



**YOUTHSCIENCECENTER**

*Inform. Instruct. Inspire*

# **SUMMER SCIENCE DISCOVERY PROGRAM**

June 1 - July 2

8:30am - 6:00pm

Kinder to 8th Grade

*New Class Offerings*

*Find Descriptions of  
Classes Online*

## **2020 Summer Schedule**

*Classes held at Bixby Elementary School*

16446 Wedgeworth Dr.,  
Hacienda Heights, CA 91745  
[youthsciencecenter.org](http://youthsciencecenter.org)



WEEK 1 : June 1 - June 5				3HR= 3 hour class (8:30-11:45am with a 15 min break)			
Session	Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
8:30 to 11:45	100-3HR	Eco Rangers: Food Chains and Webs	Biology, Anthropology	K-1st	13	\$115	\$125
	101-3HR	Jr. Programmers	Computer Programming	2nd-3rd	20	\$120	\$130
	102-3HR	<b>New!</b> Evolve or Die	Biology	3rd-5th	9	\$120	\$130
	103-3HR	<b>New!</b> Minecraft Movie Maker 1	Entertainment Technology	4th-8th	22	\$133	\$145
8:30 to 10:00	104	Ocean Explorers	Marine Biology	K-1st	12	\$74	\$80
	105	Dissecting for Kids	Biology, Anatomy	2nd-3rd	17	\$74	\$80
	106	LEGO WeDo Robots	Robotics, Computer Programming	2nd-4th	21	\$92	\$100
	107	<b>New!</b> Forensics Investigator: Bio-Crime Stoppers	Forensic Science, Molecular Biology	4th-6th	14	\$92	\$100
	108	3D Laser Cutter & Engraver: Creative Gadgets	Graphic Design	4th-8th	MPR	\$83	\$90
10:15 to 11:45	109	Rainbow Science	Chemistry, Art	K-1st	14	\$74	\$80
	110	Ocean Explorers	Biology, Anatomy	2nd-3rd	12	\$74	\$80
	111	Virtual Reality vs. Augmented Reality Science	Entertainment Technology	2nd-5th	17	\$78	\$85
	112	Lego EV3 Robots: Renewable Energy	Robotics, Computer Programming	4th-6th	21	\$92	\$100
	113	3D Laser Cutter & Engraver: Creative Gadgets	Graphic Design	4th-8th	MPR	\$83	\$90
12:30 to 3:45	114	Trash to Treasures Crafts	Environmental Science	K-3rd	20	\$115	\$125
	115	Eco Rangers: Food Chains and Webs	Biology, Anthropology	2nd-4th	13	\$115	\$125
	116	Minecraft Arcade Game Design 1	Entertainment Technology	4th-8th	22	\$133	\$145
	117	<b>New!</b> GIMP Animation and Photo Editing	Graphic Design, Animation	5th-8th	14	\$124	\$135
4:15 to 6:00	118	<b>New!</b> STEAM Table Game Maker	Physics	K-8th	12	\$69	\$75
	119	Minecraft Redstone: Nervous System	Entertainment Technology	3rd-8th	22	\$92	\$100

\*Listed member prices reflect a discount of approximately 8%. Lifetime Membership and Sibling Membership will receive 10% discount. Your discount will be applied during checkout.

WEEK 2 : June 8 - June 12				3HR= 3 hour class (8:30-11:45am with a 15 min break)			
Session	Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
8:30 to 11:45	200-3HR	CSI Jr.- Spy Lab	Forensics, Criminology	K-1st	13	\$115	\$125
	201-3HR	The Science Behind Magic Tricks	Chemistry, Physics	2nd-4th	14	\$115	\$125
	202-3HR	<b>New!</b> Minecraft Movie Maker 2	Entertainment Technology	3rd-6th	22	\$133	\$145
	203-3HR	Engineer Like a Superhero	Engineering, General Science	4th-6th	9	\$120	\$130
	204-3HR	3D Printing: Personalized Gifts	Graphic Design	5th-8th	20	\$129	\$140
8:30 to 10:00	205	Creepy Crawlies	Entomology	K-1st	12	\$74	\$80
	206	<b>New!</b> Ancient Science: Mysterious Artifacts	Anthropology, Archeology	2nd-4th	11	\$78	\$85
	207	<b>New!</b> Portable Planetarium Adventures	Astronomy	2nd-5th	MPR	\$74	\$80
	208	Medical Dissections	Biomedical Technology	4th-8th	17	\$92	\$100
	209	Lego EV3 Robots: Renewable Energy	Robotics, Computer Programming	5th-8th	21	\$92	\$100
10:15 to 11:45	210	<b>New!</b> Portable Planetarium Adventures	Astronomy	K-3rd	MPR	\$74	\$80
	211	Creepy Crawlies	Entomology	2nd-3rd	12	\$74	\$80
	212	Lego WeDo Robots	Robotics, Computer Programming	2nd-4th	21	\$92	\$100
	213	Virtual Reality vs. Augmented Reality Science	Entertainment Technology	4th-8th	17	\$78	\$85
	214	<b>New!</b> Ancient Science: Mysterious & Gruesome Artifacts	Anthropology, Archeology	5th-8th	11	\$78	\$85
12:30 to 3:45	215	Abracadabra! It's Magic	General Science	K-1st	14	\$115	\$125
	216	CSI Jr.- Spy Lab	Forensics, Criminology	2nd-3rd	13	\$115	\$125
	217	Rad Robots: Sphero SPRK	Robotics, Computer Programming	2nd-4th	17	\$120	\$130
	218	Minecraft Arcade Game Design 2	Entertainment Technology	4th-8th	22	\$133	\$145
	219	<b>New!</b> Surviving a Zombie Apocalypse	Epidemiology, Environmental Science	5th-8th	MPR	\$115	\$125
4:15 to 6:00	220	<b>New!</b> Misty and Smoky Special Effects	Physics, Engineering	K-8th	12	\$69	\$75
	221	Minecraft Redstone: Bloodstream	Entertainment Technology	3rd-8th	22	\$92	\$100

\*Listed member prices reflect a discount of approximately 8%. Lifetime Membership and Sibling Membership will receive 10% discount. Your discount will be applied during checkout.



WEEK 3 : June 15 - June 19				3HR= 3 hour class (8:30-11:45am with a 15 min break)			
Session	Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
8:30 to 11:45	300-3HR	That's Gross Don't Eat That...	Anthropology, General Science	K-1st	13	\$115	\$125
	301-3HR	<b>New!</b> Surviving a Zombie Apocalypse	Epidemiology, Environmental Science	2nd-4th	MPR	\$115	\$125
	302-3HR	Anatomy: From Inside Out	Anatomy	2nd-5th	14	\$115	\$125
	303-3HR	Minecraft Survival City: Architecture	Entertainment Technology	3rd-6th	22	\$133	\$145
	304-3HR	<b>New!</b> Drone: Spy Tech	Entertainment Technology	5th-8th	20	\$129	\$140
8:30 to 10:00	305	Scales to Tails	Biology	K-1st	12	\$74	\$80
	306	3..2..1..Launch Rockets Away	Physics, Rocketry	2nd-3rd	11	\$74	\$80
	307	3D Printing: Personalized Gifts	Graphic Design	2nd-4th	17	\$83	\$90
	308	3..2..1..Blast Off! Model Rocket Launch	Rocketry	4th-8th	9	\$83	\$90
	309	<b>New!</b> Video Game Design	Computer Programming	5th-8th	21	\$92	\$100
10:15 to 11:45	310	3..2..1..Launch: Rockets Away	Physics, Rocketry	K-1st	11	\$74	\$80
	311	Scales to Tails	Biology	2nd-3rd	12	\$74	\$80
	312	Yummy or Not: Food Chemistry	Biochemistry	2nd-4th	9	\$78	\$85
	313	Arduinos: Microprocessor Programming	Computer Programming	4th-8th	21	\$92	\$100
	314	Medical 3D Printing	Biomedical Engineering	5th-8th	17	\$92	\$100
12:30 to 3:45	315	<b>New!</b> Slimy Toy Maker	Chemistry, Food Science, Engineering	K-2nd	14	\$115	\$125
	316	That's Gross Don't Eat That...	Anthropology, General Science	2nd-4th	13	\$115	\$125
	317	Minecraft Arcade Game Design 3	Entertainment Technology	3rd-8th	22	\$133	\$145
	318	<b>New!</b> Forensics Investigator: Bio-Crime Stoppers	Forensic Science, Molecular Biology	5th-8th	MPR	\$133	\$145
4:15 to 6:00	319	Animal Explorers	Biology	K-8th	12	\$69	\$75
	320	Minecraft Redstone: Urinary Tract	Entertainment Technology	3rd-8th	22	\$92	\$100

\*Listed member prices reflect a discount of approximately 8%. Lifetime Membership and Sibling Membership will receive 10% discount. Your discount will be applied during checkout.

WEEK 4 : June 22 - June 26				3HR= 3 hour class (8:30-11:45am with a 15 min break)			
Session	Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
8:30 to 11:45	400-3HR	Defeating Virus Monsters	Epidemiology	K-2nd	14	\$115	\$125
	401-3HR	<b>New!</b> Minecraft Math Builders	Mathematics	2nd-4th	22	\$133	\$145
	402-3HR	Anatomy: Gross Special Effects	Anatomy, Special Effects	4th-8th	13	\$115	\$125
	403-3HR	<b>New!</b> App Game Design	Computer Programming	5th-8th	17	\$124	\$135
8:30 to 10:00	404	Chemistry Wizards	Chemistry	K-1st	12	\$78	\$85
	405	Candy Crush Chemistry	Chemistry	2nd-3rd	11	\$74	\$80
	406	<b>New!</b> Secret Agent Force	Criminology	2nd-4th	MPR	\$83	\$90
	407	3D Laser Cutter & Engraver: Personalized Gifts	Graphic Design	4th-6th	20	\$83	\$90
	408	Handyman's Workshop: Electrical Devices	Electrical Engineering	5th-8th	21	\$83	\$90
10:15 to 11:45	409	<b>New!</b> Secret Agent Force	Criminology	K-1st	MPR	\$83	\$90
	410	Chemistry Wizards	Chemistry	2nd-3rd	12	\$78	\$85
	411	Rock 'n' Roll Geology	Geology	2nd-4th	11	\$74	\$80
	412	Handyman's Workshop: Electrical Devices	Electrical Engineering	4th-6th	21	\$83	\$90
	413	3D Laser Cutter & Engraver: Personalized Gifts	Graphic Design	5th-8th	20	\$83	\$90
12:30 to 3:45	414	Eco Rangers: Natural Elements	Environmental Science, Engineering	K-2nd	13	\$115	\$125
	415	<b>New!</b> Slimy Toy Maker	Chemistry, Food Science, Engineering	2nd-3rd	14	\$115	\$125
	416	<b>New!</b> GIMP Animation and Photo Editing	Graphic Design, Animation	2nd-4th	20	\$124	\$135
	417	Minecraft Arcade Game Design 4	Entertainment Technology	4th-8th	22	\$133	\$145
	418	<b>New!</b> Stop Motion Animation 1	Graphic Design, Animation	5th-8th	17	\$124	\$135
4:15 to 6:00	419	<b>New!</b> Stop Motion Animation	Animation	K-3rd	12	\$69	\$75
	420	<b>New!</b> Minecraft Mini Movie Maker	Entertainment Technology	4th-8th	22	\$92	\$100

\*Listed member prices reflect a discount of approximately 8%. Lifetime Membership and Sibling Membership will receive 10% discount. Your discount will be applied during checkout.

WEEK 5 : June 29 - July 2				(no afternoon classes on Thursday, July 2) 3HR= 3 hour class (8:30-11:45am with a 15 min break)			
Session	Class No.	Class Title	Subject	Grade	Room	Member*	Non-Member
8:30 to 11:45	500-3HR	Space Invaders	Astronomy	K-2nd	14	\$92	\$100
	501-3HR	Augmented Reality (AR): 3D Landforms	Geology, Topography	2nd-3rd	17	\$92	\$100
	502-3HR	Minecraft Survival City: Landforms	Entertainment Technology	3rd-8th	22	\$107	\$116
	503-3HR	<b>New!</b> Debate: The Science Behind Hollywood Movies	Engineering, General Science	4th-6th	13	\$92	\$100
8:30 to 10:00	504	Animal Transformations	Biology	K-1st	12	\$59	\$64
	505	<b>New!</b> Take Charge! Thunderbolt	Physics	2nd-3rd	11	\$59	\$64
	506	GoPro: Action Filmmaking	Filmmaking, Entertainment Technology	4th-6th	20	\$70	\$76
	507	<b>New!</b> Escape Room: Secret STEM Lab	General Science	6th-8th	MPR	\$66	\$72
10:15 to 11:45	508	<b>New!</b> Take Charge! Thunderbolt	Physics	K-1st	11	\$59	\$64
	509	Animal Transformations	Biology	2nd-3rd	12	\$59	\$64
	510	<b>New!</b> Escape Room: Secret STEM Lab	General Science	4th-6th	MPR	\$66	\$72
	511	GoPro: Action Filmmaking	Filmmaking, Entertainment Technology	6th-8th	20	\$70	\$76
12:30 to 3:45	512	<b>New!</b> The Science Behind Hollywood Movies	Engineering, General Science	K-3rd	13	\$69	\$75
	513	Space Invaders	Astronomy	2nd-3rd	14	\$69	\$75
	514	<b>New!</b> Stop Motion Animation 2	Graphic Design, Animation	4th-8th	12	\$75	\$81
	515	3D Laser Cutter: Interlocking Objects	Graphic Design	4th-8th	20	\$77	\$84
4:15 to 6:00	516	Mind Games 2020	Neuroscience	K-8th	12	\$41	\$45

\*Listed member prices reflect a discount of approximately 8%. Lifetime Membership and Sibling Membership will receive 10% discount. Your discount will be applied during checkout.

## FREQUENTLY ASKED QUESTIONS

### 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 2020. Preschool Students must be 4 years old as of September 2019 and must be registered as a kindergartner or above for the September 2020 school year.

### Where Can I Find Class Descriptions?

Please go to our website, click on the "Summer Science Discoveries" button, and download the Summer 2020 Schedule with class descriptions.

# FREQUENTLY ASKED QUESTIONS

## How Do I Register?

### Online

1. Go to [www.youthsciencecenter.org](http://www.youthsciencecenter.org).
2. Click on the "Summer Science Discoveries" button.
3. Please view our tutorial for a step-by-step guide on how to register your children.
4. Click on the link "Register Now!", select "Details" to see class lists, descriptions and availabilities, click on "Register→" button to start class registration, and pay using the online system's prompts. Please make sure to use the same email address for both membership purchase and class registration checkout.
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](mailto: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.

**Walk-In:** Prior to the start of the Summer Program, please visit YSC office at Bixby Elementary, Room 17, 16446 Wedgeworth Drive, Hacienda Heights, Office Hours: Mon-Fri, 9am-4pm.

## Where Are the Classes Located?

Bixby Elementary, 16446 Wedgeworth Drive in Hacienda Heights. (Across the street from Wilson High School and about 5 minutes West of the Puente Hills Mall.)

## How to Contact Us?

Please contact us at (626) 588-7818 or email us at [diana@youthsciencecenter.org](mailto:diana@youthsciencecenter.org)

## What Payment Options Do You Accept?

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

## Am I a Member or a Non-Member?

Unless you have previously purchased a life membership, your membership expires on March 1, 2020. 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. Please make sure to use the same email address for both membership purchase and class registration checkout.**

## Do I get a Sibling Discount?

The standard discount for the YSC Membership is 8% off of your tuition, but you will receive an additional 2% off of your tuition if you have 2 or more children and purchase the 2020 Sibling Membership. **Please select the correct membership type or your discount will be forfeited.**

## 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 per week.**

## 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 and Change Policy?

No cancellations and changes can be accepted over the phone. Cancellations 96 hours before the first day of class will be given a full refund in the original form of payment. Cancellations within 96 hours of the first day of class will be issued class credit for the 2020 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. A \$5 processing fee will be charged per class if any class changes are requested 96 hours before the class starts. If you must cancel and make changes for your registration before the class starts, please email Elaine Chiu at [elaine@youthsciencecenter.org](mailto:elaine@youthsciencecenter.org).

# 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 Summer Staff

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

\*\* In Memory of Phyllis Vandeventer \*\*

## Officers & Board Members

Ron Chong, Chairman  
Stan Liu, Vice Chairman  
Philip Teders, Treasurer  
Victor Wu, Secretary

Scott Bevans  
Maanas Bukkuri  
Roger Huynh  
Brian Mayhall  
Vicky Soong  
Chad Wilson

**2020 Summer Program | June 1 - July 2**  
**8:30am - 6:00pm | Kinder to 8th**



**Summer Camp location**  
Bixby Elementary School  
16446 Wedgeworth Dr,  
Hacienda Heights, CA 91745

**Contact Information**  
[www.youthsciencecenter.org](http://www.youthsciencecenter.org)  
[diana@youthsciencecenter.org](mailto:diana@youthsciencecenter.org)  
(626) 588-7818

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



instagram

  
**YOUTHSCIENCECENTER**  
*Inform. Instruct. Inspire*  
P.O. BOX 5723  
Hacienda Heights. CA 91745

PLACE  
STAMP  
HERE



facebook



YSC home page



## 2020 Class Descriptions

### ***3..2..1..Blast Off! Model Rocket Launch #308 - Instructor: Lyle Majeska***

Unlock the mystery of how a rocket flies. Meet the scientists who made space flight possible. Build your own model rocket and launch it on the last day of class.

### ***3..2..1..Launch Rockets Away #306 & 310 - Instructor: Teddy Sachs***

This class explores fun experiments that teach how to build mind-blowing projects, each designed to show how mechanical science and astrophysics work. We'll use everyday items to build awesome rocket ships, paper spinners, and mobile rocket launch pads, all while learning concepts like Newton's Third Law of motion, speed, gravity and air resistance. Kids learn to make scientific observations, identify and classify their questions, all while investigating aerodynamics.

### ***3D Laser Cutter & Engraver: Creative Gadgets #108 & 113 - Instructor: Lyle Majeska***

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 useful gadgets!

### ***3D Laser Cutter & Engraver: Personalized Gifts #407 & 413 - Instructor: Steven Bach***

Learn spatial reasoning using cutting edge tools required to create 3D designs and how to efficiently use computer aided design software to produce your projects. Use your imagination to give a unique touch to your personalized 3D laser and engraved printing projects.

### ***3D Laser Cutter: Interlocking Objects #515 - Instructor: Steven Bach***

Learn spatial reasoning using cutting edge tools required to create interlocking 3D objects and how to efficiently use computer aided design software to produce your 3D projects. Use your imagination and engineering skills to personalize your 3D laser and engraved 3D objects for either functional home use or for leisure.

### ***3D Printing: Personalized Gifts #204 - Instructor: Steven Bach/ #307 - Instructor: Stephanie Bendlin-Trevino***

Learn additive manufacturing (3D printing) and spatial reasoning using cutting edge tools required to create 3D designs and how to efficiently use computer aided design software to produce your projects. Use your imagination to give a unique touch to your personalized 3D printing projects.

### ***Abracadabra! It's Magic #215 - Instructor: Vanessa Lozano***

Become a magician! Learn simple sleight of hand, disappearing coins, rope card tricks and more. Students will be conjuring their own magic crafts to share with family and friends.

### ***Anatomy: From Inside Out #302 - Instructor: Pat Smith***

Create a full-size clone of yourself while building the organs, bones and tissues in your body. This paper model will represent the inside of you that you can display at home. Simple dissections and models will teach us how our bodies work!

### ***Anatomy: Gross Special Effects #402 - Instructor: Patrice Stanzione***

Learn how special effect artists create icky, creepy, and gruesome cuts, bruises, and burns, as well as how our bodies react to these external stimuli. From cells to systems, students will experience and experiment while learning about their working body machines. Take home a student-made book of 3D representations and create fake wounds on your body and trick your friends.

### ***Ancient Science: Mysterious Artifacts #206 & 214 - Instructor: Teddy Sachs***

Dig into the science of ancient times and unearth amazing discoveries! You will be creating artifacts, such as mediums to draw on, historical maps to navigate, and the Egyptian pyramids. Discover the mysteries behind mummies, skin and food preservation, shrunken fruits, and more.

Grades 5th-8th will actually mummify an animal.

### ***Animal Explorers #319 - Instructor: Yvette Franco***

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

## 2020 Class Descriptions

### ***Animal Transformations #504 & 509 - Instructor: Leann Legind***

Discover the amazing transformations that living creatures go through as they change throughout their life cycles! Discover the beautiful transformations of a silkworm into a moth, observe shrimp eggs turn into adult shrimp, learn about the grasshopper life cycle, and much more! Handle live animals, eat edible insects and even hatch fish eggs brought by a guest Zoologist from the Cabrillo Marine Aquarium. Take home your own "pet" to observe the life cycle process, with parent permission. Grades 2nd-3rd will perform a grasshopper dissection.

### ***App Game Design #403 - Instructor: Rachel Wampler***

Whether your team apple or team android, we can all agree that game apps have come along way since smartphones have been developed. Angry Birds, Candy Crush, and Pokemon Go have all been hits around the nation. In this class, your student will create the games compatible to smart devices. Students will use Python coding language to develop their games. All future game designers are welcome.

### ***Arduinos: Microprocessor Programming #313 - 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 your Arduino kit home for further exploration. Good for beginners and repeating/intermediate students.

### ***Augmented Reality (AR): 3D Landforms #501 - Instructor: Brandi Koehm***

See your world come alive with augmented reality! Create your own volcano, glaciers, tsunamis, floods, and map design with interactive software then compare and contrast with your own vinegar and baking soda volcanoes, salt and ice cube glaciers, cardboard designed topographic maps, and much more. Sculpt your landform and 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.

### ***Candy Crush Chemistry #405 - Instructor: Nicolette Prudente***

Explore the world of chemistry by using candies to experiment on. Chemistry, engineering, density, crystallization, and etc all can be explained with candy. Transform one state of matter into another, learn density with the use of Skittles, use your engineering and collaborative skills to create a marshmallow challenge, blow things up with Mentos, learn the structural transformations, physico-mechanical properties and physico-chemical properties of gelatin, and the crystallization process needed to make candy.

### ***Chemistry Wizards #404 & 410 - Instructor: Leann Legind***

Make a safe chemistry set using everyday home items. Experiment with different chemicals, see exciting reactions, and even taste some of your chemical creations. Become a great wizard and mix different "potions" using chemistry as your guide.

### ***Creepy Crawlies #205 & 211 - Instructor: Leann Legind***

What is tiny, tickles and has six legs? An incredible insect! Learn about the small creatures that live in your garden. Find out what they eat and why they are useful. Make an insect keeper, eat edible insects, march to an ant chant. Watch a mealworm turn into a beetle. Go buggy over insects!

### ***CSI Jr.- Spy Lab #200 & 216 - Instructor: Patrice Stanzione***

Ever dream of being on a CSI team? 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! The problem solving techniques and strategies learned in this class will be able to transfer to other areas of their education in the future. It's a new mystery each year so children can come back summer after summer.

## 2020 Class Descriptions

### ***Debate: The Science Behind Hollywood Movies #503 - Instructor: Patrice Stanizone***

Can a wooden door floating in the ocean withstand the weight of two people? Can your hair be used as a pulley? Can a ship broken in half stay afloat? To answer these questions and many more Hollywood inspired clips, you will have to discuss, experiment, and debate on such Hollywood movies as Spiderman, Ironman, Tangled, Titanic, Mulan and more to determine whether Hollywood got it right or not.

### ***Defeating Virus Monsters #400 - Instructor: Vanessa Lozano***

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

### ***Dissecting for Kids #105 - Instructor: Rachel Wampler***

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: Spy Tech #304 - Instructor: Steven Bach***

Learn how to solve modern day crimes using modern day technology. In this class, you will become a super spy using drone video technology, drone map making skills, collaboration skills, and critical thinking skills to retrieve the Top Secret document that has gone missing. Students will take home their edited drone video along with the Top Secret document to share with their friends and family.

### ***Eco Rangers: Food Chains and Webs #100 & 115 - Instructor: Patrice Stanizone***

Join in the discovery of what eats what, including what humans all over the world eat. Learn about how specific biomes contain specific food chains and webs. Try some really weird foods in our food chain. What's yummy to some food webs is just plain disgusting to others.

### ***Eco Rangers: Natural Elements #414 - Instructor: Patrice Stanizone***

Natural elements that make up planet Earth impacts so much of our lives, we breathe air, we walk on solid ground, we build fires, and we drink water. Learn how humans have engineered these natural elements to build planes, boats, cars, and fuel.

### ***Engineer Like a Superhero #203 - Instructor: Andrea Brown***

Work like an engineer to design, create, test and build table games, a catapult, a ferris wheel with a wheel and axle, and a Rube Goldberg contraption. A round of competitions will determine who has the best engineering skills and be crowned the superhero engineer.

### ***Escape Room: Secret STEM Lab #507 & 510 - Instructor: Rachel Wampler***

Join us for this exciting new class where you will use your critical thinking and collaboration skills to figure out puzzles, mazes, and more to escape the secret lab which you have been trapped in! Actual escape room tactics will be used on the last day of class.

### ***Evolve or Die #102 - Instructor: Andrea Brown***

Why would a cockroach survive a nuclear explosion but other animals cannot? How can a polar bear survive below freezing weather and other animals can't? Take an imaginary trip to the Galapagos Island to see whether Darwin got it right or not.

### ***Forensics Investigator: Bio-Crime Stoppers #107 & 318 - Instructor: Terri Burgess***

Have you ever wondered how criminals are caught using laboratory techniques? Come and learn the physical basis of how blood typing is performed using an artificial blood typing kit. Use plant pigmentation to identify the location of criminals and much more. Your child will be learning high school level laboratory curriculum and meeting high school Next Generation Science Standards.

### ***GIMP Animation and Photo Editing #117 & 416 - Instructor: Terri Burgess***

Learn how to edit photos and create animations using GNU Image Manipulation Program. Students can either create their own character or create a character from a photo. Students will then do advanced editing using GIMP software on their photo to create their own animation movie.

## 2020 Class Descriptions

### ***GoPro: Action Filmmaking #506 & 511 - Instructor: Gilbert Talancon***

How do parkour athletes shoot and edit their X-sports films? While 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 to take home and share with family and friends.

### ***Handyman's Workshop: Electrical Devices #408 & 412 - Instructor: Lyle Majeska***

Learn to become a handyman at home and help with simple electronic home repairs. Learn how to solder and identify components to build a fun take-home project. Emphasis will be placed on reading a schematic diagram and handling tools safely.

### ***Jr. Programmers #101 - 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.

### ***LEGO EV3 Robots: Renewable Energy #112 & 209 - Instructor: Kim Bach***

With the new EV3 Robots, you will work in pairs to go through a series of training exercises to prepare you to guide your robot in solving real-world engineering challenges related to renewable energy. After training, you will go on a simulated mission to solve a real-world problem by fixing a power plant, a wind turbine, solar panel on a roof top, a dam, and more.

### ***LEGO WeDo Robots #106 & 212 - Instructor: Kim Bach***

Develop science and engineering skills with LEGO WeDo 2.0 to build a robot. Learn to design prototypes, 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?

### ***Medical 3D Printing #314 - 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.

### ***Medical Dissections #208 - Instructor: Stephanie Bendlin-Trevino***

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 organs in this hands-on minds-on class.

### ***Mind Games 2020 #516 - Instructor: Yvette Franco***

Come and explore all new amazing mind tricks, puzzles, and brain teasers. Learn why your brain does what it does and much more in this incredibly mind blowing class.

### ***Minecraft Arcade Game Design 1, 2, 3 & 4 #116, 218, 317 & 417 - Instructor: Jim Pike***

Do you have a kid who loves Minecraft and other kinds of video games? Are they interested in how video games work? Have they ever wanted to create their own video game? If so then this class will be perfect for you! In Minecraft Game Design students will create their own video games using Minecraft as a game creation platform. They will gain skills in computer programming, set design, map building, and teamwork. Each class stands by itself without prerequisites. Students can repeat classes, learn new techniques in each class, and start their projects from their own level.

### ***Minecraft Math Builders #401 - Instructor: Jim Pike***

Do you love Minecraft? Well, in this class, you will learn how to have fun building in Minecraft while learning different math skills such as long division, regrouping, algebra, and understanding algorithms which are needed to run any type of video game or computer programs. This class covers 3rd-5th grade Common Core Standards.



## 2020 Class Descriptions

### ***Minecraft Movie Maker 1, 2 & Mini #103, 202, 420 - Instructor: Jim Pike***

Does your kid have a passion for drama? Are they creative storytellers? Have they ever wanted to work on a movie set? If so, then Minecraft Movie Maker is the perfect class for them. In this class, students will develop original characters, write scripts, and act them out in Minecraft. Students will also gain video editing skills in order to complete their movies and upload them onto YouTube. Each class stands by itself without prerequisites. Students can repeat classes, learn new techniques in each class, and start their projects from their own level.

### ***Minecraft Redstone: Bloodstream #221 - Instructor: Jim Pike***

Have you ever wondered how the human body works? Are you interested in engineering machines? If so Redstone Body Systems is perfect for you! In this class, we will study how body system works, particularly the bloodstream, and create machines that replicate these processes in Minecraft.

### ***Minecraft Redstone: Nervous System #119 - Instructor: Jim Pike***

Have you ever wondered how the human body works? Are you interested in engineering machines? If so Redstone Body Systems is perfect for you! In this class, we will study how body system works, particularly the nervous system, and create machines that replicate these processes in Minecraft.

### ***Minecraft Redstone: Urinary Tract #320 - Instructor: Jim Pike***

Have you ever wondered how the human body works? Are you interested in engineering machines? If so Redstone Body Systems is perfect for you! In this class, we will study how body system works, particularly the urinary tract, and create machines that replicate these processes in Minecraft.

### ***Minecraft Survival City: Architecture #303 - Instructor: Jim Pike***

In Survival City mode, students will study how humans affect the world around them by building a city in Minecraft survival mode. Students will study landforms and biomes of the world, gather resources, city plan, design buildings in different architectural styles, and build infrastructure.

### ***Minecraft Survival City: Landforms #502 - Instructor: Jim Pike***

In Survival City mode, students will study how humans affect the world around them by building a city in Minecraft survival mode. Students will study landforms and biomes of the world, gather resources, city plan, design buildings in different architectural styles, and build infrastructure.

### ***Misty and Smoky Special Effects #220 - Instructor: Yvette Franco***

Create cool special effects with dry ice and fog machines. Learn the physics behind this special type of "ice" and the misty fog created by fog machines. Are you ready for a SMOKEtacular and FOGtastic experience?

### ***Ocean Explorers #104 & 110 - Instructor: Leann Legend***

Put on your mask. Get ready to look into the ocean. Learn about the amazing animals that live in this incredible world. Make your own ocean fish print, dissect a squid, observe fish and a hermit crab, make a jelly fish and a stuffed sea creature to take home. You'll have a SEAsational time!

### ***Portable Planetarium Adventures #207 & 210 - Instructor: Rachel Wampler***

Bring the night skies to your classroom! Experience a virtual flight to our moon and around the Milky Way without leaving earth. Learn about the planets, eclipses, constellations, Greek mythology, and Indian folklore in a clear, night sky format via our inflatable Starlab planetarium.

### ***Rad Robots: Sphero SPRK #217 - Instructor: Stephanie Bendlin-Trevino***

Learn 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.

### ***Rainbow Science #109 - Instructor: Terri Burgess***

Explore all of the colors of the rainbow with hands-on fun! Students will blend science and art in this uniquely colorful class!

## 2020 Class Descriptions

### ***Rock 'n' Roll Geology #411 - Instructor: Nicolette Prudente***

Calling all rock hounds, come join our geology class and have a rocking good time learning all about geology, such as volcanic eruptions, subsiding buildings, liquefying sand, earthquake zones, and much more. Get an up close view of rocks and different soils and find out what they are made out of and what makes them so unique and special.

### ***Scales to Tails #305 & 311 - Instructor: Leann Legind***

Learn about different animals, from those that have scales to those that have tails. Learn about the five major animal classifications and find out what makes each group so special. Observe dogs, mice, lizards, fish, ants & more! Make fun animal crafts and even create your own "super animal".

### ***Secret Agent Force #406 & 409 - Instructor: Terri Burgess***

In this interactive detective and criminal game, you will try to outsmart your opponents to either find the clues or identify the criminal. You will be practicing technology used by secret agents, such as night vision goggles, invisible beams, alarms, and much more to identify the "bad guys" and retrieve the stolen goods, as well as creating your own secret agent gadgets.

### ***Slimy Toy Maker #315 & 415 - Instructor: Vanessa Lozano***

Have fun learning chemistry, food science, and engineering while making slimy, icky, and gross toys. Create replicas of real food, such as smoothies or other gross replicas and fool your friends. Discover how yummy your slimy toys can be by eating cherry boogers and other icky stuff. So, if you like making slimy toys, then come join us and engineer some fun!

### ***Space Invaders #500 & 513 - Instructor: Vanessa Lozano***

Are we alone? Come explore this question by learning what it takes for life to evolve on other planets. Discover new planets, new galaxies, and much more! See how Newton's Laws are everywhere in known existence. Learn about dwarf planets and stellar evolution. Using experiments and crafts, learn about the not-so-final frontier.

### ***STEAM Table Game Maker #118 - Instructor: Yvette Franco***

Have fun and learn at the same time while building your favorite table games, such as foosball, ping pong, pinball, skee ball and many more. Learn how physics is used in the creation and playing of all of these games and more.

### ***Stop Motion Animation #419 - Instructor: Yvette Franco***

Have you ever wondered how The Lego Movies, Rudolph the Red Nose Reindeer, and The Nightmare Before Christmas were created? Well in this class, you will learn how stop motion animation works, by learning techniques, such as paper cut out, claymation, object animation, and pixilation. Create a flip book, zoetrope, and a stop motion animation movie to take home and share with family and friends. So, bring your imagination to create stop motion animation movies with just about anything that is exciting to you!

### ***Stop Motion Animation 1& 2 #418 & 514- Instructor: Rachel Wampler***

Have you ever wondered how The Lego Movies, Rudolph the Red Nose Reindeer, and The Nightmare Before Christmas were created? In this class, you will learn how stop motion animation works, by learning techniques, such as paper cut out, claymation, object animation, and pixilation. Create a flip book, zoetrope, and a stop motion animation movie to take home and share with family and friends. So, bring your imagination to create stop motion animation movies with just about anything that is exciting to you! Each class stands by itself without prerequisites. Students can repeat classes, learn new techniques in each class, and start their projects from their own level.

### ***Surviving a Zombie Apocalypse #219 & 301- Instructor: Terri Burgess***

Your community has been overrun by zombies, how would you protect yourself from the zombies? In this class, you will learn methods to counteract contagious diseases and viruses through the study of viruses like a CDC expert but also through developing life saving skills in an environment where resources are scarce. Here are just some of the survival skills you will learn: how to make contaminated water drinkable, how to make a shelter, how to make a compass, how to make a solar oven, how to find food, and much more.

## 2020 Class Descriptions

### ***Take Charge! Thunderbolt #505 & 508 - Instructor: Terri Burgess***

Can you harness Pikachu's thunderbolt powers to overtake others and continue your quest for the next battle? Well in this class you will learn about the different types of electricities that exist and whether or not you can use your electrical powers to make balls dance, to levitate objects, and to even shock your friends.

### ***That's Gross Don't Eat That... #300 & 316 - Instructor: Patrice Stanzione***

What's yummy to some cultures is just plain weird to others. Come see, feel, smell, and even taste some exotic foods from other cultures. Make cheese, bugs, a model of the stomach and the esophagus, and much more. This class changes and varies its foods and cultures each year so children can return summer after summer and still make new discoveries!

### ***The Science Behind Hollywood Movies #512 - Instructor: Patrice Stanizone***

Can helium filled balloons really lift a house, can your hair be used as a pulley, can a ship broken in half stay afloat? To answer these questions and many more Hollywood inspired clips, you will have to discuss, and experiment on such Hollywood movies as Spiderman, Ironman, Tangled, Up, Mulan and more to determine whether Hollywood got it right or not.

### ***The Science Behind Magic Tricks #201 - Instructor: Pat Smith***

Come discover the magical, surprising science in our world! Defy the forces of gravity, investigate optical illusions, experiment with sound makers, mix colors without touching them, make your own tornado in a bottle, explore colored shadows, and "see" invisible forces at work! Learn the magic behind the exciting world of physics!

### ***Trash to Treasures Crafts #114 - Instructor: Vanessa Lozano***

Become a young environmentalist and learn how upcycling can free up space in our landfills, how it can prevent trash from reaching our waterways 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.

### ***Video Game Design #309 - Instructor: Rachel Wampler***

In the land of Space Invaders, Pong, Pac Man, Tetris, Minecraft, video game designers have used computer programming skills to make their dreams come to fruition. This class uses Python coding skills to help students develop the basic principles of video games. Students will become programmers to create their own stories, their own rules, and their own game play. All ranges of experience are welcome to venture this course.

### ***Virtual Reality vs. Augmented Reality Science***

***#111- Instructor: Rachel Wampler/ #213 - 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.

### ***Yummy or Not: Food Chemistry #312 - Instructor: Rachel Wampler***

Your body is a lean mean chemistry machine, it does more than digest your food, it chemically reacts with your food to produce visual and aromatic results. What looks yummy to you may actually be bad for you. Discover whether coke can actually dissolve your teeth, whether food coloring can dye your stomach, whether different fats have different densities, whether carbonated drinks can clean your intestines, whether eating beans gives you flatulence, and more.