Robots 2019	Computer Programming, Engineering, Physics	2-3	20	$78	$85
104	Pop, Sizzle, Boom Science!	Chemistry, Physics	2-3	11	$78	$85
105	Python Boot Camp	Computer Programming	3-5	21	$92	$100
106-3HR	Minecraft-Survival City	Entertainment Technology, Architecture	3-8	22	$133	$145
107-3HR	Oil Spills: Prep for Disaster	Environmental Science	4-6	9	$120	$130
108-3HR	Creative 3D Printing	Computer Science, Art	6-8	17	$129	$140
109	3D Laser Cutting & Woodworking	Graphic Design, Carpentry	6-8	MPR	$83	$90
110-3HR	Defenders of Cyberspace	Computer Science	7-8	10	$115	$125

Week 2: June 10-June 14

Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
200	Soda Pop Science	Chemistry, Physics	K-1	14	$74	$80
201-3HR	Physics for Kids	Physics	K-1	13	$115	$125
202-3HR	3D STEM Doodler	General Science, Art	2-3	12	$115	$125
203	Edible Science	Chemistry	2-3	11	$78	$85
204	Critters in the Classroom	Biology	2-4	10	$69	$75
205-3HR	Crime Lab-Crime Scene Investigator	Forensics	4-6	9	$120	$130
206	LEGO Mindstorms	Robotics, Physics, Engineering	4-8	21	$92	$100
207-3HR	Minecraft: Redstone Engineers	Entertainment Technology, Engineering	5-8	22	$133	$145
208	3D Printing: Prosthetic Hand	Prosthetics, Computer Science	5-8	17	$92	$100
209-3HR	Drone Racers	Computer Science, Electrical Engineering	6-8	MPR	$133	$145

Week 3: June 17-June 21

Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
300	Fair Weather Ahead	Meteorology	K-1	14	$74	$80
301-3HR	Anatomy and Me	Anatomy	K-1	13	$115	$125
302-3HR	Bridges and Tunnels: Feats of Engineering	Engineering	2-3	11	$115	$125
303	Rad Robots 2019	Computer Programming, Engineering, Physics	2-3	12	$78	$85
304	Let's Go Fly	Physics, Aeronautics	2-4	10	$74	$80

*Listed member prices reflect a discount of approximately 8%. Your discount will be applied during checkout.

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Website: www.youthsciencecenter.org
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Email: ysc@youthsciencecenter.org

Youth Science Center
Nonprofit 501(c)3 Organization
Federal Tax ID: 95-2273238

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Week 3: June 17-June 21 (Continued)

Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
305-3HR	Physics is Fun	Physics	3-6	9	$115	$125
306	3D Laser Cutter & Engraver	Graphic Design	4-5	20	$83	$90
307	The World of Virtual & Augmented Reality	Entertainment Technology	5-8	17	$78	$85
308-3HR	Minecraft-Survival City	Entertainment Technology, Architecture	5-8	22	$133	$145
309-3HR	Drone Racers	Computer Science, Electrical Engineering	6-8	MPR	$133	$145

Week 4: June 24- June 28

Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
400	Academy of Bubbleology	Physics	K-1	14	$74	$80
401-3HR	CSI Jr.	Forensics	K-1	13	$115	$125
402-3HR	Art in the Wild 2019	General Science, Art	K-6	9	$115	$125
403	Mind Games Jr.	Psychology, Anatomy	2-3	12	$74	$80
404	LEGO WeDo-STEM Challenge	Robotics	2-4	21	$92	$100
405-3HR	Minecraft-Survival City	Entertainment Technology, Architecture	3-6	22	$133	$145
406	Creative 3D Printing	Computer Science, Art	4-8	17	$83	$90
407	Arduino Instructables	Computer Programming, Electronic Engineering	5-8	20	$92	$100
408-3HR	Drone Racers	Computer Science, Electrical Engineering	6-8	MPR	$133	$145
409-3HR	Defenders of Cyberspace	Computer Science	7-8	10	$115	$125

Week 5: July 1-3 and July 5 (Four days only)

Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
500	Art Smart 2019	General Science, Art	K-1	14	$59	$64
501-3HR	Astronomy-Get Spaced Out!	Astronomy	K-1	13	$92	$100
502	Coding for Kids 2019	Computer Science	2-3	12	$63	$68
503-3HR	Disease Detective	Epidemiology	2-6	11	$92	$100
504-3HR	Minecraft-Survival City	Entertainment Technology, Architecture	3-6	22	$107	$116
505	3D Printing: Prosthetic Hand	Prosthetics, Computer Science	4-8	17	$74	$80
506	LEGO EV3-Get Ready for Mars	Robotics, Physics	4-8	21	$74	$80
507-3HR	Drone Racers	Computer Science, Electrical Engineering	6-8	MPR	$107	$116

There will be no classes held on July 4 due to national holiday.

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SECOND SESSION (10:15-11:45 am)

Week 1: June 3-June 7

Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
111	Rad Robots 2019	Computer Programming, Engineering, Physics	K-1	20	$78	$85
112	Coding for Kids 2019	Computer Science	2-3	12	$78	$85
113	Pop, Sizzle, Boom Science!	Chemistry, Physics	K-1	11	$78	$85
114	Engineer Challenges - Full STEAM Ahead	Engineering	2-3	14	$74	$80
115	3D Laser Cutting & Woodworking	Graphic Design, Carpentry	4-8	MPR	$83	$90
116	Python Boot Camp	Computer Programming	6-8	21	$92	$100

Week 2: June 10-June 14

Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
210	Edible Science	Chemistry	K-1	11	$78	$85
211	Soda Pop Science	Chemistry, Physics	2-3	14	$74	$80
212	Fishline Physics	Physics	2-4	10	$74	$80
213	Action Filmmaking	Digital Arts & Technology	3-5	20	$87	$95
214	The World of Virtual & Augmented Reality	Entertainment Technology	5-8	17	$78	$85
215	LEGO EV3-Get Ready for Mars	Robotics, Physics	6-8	21	$92	$100

Week 3: June 17-June 21

Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
310	Rad Robots 2019	Computer Programming, Engineering, Physics	K-1	12	$78	$85
311	Fair Weather Ahead	Meteorology	2-3	14	$74	$80
312	Motor Mania	Engineering	2-4	10	$83	$90
313	Killer Chase Scenes	Digital Arts & Technology	4-6	21	$87	$95
314	3D Laser Cutter & Engraver	Graphic Design	5-8	20	$83	$90
315	3D Printing: Artificial Organs	Biomedical Engineering, Biomechanics & Engineering	5-8	17	$92	$100

Week 4: June 24- June 28

Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
410	Mind Games Jr.	Psychology, Anatomy	K-1	12	$74	$80
411	Academy of Bubbleology	Physics	2-3	14	$74	$80
412	LEGO WeDo-STEM Challenge	Robotics	2-4	21	$92	$100
413	Action Filmmaking	Digital Arts & Technology	3-5	11	$87	$95
414	Creative 3D Printing	Computer Science, Art	4-8	17	$83	$90
415	Arduino Instructables	Computer Programming, Electronic Engineering	5-8	20	$92	$100

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SECOND SESSION (10:15-11:45 pm)

Week 5: July 1-3 and July 5 (Four days only)

Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
508	Coding for Kids 2019	Computer Science	K-1	12	$63	$68
509	Art Smart 2019	General Science, Art	2-3	14	$59	$64
510	3D Printing: Artificial Organs	Biomedical Engineering, Biomechanics & Engineering	4-8	17	$74	$80
511	LEGO Mindstorms	Robotics, Physics, Engineering	6-8	21	$74	$80

There will be no classes held on July 4 due to national holiday.

THIRD SESSION (12:30-3:45 pm)

Week 1: June 3-June 7

Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
117	STEM Tower Challenge	Engineering	K-2	12	$115	$125
118	Art as Science	General Science, Art	2-4	13	$115	$125
119	Coding for Kids 2019	Computer Science	4-5	21	$120	$130
120	Minecraft Game Design	Computer Programming	5-8	22	$133	$145
121	Creative 3D Printing	Computer Science, Art	6-8	17	$129	$140

Week 2: June 10-June 14

Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
216	3D STEM Doodler	General Science, Art	K-1	12	$115	$125
217	Physics for Kids	Physics	2-3	13	$115	$125
218	Python Boot Camp	Computer Programming	2-4	17	$133	$145
219	Music Videos	Digital Arts & Technology	4-8	20	$124	$135
220	Minecraft Game Design	Computer Programming	5-8	22	$133	$145
221	3D Laser Cutter & Engraver	Graphic Design	6-8	MPR	$129	$140

Week 3: June 17-June 21

Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
316	Fantastic Flyers	Physics	K-1	12	$115	$125
317	Anatomy and Me	Anatomy	2-3	13	$115	$125
318	Dissecting for Science	Anatomy	4-8	17	$120	$130
319	Minecraft Game Design	Computer Programming	5-8	22	$133	$145
320	Book Trailer Films	Digital Arts & Technology	5-8	21	$124	$135

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THIRD SESSION (12:30-3:45 pm)

Week 4: June 24- June 28

Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
416	Exploration Earth	Environmental Science	K-1	12	$115	$125
417	CSI Jr.	Forensics	2-3	13	$115	$125
418	Micro-Monsters	Microbiology	4-8	17	$120	$130
419	Minecraft Game Design	Computer Programming	5-8	22	$133	$145
420	Music Videos	Digital Arts & Technology	5-8	11	$124	$135

Week 5: July 1-3 (Three days only)

Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
512	Upcycling: Trash to Treasures	Environmental Science	K-1	12	$69	$75
513	Astronomy-Get Spaced Out!	Astronomy	2-3	13	$69	$75
514	Dissecting for Science	Anatomy	4-8	17	$72	$78
515	Minecraft Game Design	Computer Programming	5-8	22	$80	$87
516	3D Laser Cutter & Engraver	Graphic Design	6-8	MPR	$75	$81

There will be NO afternoon classes held on July 4 and July 5.

FOURTH SESSION (4:15-6:00 pm)

Week 1: June 3-June 7

Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
122	Upcycling: Trash to Treasure	Environmental Science	K-8	12	$69	$75
123	Minecraft: Redstone Engineers	Entertainment Technology, Engineering	3-8	22	$92	$100

Week 2: June 10-June 14

Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
222	Zany Zoo	Biology	K-8	12	$69	$75
223	Filmmaking 101	Digital Arts & Technology	4-8	20	$87	$95

Week 3: June 17-June 21

Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
321	3D STEM Doodler	General Science, Art	K-8	12	$69	$75
322	Filmmaking 101	Digital Arts & Technology	4-8	21	$87	$95

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FOURTH SESSION (4:15-6:00 pm) RECESS IS 3:45-4:15 pm

Week 4: June 24- June 28						
Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
421	Zany Sports	Sports Science, Anatomy	K-8	12	$69	$75
422	Hacking the Test	Computer Programming	4-8	22	$87	$95

Week 5: July 1-3 (Three days only)						
Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
517	Mind Games	Psychology, Anatomy	K-8	12	$41	$45
518	Hacking the Test	Computer Programming	4-8	22	$52	$57
There will be NO afternoon classes held on July 4 and July 5.						

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FREQUENTLY ASKED QUESTIONS

How Do I Register?

Attention: the Youth Science Center has changed to a new online registration system.

1. Go to www.youthsciencecenter.org .
2. Click on the "Summer Science Discovery" button.
3. Please view our tutorial video or document for a step-by-step guide on how to register your children.
4. Select the week that you desire to register for and pay using the online system's prompts.
5. A class confirmation will be sent to you via email automatically once registered via the online system. We regret that we are not able to confirm classes by telephone.
6. For more information regarding registration please email Elaine Chiu at elaine@youthsciencecenter.org. For more class information, please call Diana Padilla at (626) 588-7818.
7. We will post a list of classes closed due to full enrollment on our website.

When Should I Register?

Registration is first come, first served. Register early to avoid disappointment.

What Age Must My Child Be to Participate?

Grade level is listed on the class schedule. This is the grade your child will be entering in September 2019. Preschool Students must be 4 years old as of September 2018 and must be registered as a kindergartner or above for the September 2019 school year.

Where Are the Classes Located?

Bixby Elementary, 16446 Wedgeworth Drive in Hacienda Heights. (Across the street from Wilson High School.)

Where Can I Find Class Descriptions?

Please go to our website, click on the "Summer Science Discovery" button, and download the Summer 2019 Schedule with class descriptions.

FREQUENTLY ASKED QUESTIONS

What Payment Options Do You Accept?

We can accept credit, debit, PayPal, and check payments online. Please note that any bounced checks will be charged a $35 service fee.

Am I a Member or a Non-Member?

Unless you have previously purchased a life membership fee, your membership expires on March 1 2019. **Please note that your membership is good for our After School Classes as well. If the Youth Science Center is not at your school yet, please ask your school principal or contact Diana Padilla at 626-588-7818.**

What About Lunch Time Supervision?

Your child's safety and comfort are extremely important to us. Any child who is enrolled in classes right before and right after lunch (12:30pm) of the same week will be supervised during lunch time. Students **must bring their own lunch.** We do not provide microwaves for the students. Activities will be provided when the students have finished eating. There is no additional charge for this supervision. **If your child does not have a 12:30-3:45 class and you would like for us to supervise your child during lunch (11:45-12:30), then you will need to pay a $20 lunch time supervision fee**.

What Happens if I Register Late?

Late registrants are considered those who register after the first day of class. **Late registrants will be charged $5.00.**

What is Your Cancellation Policy?

If you must cancel your registration before the class starts, please email Elaine Chiu at elaine@youthsciencecenter.org. No cancellations can be accepted over the phone. Cancellations 72 hours before the first day of class will be given a full refund in original form of payment. Cancellations within 72 hours of the first day of class will be issued class credit for the 2019 summer program **minus a $30 processing fee per class. No cancellations will be accepted after the class begins.** Please allow 5-7 business days for any refunds.

YOUTH SCIENCE CENTER

Mission

Established in 1962, the Youth Science Center (YSC) is a non-profit organization dedicated to improving math and science education.

The mission of the Youth Science Center is to inform, instruct, and inspire our youth to discover the excitement of science and technology through innovation and hands-on experience.

We have built a reputation for presenting quality science, math, and computer, classes for students grades K through 8th living throughout Los Angeles County's San Gabriel Valley.

Science Center Staff

Diana Padilla, *Project Manager*
Lana Willis, *Principal*
Elaine Chiu, *Registrar*

Officers & Board Members

Ron Chong, *Chairman*
Roger Huynh, *Vice Chairman*
Philip Teders, *Tresurer*
Victor Wu, *Secretary*

Scott Bevans
Stan Liu
Piyusha Perera
Thaminda Ramanayake
Vicky Soong
Phyllis Vandeventer
Chad Wilson

2019 Summer Program | June 3- July 5

Classes this summer are at Bixby Elementary School.
16446 Wedgeworth Dr, Hacienda Heights, CA 91745
Please contact us at (626) 854-9825 before the program begins
(626) 588-7818 after the program begins

2019 Classes Descriptions

3D Printing: Artificial Organs #510 - Instructor: Nicolette Prudente
This class is based on the pioneering work of Dr. Ahmed Ghazi, in which 3D printed organs are printed so that doctors and medical students can practice on. In this class, students will create an organ mold via computer aided design and then create their own hydrogel, which will eventually become the artificial organ. Students will then get to dissect a real organ and compare it to their artificial organ. Students will also be taught suturing techniques on both the artificial and real organ.

3D Laser Cutter & Engraver #221, 306, 314 & 516 - Instructor: Steven Bach
Learn graphic design skills with the use of Inkscape and the iconic 3D Laser Cutter to make incredible 3D art from just about any material at the push of a button. Create ornaments, anime art, and even your favorite meme!

3D Laser Cutting & Woodworking #109 & 115 - Instructor: Lyle Majeska
Carpentry and graphic design-the perfect marriage! Students will not only learn to use hand tools and power tools safely and make a wooden pen to take home, but also learn graphic design skills with the use of Inkscape and the iconic 3D Laser Cutter to make incredible 3D art from just about any material at the push of a button.

3D Printing: Artificial Organs #315 - Instructor: Stephanie Bendlin-Trevino
This class is based on the pioneering work of Dr. Ahmed Ghazi, in which 3D printed organs are printed so that doctors and medical students can practice on. In this class, students will create an organ mold via computer aided design and then create their own hydrogel, which will eventually become the artificial organ. Students will then get to dissect a real organ and compare it to their artificial organ. Students will also be taught suturing techniques on both the artificial and real organ.

3D Printing: Prosthetic Hand #208 & 505 - Instructor: Stephanie Bendlin-Trevino & Nicolette Prudente
Prosthetics is an expanding health science profession in which artificial limbs are used to enhance individuals with limb loss. Prosthetics devices are extremely expensive, however, with the advent of the 3D Printer, these devices are much more affordable. In this class, students will make an actual working 3D printed prosthetic hand of their own using Sketchup and hand tools as well.

3D STEM Doodler #202, 216 & 321 - Instructor: Vanessa Lozano & Yvette Franco
In this class you will not only learn about atoms, the parts of a tree, animals, and other STEM topics, but you will also be able to create them using a 3D Printing Pen and even use your imagination to create your own 3D doodle masterpiece.

Academy of Bubbleology #400 & 411 - Instructor: Leann Legind
Burst into the world of "bubbleology". Study surface tension. Learn about chemistry when making "Official Bubbleologist Solution" and fun-shaped bubble wands. See why bubbles are round, why they float, stretch & pop. Get ready to be put into a "human-sized bubble."

Action Filmmaking #213 & 413 - Instructor: Kwesi Johnson

Be the next LeBron James, Rob Gronkowski, or Lionel Messi! In Action Filmmaking, students will film themselves with a GoPro Hero 4 playing sports games to create a highlight reel. Students will use Photoshop Elements and Premiere to edit their film and learn how to upload it to Youtube (with parent permission) and also to take home and share with family and friends.

Anatomy and Me #301 &317 - Instructor: Patrice Stanzione

Learn about your inner self, from your circulatory system to your respiratory system and everything in between. Students will explore what's under their skin. They will start by making a "cell-fie" and go from there. From the basic human cell through how the entire body machine works together, students will dance, jump, balance, and a zillion other wacky activities to understand their bodies. Students will learn through experimentation and participation. Students will leave with an understanding of anatomy far beyond their grade level.

Arduino Instructables #407 & 415 - Instructor: Lyle Majeska

Have you ever wanted to get creative with technology? Well, in this class, whether you have no experience or are a tinkerer, artist, programmer, hobbyist, or just plain curious, then this class is for you as you will be able to bring your electronics imagination to life by learning the Arduino board, programming language, and software, which will enable you to plan and build projects. Skills in prototyping, soldering, and coding will continue to improve throughout the class. Students will build digital and interactive projects that can sense and control objects in the physical world and the best part is, you can take home your Arduino kit for further exploration.

Art as Science #102 & 118 - Instructor: Patrice Stanzione

In this totally hands-on class children will come to understand light and shadow through scientific experiments and learning the chiaroscuro technique in art. Biological proportion will be learned through self portraits. Paper Chromatography, mixed media pieces, and other techniques will demonstrate various concepts in science. This class puts the A in S.T.E.A.M.!.

Art in the Wild 2019 #402 - Instructor: Pat Smith

Artists extend your STEAM understanding as we draw and paint on different paper media: nature prints on solar paper, fruit stamping, making paper from pulp/natural items, fabric squares, engraving, tissue paper art, and balancing mobiles. Hands-on at its most creative!

Art Smart 2019 #500 & 509 - Instructor: Leann Legind

Get ready for new projects in "Art Smart." All the projects are brand new integrating science, art, and literature. Students will use medium such as water color, oil pastels, chalk, markers, tempera, and so much more. Students will create collages, masterpieces, and one-of-a-kind creations. Get smart with art!

Astronomy-Get Spaced Out! #501 & 513 - Instructor: Patrice Stanzione

No longer are we just the 3rd rock from the Sun. Come explore our newly discovered space neighbors, new planets, new galaxies, and much more! See how Newton's Laws are everywhere in known existence. Learn about dwarf planets and stellar evolution. Experiment on a moonscape of your own. Using experiments and crafts, learn about the not-so-final frontier. Students will leave with a firm understanding as outlined by NGSS.

Book Trailer Films #320 - Instructor: Kwesi Johnson

Do you love making movies? Do you love to read? Well in this class you will combine the two to create your very own trailer of your favorite book, by writing a story board and then acting out your story. Learn how to upload it to Youtube (with parent permission and also leave home with a copy of your own trailer to share with family and friends.

Bridges and Tunnels: Feats of Engineering #302 - Instructor: Teddy Sachs

Students will engage in a hands-on exploration of Newton's Third Law of Motion and of forces that push and pull on structures. They'll make a variety of creations that explore the science of engineering. They'll experiment with a triangular toothpick dome, liquefaction, and corrosion. In Bridges and Tunnels: Feats of Engineering, children will learn more about how structures are created and improve their building skills as they create several bridge and tunnel models.

Coding for Kids 2019 #101, 112, 502 & 508 - Instructor: Vanessa Lozano,

Come join us for all new activities that will teach kids how to use critical thinking skills, identify "bugs" and how to solve them, how to follow and predict a set of instructions, and decompose a problem into smaller steps by playing online coding games on an iPad. To finish it off, students will make an actual board game of their digital creations

Coding for Kids 2019 #119 - Instructor: Terri Burgess

This is an introductory course that teaches kids how to use critical thinking skills, identify "bugs" and how to solve them, how to follow and predict a set of instructions, and decompose a problem into smaller steps by playing online coding games on an iPad. To finish it off, students will make an actual board game of their digital creations

Creative 3D Printing #108, 121, 406 &414 - Instructor: Steven Bach & Nicolette Prudente

Learn the basics of additive manufacturing (3D printing) using cutting edge tools and computer aided design software. Use your imagination to create several 3D digital models using a 3D printer. 3D print a dragon, castle, or your favorite meme.

Crime Lab-Crime Scene Investigator #205 - Instructor: Andrea Brown

Test powders, liquids, and other substances for reaction to chemicals. Test for real or fake blood. Take specifications of "blood" spatter. Learn to lift fingerprints. Investigate with paper chromatography to study handwriting samples. Observe hair and other fibers. Students will solve mini crimes all week to lead to the "mock crime scene" to solve the case. We will have at least one speaker come to class.

Critters in the Classroom #204 - Instructor: Robert Smith

Come and learn all about small critters that lurk in your garden, examine lady bugs up close, sketch snails, touch rolly pollies, observe earthworms, and even race them against each other. Learn about the environment these critters like to live in.

CSI Jr. #401 & 417- Instructor: Patrice Stanzione

Using powers of logical deduction, through analyzing powders and liquids, studying and comparing fingerprints and other clues, interviewing suspects and witnesses, your child will collaborate with a team to solve a mystery. Your child will be using the same strategies as the big kids and professional crime solvers! It's a new mystery each year so children can come back summer after summer.

Defenders of Cyberspace #110 & 409- Instructor: Josh Chin

Join us in defending cyberspace from hackers, identify thieves, computer viruses, Trojan horses, spyware and much more! Learn to become a "defender of cyberspace" just like multi-million dollar companies defend their internet-connected systems, including hardware, software and data, from cyberattacks.

Disease Detective #503- Instructor: Terri Burgess

Learn all about viruses and bacterium and how they are spread and what you can do to protect yourself. Students will grow bacteria, create virus models, experiment with microbes, create a hazmat suit, and much more.

Dissecting for Science #318 & 514- Instructor: Nicolette Prudente

Have you ever wanted to know how an organism works from the inside? How the structure of an organism helps it survive in the wild? Come be a biological researcher and explore how things work through dissection! Students will explore the inner workings of 5 different organisms in this hands-on minds-on class.

Drone Racers #209, 309, 408 & 507- Instructor: Steven Bach

Do you have what it takes to be the next drone racer? In this class, pilots will learn to build and fly micro drones equipped with cameras to give a truly first person view of flight. With the use of flight simulator software, pilots will learn basic flight principles, such as yaw, pitch, and roll. Pilots will also learn about the electromagnetic spectrum and how electromagnetic radiation allows for the control of drones. Instructor is current in his General Class Amateur Radio license. Come be the first to test your skills in our indoor race track!

Edible Science #203 & 210- Instructor: Teddy Sachs

Grab a beaker, pick up your whisk, and get ready to cook up some solid science. Using food as our tools (or ingredients!) curious kids become saucy scientists that measure, weigh, combine, and craft their way through the kitchen. This class will focus on the chemistry of cooking, nutrition and some basic kitchen-skills. And the best news is when all the mad-science is done, you're invited to grab a spoon and take a bite!

Engineer Challenges - Full STEAM Ahead #100 & 114- Instructor: Leann Legind

Get ready to participate in engineering challenges that will work on critical thinking and collaboration! You will get to build structures out of straws, marshmallows, sticks, and more. See who can build the tallest structure! Which group can move cups without touching them? How can you make a house out of sticks that won't blow down? Get ready to explore engineering!

Exploration Earth #416- Instructor: Vanessa Lozano

Come explore planet Earth and learn about our precious natural resources, such as water and fossil fuels, the relationships between animals and plants, and the differences between landforms and how they formed.

Fair Weather Ahead #300 & 311- Instructor: Leann Legind

Explore the wonders of weather, the water cycle and air pressure. Learn how to make it rain. Make your own clouds. Create a tornado in a bottle. Play with snow, make snowballs, eat snow ice cream and so much more!

Fantastic Flyers #316- Instructor: Vanessa Lozano

Make, fly and take home a variety of airplanes. Learn some of the important physics that make these projects fly.

Filmmaking 101 #223 & 322- Instructor: Kwesi Johnson

Start on your way to an Oscar! In this class students will write, shoot, and star in their own movies by using a GoPro Hero 4. Students will also edit their films using Photoshop Elements and Premiere to create a short film of themselves to upload to Youtube (with parent permission) and to take home and share with family and friends.

Fishline Physics #212- Instructor: Robert Smith

Make a working phone, create a string musical instrument, create static electricity. Create giant bubbles and clouds in a jar. Create a stream of water on a string. Illustrate diffusion of molecules.

Hacking the Test #422 & 518- Instructor: Jim Pike

In this class we will be learning to code by creating our own versions of mathematical standardized tests. Students will work together to solve test problems and then code their own versions of the problem using Scratch Coding. Hacking the Test will help students understand what is going on inside the program and therefore better understand the test questions.

Killer Chase Scenes #313 - Instructor: Kwesi Johnson

In this class, students will learn how chase scenes are filmed in the professional filming industry and film themselves in a chase scene using a GoPro Hero 4 and then learn to edit it with Photoshop Elements and upload it to Youtube with parent permission. The end product will be a short chase film of themselves, which they can share with family and friends.

Lego EV3-Get Ready for Mars #215 & 506- Instructor: Kim Bach

In this introductory robotics class, you will go through a series of training exercises to guide your robot in solving real-world engineering challenges related to renewable energy on earth. Now we are ready for our trip to Mars where 7 STEM challenges await!

LEGO Mindstorms #206 & 511- Instructor: Kim Bach

In this new advanced robotics class, students will build and learn to program a LEGO robot to run experiments related to force and motion, energy, light, heat, and temperature. By combining LEGO® elements with a programmable brick, motors and sensors, you can make your creations walk, talk, grab, think, shoot and do almost anything you can imagine! How many ways can you bring your LEGO Mindstorm creation to life?

LEGO WeDo-STEM Challenge #404 & 412- Instructor: Kim Bach

Develop science and engineering skills with LEGO WeDo 2.0 to build a robot. Learn to design proto-types, use models, plan and carry out investigations, analyze and interpret data using a classroom friendly software, engaging standards-based projects and a discovery based approach. Are you up to the STEM challenge?

Let's Go Fly #304- Instructor: Robert Smith
Make simple models of kites, planes, helicopters, flying saucers, and rockets and watch them fly. Learn the physics of aerodynamics to see how these models can defy gravity.

Micro-Monsters #418- Instructor: Nicolette Prudente
Ever wonder about the things we can't see? Well this class will explore microorganisms or creatures that are too small to see with our eyes alone. We'll be using microscopes, learning how to make our own slides, test for bacteria, and determine what "monsters" are in our sewage.

Mind Games #517- Instructor: Yvette Franco
Come and explore all new amazing mind tricks, puzzles, and brain teasers. Learn why your brain does what it does, put together puzzles, test your memory and your hand-eye coordination, learn how your senses work, create fun math games, and much more in this incredibly mind blowing class.

Mind Games Jr. #403 & 410- Instructor: Vanessa Lozano
Come and explore the amazing world of mind tricks, puzzles, and brain teasers. Learn why your brain does what it does, put together puzzles, test your memory and your hand-eye coordination, learn how your senses work, create fun math games, and much more in this incredibly mind blowing class.

Minecraft Game Design #120, 220, 319 & 419- Instructor: Jim Pike
A Minecraft Mini Game is a video game built, coded, and played inside of Minecraft. Students will study computer science, level design, command block coding, and concepts of what makes a good game.

Minecraft: Redstone Engineers #123 & 207- Instructor: Jim Pike
Learn about circuits and electrical engineering by building redstone machines in Minecraft. Redstone is the Minecraft name for copper and can be used to make wires, batteries, clocks and all sorts of machines. If your student is a tinkerer they will love this class.

Minecraft-Survival City #106, 308, 405 & 504- Instructor: Jim Pike
In Minecraft Survival mode students will study how humans affect the world around them by building a city in survival mode. Students will study landforms and biomes of the world, gather resources, city plan, design buildings in different architectural styles, and build infrastructure. Good for all ages.

Motor Mania #312- Instructor: Robert Smith
Use simple motors and batteries to power a model car, a mini-fan, a mini-boat, a small stroboscopes, and other fun creations. Students will have endless fun working together and learning how to engineer these contraptions.

Music Videos #219 & 420- Instructor: Kwesi Johnson
Become the next Youtube karaoke sensation! Students will create, edit, and upload to Youtube (with parent permission) their own music videos with the use of a GoPro Hero 4 and Photoshop Elements and Premiere. Students will leave with a short video of themselves to share with family and friends.

Oil Spills: Prep for Disaster #107- Instructor: Andrea Brown
In this class, students will learn what happens to the environment during a disastrous oil spill, by experimenting with different liquid densities, by creating a water purification system, and by observing the differences between salt vs. freshwater. Students will build their own oil containment system and induce an oil spill to determine the effects on freshwater and marine ecosystems.

Physics for Kids #201 & 217- Instructor: Patrice Stanzione
In learning Newton's Laws children will participate in sports and playground physics activities, make different polymers that defy the states of matter, and invent insolation to protect a raw egg from breaking from a 2nd story drop. They will design a rollercoaster that demonstrates their understanding of the basic principles of physics. Along with other activities students will come away from the course with a firm understanding of the same principles of physics as the big kids. It is learning that will last a lifetime!

Physics is Fun #305- Instructor: Pat Smith
Get a spin on summer investigating spinners, solar bug bots, sound waves and motion machines. Be inspired by famous physicists - Sir Isaac Newton to Rube Goldberg.

Pop, Sizzle, Boom Science! #104 & 113- Instructor: Teddy Sachs
This class is perfect for kids who like the excitement of exploding things, boiling things, and generally making a mess while learning about science. Get ready for amazing projects like: making slime, make color-changing milk, explode a Mentos Diet Coke geyser, create a PVC rocket launcher, put puffy paint in the microwave, make solar oven S'mores and make a homemade light saber, to name just a few!

Python Boot Camp #105 & 116- Instructor: Terri Burgess
In this class, students will learn how to code interactive projects in Python-a text-based programming language that is widely used in making web applications. Through project based lessons, students will be first introduced to the interactive coding environment, variables, conditionals, and loops all while manipulating their own sprites.

Python Boot Camp #218- Instructor: Stephanie Bendlin-Trevin
In this class, students will learn how to code interactive projects in Python-a text-based programming language that is widely used in making web applications. Through project based lessons, students will be first introduced to the interactive coding environment, variables, conditionals, and loops all while manipulating their own sprites. Good for returning students as they will build upon the knowledge they already learned.

Rad Robots #103 & 111- Instructor: Stephanie Bendlin-Trevino
Learn basic programming rules to maneuver your mini robot through various types of mazes, obstacle courses, and terrains. Use your critical thinking skills to engineer diverse types of transportation media for your robot. Learn the basic principles of physics required to maneuver your robot.

Rad Robots #303 & 310- Instructor: Brandi Koehm
Learn basic programming rules to maneuver your mini robot through various types of mazes, obstacle courses, and terrains. Use your critical thinking skills to engineer diverse types of transportation media for your robot. Learn the basic principles of physics required to maneuver your robot. Good for returning students as they will build upon knowledge they have already learned.

Soda Pop Science #200 & 211- Instructor: Leann Legind

Did you know that you could learn important scientific principles from soda pop? Get ready to learn about liquids, gas, and acids using soft drinks. Also, did you know that you could fill a balloon using the gas from soda! You will make soda disappear, make your own soda from scratch, compare regular soda with diet soda, create a soda geyser and more. Get ready to pop, whizz, and fizz!!!

STEM Tower Challenge #117- Instructor: Vanessa Lozano

What kind of unique designs will you build to create the highest tower, what design skills will you use to have your tower carry the heaviest load, how will you engineer a tower with the lightest materials? All of these and many more questions will be answered in this challenging architecture class that will also teach you about some of the real world architectural feats.

The World of Virtual & Augmented Reality #214 & 307- Instructor: Stephanie Bendlin-Trevino

See your world come alive with virtual reality and augmented reality! Create an amphitheater full of natural landscapes, planets, roller coasters, cities and so much more using virtual reality! Swim with flesh-eating piranhas! Color a drawing then make it come alive as a 3D object! Learn the science behind this technology and how it can be applied to the future of science education.

Upcycling: Trash to Treasure #122 & 512- Instructor: Yvette Franco & Vanessa Lozano

Become a young environmentalists and learn how upcycling can free up space in our landfills, how it can prevent trash from reaching our water ways and of course how to turn old and used "trash" into "treasures". Take a bunch of unused household items and create beautiful art, create innovative home decorations and, build great practical everyday items all while learning about our environment and how to preserve it.

Zany Sports #421- Instructor: Yvette Franco

Why are your feet the most important piece of complex sports equipment? Come jump, run, climb, kick and study the science behind many of the sports we play and how we play them. You'll learn about how your body works, learn to improve your sport as well as your performance and have fun keeping busy and physically active!

Zany Zoo #222- Instructor: Yvette Franco

Students will learn about the principles of science all while learning about insects, spiders, lizards, mammals, and much more!