

# San Joaquin County Office of Education

## STEM CAMPS

### 2020 SUMMER PROGRAMS FOR STUDENTS AT THE SJCOE

#### BIOTECHNOLOGY AND MICROSCOPY

**Microscopy Bootcamp | Grades 6-8 | June 23-25 | \$175 (includes lunch)**

Students will be exposed to hands-on Microscopy activities. They will learn how to keep a laboratory research notebook.

**Biotech Bootcamp | Grades 6-8 | July 14-16 | \$175 (includes lunch)**

Students will learn how to use the tools of biotechnology, separate molecules, quantify proteins, and insert DNA into bacteria.

**Biotech Bootcamp | Grades 9-10 | July 21-23 | \$200 (includes lunch)**

Students will make solutions, analyze DNA, purify proteins, separate molecules, transform bacteria, and clone DNA fragments.



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**REGISTRATION  
NOW OPEN**  
[www.sjcoescience.org](http://www.sjcoescience.org)

#### ENGINEERING AND ROBOTICS

**Elementary Engineering with LEGO WeDo AM/PM | Grades 2-5 | June 16-18 | \$95 (includes snack)**

This workshop will present building and coding challenges as students have fun learning to build and program LEGO We Do robotic devices. Engineering concepts and creating computer code will be explored to design and program robots.

**Robotics Inventions | Grades 6-8 | June 19, 22-23 | \$180 (includes lunch)**

This is a fun, introductory class using the powerful Mindstorms Lego EV3 robotics system. Students will explore electrical and engineering concepts, build various robots with different sensors, and use the computer to program their robots to respond to sensors and perform desired tasks.

**Virtual Reality and Augmented Reality | Grades 7-12 | July 14-16 | \$150 (includes lunch)**

Virtual Reality and Augmented Reality are future technologies that allow for training, entertainment and utility. Students will learn to both use and implement these technologies during this hands-on 3 day training

**Artificially Intelligent Inventions | Grades 7-12 | July 28-30 | \$150 (includes lunch)**

Artificial intelligence is increasingly ubiquitous, from smart speakers, to phone apps. Students will get the chance to not just learn the theory behind this technology of the future, but to invent solutions using it in the Python programming language.

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#### CODING

**Coding Fun AM/PM | Grades 4-5 | June 8-10 | \$95 (includes snack)**

Kids can start programming in elementary school! Scratch, an object-oriented programming language is capable of doing all sorts of computer tasks, even designing or modifying classic video games!



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**High Tech Incubator | Grades 6-8 | June 29 - July 1 | \$200 (includes lunch)**

In this class, we will learn the basic concepts of writing code for the Arduino, an inexpensive, hobby microcontroller. Students will use makerspace tools to invent high tech creations with circuitry and programming.

**Arcade Creations | Grades 9-12 | July 21-23 | \$180 (includes lunch)**

An afternoon at the Arcade is magical. These high tech machines transport you to magical places and help you accomplish monumental feats. In reality, they are computers engineered and programmed to interact with users. Learn engineering and computer science using circuitry, 3D printers, laser cutters and more as you engineer a small system that plays a video game you wrote to take home at the end of the camp.

#### DURHAM FERRY OUTDOOR EDUCATION CENTER

**Let's Play Outside I | Grades 4-8 | June 8-11 | \$300 (includes lunch)**

This is a camp hosted at Durham Ferry Outdoor Education Center in Manteca. Students will participate in nature hikes, archery and fishing. We will work on building confidence and academic strength in kids.

**Let's Play Outside II | Grades 4-8 | June 15-18 | \$300 (includes lunch)**

This is a camp hosted at Durham Ferry Outdoor Education Center in Manteca. Students will participate in nature hikes, archery and fishing. We will work on building confidence and academic strength in kids.

**Let's Play Outside III | Grades 4-8 | June 22-25 | \$300 (includes lunch)**

This is a camp hosted at Durham Ferry Outdoor Education Center in Manteca. Students will participate in nature hikes, archery and fishing. We will work on building confidence and academic strength in kids.

**Let's Play Outside IV | Grades 4-8 | July 13-16 | \$300 (includes lunch)**

This is a camp hosted at Durham Ferry Outdoor Education Center in Manteca. Students will participate in nature hikes, archery and fishing. We will work on building confidence and academic strength in kids.