

2020 Summer STEM Programs

At Arrow Montessori School

818 W Gladstone Street, San Dimas CA - 91773 (909) 599-0025
www.arrowmontessori.com



Schedule

Mechanical Engineering

July 6– 10 | Ages 5-14
9 am-12 pm



Aerospace Engineering

July 13– 17 | Ages 5-14
9 am-12 pm



Civil Engineering

July 20-24 | Ages 5-14
9 am-12 pm



Environmental Engineering

July 27 - 31 | Ages 5-14
9 am-12 pm



Electrical & Marine Engineering

Aug 3– 7 | Ages 5-14
9 am-12 pm



Chemical & Biomedical Engineering

Aug 10-14 | Ages 7-14
9 am-12 pm



Robotics

Aug 17-21 | Ages 5-14
9 am-12 pm



INVENT YOUR SUMMER

Young Minds Academy brings science, technology, engineering and math (STEM), to kids from grade Kindergarten to eighth in a fun and challenging way through summer workshops. We are proud to inspire students by teaching science concepts through hands-on learning.

REGISTER at Arrow Montessori.

Kindergarten—8th grade

7/6—7/10

Junior Mechanical Engineering:

Toys have always inspired creativity in children. In this week long camp, young engineers will learn the concepts of Mechanical Engineering and put them into action to become expert Toy Makers as they design and build their very own toys.

Mechanical Engineering:

During the Mechanical Engineering camp, students design, create, test, and refine a variety of machines and mechanical systems. Students learn basics of fluid mechanics, simple machines, and other design and engineering concepts while constructing roller coasters, egg-drop vehicles, and an incredibly fast air powered dragster.

7/13-7/17

Junior Aerospace Engineering:

This class introduces our youngest engineers to fundamental concepts of aircraft and spacecraft design. Through open and focused exploration, students explore and construct airplanes, rockets, helicopters, and more.

Aerospace Engineering:

During our Aerospace Engineering class, students use the Engineering Design Process to design, create, test, and refine a variety of flying machines. They construct a shock absorbing system designed to protect two marshmallow astronauts in a lunar vehicle, create their own air-powered rockets, and assemble a hot air balloon model that actually takes flight!



Now Enrolling
Call: (909) 599-0025
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7/20-7/24

Junior Civil Engineering:

Put on your hard hats engineers and join us for the Engineering of Cities! During this week, students work hard to apply their knowledge of construction build their very own city from the ground up. From roads and tunnels to buildings and skyscrapers, students discover that no job's too tough for an engineer.

Civil Engineering:

How do our communities become wonderful places to live, work, grow up and play? During this week, students are challenged to design and build their own scale-model city. Students will learn how to draft a Master Plan and study various land uses and the real world engineers play in building a city in order to make them better places to live.

7/27-7/31

Junior Environmental Engineering:

Are you ready to get down and dirty searching for solutions to some of our biggest environmental problems? In Junior Environmental, students ponder some truly "hot" environmental issues. Students save endangered animals, help plants grow and create protection from the sun's heat. By investigating natural process, we discover ways that engineers can be inspired by the world around us to take on all sorts of challenges.

Environmental Engineering:

During our Environmental Engineering camp, students use the Engineering Design Process to design, create, test, and refine basic solutions related to alternative energy and environmental issues. They learn principles behind crafting efficient wind-powered machines and discover how those machines can be used to help reduce the use of fossil fuels. During the culminating project, students test different materials to discover which ones most effectively clean up after an oil spill.

8/3-8/7

Junior Marine & Electrical Engineering:

What causes something to sink or float? How can engineers help explore and protect the ocean below? During this week, students explore the concepts of marine engineering and mechanics, harnessing the power of water, and discovering designs that help us make the impossible, possible.

Marine & Electrical Engineering:

During the Marine Engineering classes, students use the Engineering Design Process to design, create, test, and refine several types of marine based devices and vehicles. Students construct working prototypes that teach and reinforce the concepts of above water transportation, underwater exploration, and harnessing the power of water. They gain exposure to careers in naval, ocean, and marine engineering.

8/10-8/14

Junior Chemical Engineering:

The Junior Chemical Engineering classes introduce our youngest engineers to fundamental concepts of solids, liquids, and solutions. Students investigate the properties of several crazy concoctions and make their own samples of bubbles, play dough, flub, and more.

Biomedical Engineering:

Participants will explore the application of engineering principles and design concepts to medicine and biology. This class introduces students to the field of healthcare purposes. Through hands-on activities, students are introduced to the systems of the human body (circulatory, respiratory, as well as genetics). Students will learn about the components of blood, identify the blood groups as well as dissect a sheep heart!

8/17-8/21

Junior Robotics: Play Soccer:

This week is a perfect mixture of fun and learning to program. Using LEGO® bricks, students build several projects such as a goal kicker and a goal keeper. Students will learn how to program and operate their creations using a laptop computer.

Robotics Academy:

Our Robotics Academy offers hands-on, minds-on robotics curriculum supported by the latest research and innovation. Students will construct authentic, open-ended designs to meet real-world challenge. Robotics challenge teaches important skills in foundational mathematics, engineering, programming, problem-solving, creative thinking, and computational thinking.

