

PRIMANTI MONTESSORI SCHOOL – WHITTIER

Summer of Discovery 2017

Daily **STEM (Science, Technology, Engineering & Mathematics)** (Monday – Thursday) *Program Included & **Weekly Field Trips (Fridays)**

Junior Engineers - Kinder & 1st Grade: 1 to 1 ½ hours of STEM Education

Apprentice Engineers - 2nd through 8th Grade: 2 to 2 ½ hours of STEM Education

*Due to the popularity of the STEM Program, in order to process on a first come, first served basis, all applications will be date stamped and students 7 & up will be given priority for the Apprentice Engineers group placement. Secondary class placement for this age group, will be the Junior Engineers group.

ELEMENTARY WEEKLY SCHEDULE

Week 1: Summer Arts & Crafts Week - June: 12-16

Learn, explore and create works of art and summer crafts! Using watercolors, color pencils, pastels, markers, chalk, clay, pencil and pen we will create beautiful multimedia art work. Simple brush strokes, color mixing, values, contrast, highlighting, and shadowing are a few of the lessons that will be covered.

BRICKS 4 Kidz:

AM - Stop Motion Animation 9:30-11:30 / 4days (M-Th) x 2hr.

PM - Mechanical Engineering Lego 12:00-1:00 (5-6yrs. Only)



Field Trip: In- House Field Trip

Week 2: Environmental Week- June 19-23

Engineering for Kidz:

Junior Marine Engineering: Civil Engineering- Put on your hard hats engineers and join us for our *The Engineering of Cities!* During this week, students work hard to apply their knowledge of construction to save the beach from erosion and build their very own city from the ground up. From roads and tunnels to buildings and skyscrapers, students discover that no job is too tough for an engineer.

Master Engineer Classes: Electrical Engineering - During our Electrical Engineering week, students use the Engineering Design Process to design, create, test, and refine basic electronics and circuits. Students learn how a circuit works and test materials to see if they conduct electricity. Building upon a general understanding of electrical energy, they will experiment with Snap Circuits® to discover the capabilities of major electronic components. In addition, students build their own flashlights and explore the world of magnetic energy.

Field Trip: Environmental Nature Center

The ENC features 15 native California ecosystems, a Nature Museum packed with neat things to touch and investigate.



Week 3: Sports Week- June 26-30



Engineering for Kidz:

Junior Robotics: Play Soccer

Using LEGO® bricks, students build a goal kicker, a goal keeper, and cheerful fans. They also learn how to program and operate their creations using a laptop computer.

Master Engineer Classes

Fluid Power

Have you ever wonder how an elevator can lift a load of people up into the air? During this week, students will examine at how hydraulic and pneumatic systems work to help people perform tasks that involve large amounts of weight with seemingly little effort. Students will explore how forces are transmitted and multiplied within these systems as they discover about Pascal Law.

Field Trip: In- House Field Trip

Week 4: Performing Arts Week - July 3 – July 7

Bicks 4 Kidz:

AM - Stop Motion Animation 9:30-11:30 / 4days(M-Th) x 2hr.

PM - Mechanical Engineering Lego 12:00-1:00 (5-6yrs. Only)



Lights, cameras, Legos, computers, software, and your creativity combine to design, create, and film a stop action mini-movie. Working as a team, students will plan, script, and use LEGO components to build the set and props and then shoot their movie using a camera. Teams will use movie-making software to add special effects, titles, credits, and more. Participants will take home a DVD of their movie creation.

Two students per robot, per laptop.

Field Trip: Jargie The Science Girl!

Topic: Gravity and Energy & Chemical Reactions

Week 5: Manners & Etiquette Week- July 10-14

This week, students will learn basic manners. Manners in children can be a frustration to instill, but etiquette goes beyond table manners, and works its way into all manner of social skills.



Engineering for Kidz:

Junior Marine Engineering: Inventors Workshop - We have opened the workshop for a week of fun, creativity, and of course -- engineering! Over the course of a week, students will invent new machines and explore creative design solutions using the Engineering Design Process. Discover how to design your own drawing robot inside the Engineering for Kids Inventor's Workshop.

Master Engineer Classes

Biomedical Engineering-

Human beings are fascinating and complex living organisms – a symphony of different functional systems! Through series with hands-on activities students are introduced to the systems of the human body – skeletal, muscular, circulatory, respiratory, digestive, and sensory as well as genetics. At very stage, they are introduced to engineers' creative, real world involvement in caring for the human body.

Field Trip: In- House Field Trip

Week 6: Pottery Week- July 17 – 21

Kids will learn to sculpt with clay, draw, paint, and talk about different sculpting art forms.



Engineering for Kidz

Junior Marine Engineering:

The Engineering of Power and Energy - In the Engineering of Power and Energy, join us as we look at ways to get things moving. During this week, students explore the foundational concepts of potential and kinetic energy by building their very own toys. Additionally, students will explore natural power and energy sources such as falling water and the sun. Get ready for a shock in this energetic and engaging engineering experience!

Master Engineer Classes

Robotics Level 1 - Students will learn the basics of designing, programming, and controlling a fully functional robot. Using LEGO® MINDSTORMS®, mathematical concepts, and engineering principles students will brainstorm, plan, test, and modify sequences of instructions to accomplish a given task. Students will also learn the sequence of communication between the robot, and the programmer by collecting and analyzing data using the robot's sensors.

Field Trip: In-House Field Trip

Week 7: Journey in Time Week: July 24-28

Engineering for Kidz

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.



Master Engineer Classes

Robotics level 2

Supported by the latest research and innovation, this class uses the hands-on, minds-on field of robotics to engage students in problem solving, discovery, and exploratory learning.

Field Trip: Heritage Museum

Students will discover what life was like in orange county one hundred years ago. Making butter, using a stereoscope viewer, trying out a pump organ, and dressing in period clothing are only a few of the hands on activities the students will experience!

Week 8: Arboretum - June 31- Aug. 4

This week, students will learn about the plants, nature, history, health, culture and sustainability.



Briks4kidz:

Using motors, sensors, software and LEGO! Students will learn how to design and program their Robot that can perform all kinds of tasks! Mindstorms software lets them place icons in sequence to design the commands they want. Students work in teams to learn basic programming logic, make enhancements, and work on increasingly complex and programs.

AM - Robotics 9:30-11:30 AM / 4days(M-Th) x 2hr.

PM - Mechanical Engineering Lego 12:00-1:00 (5-6yrs. Only)

Field Trip: Fullerton Arboretum

Week 9: Culinary Week- August 7- 11

Let's get cookin'! Students will discuss many skills, measurements and conversions, healthy foods handling practices, herb-spice-ingredient identification, palette expansion, and nutrition. Students will be introduced to specific cooking techniques such as sautéing, braising, broiling, frying, roasting, grilling, baking, stewing and MORE in a detailed practice setting.

Engineering for Kidz

Junior Marine 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.

Master Engineer Classes

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!



Field Trip: In- House Field Trip

Week 10: Dino Week- August 14 -18

Be an Archeologist this week and have fun studying and discovering the different time periods of the dinosaurs.

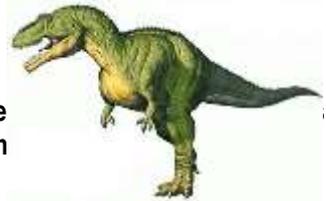
Engineering for Kidz

Junior Marine Engineering: What causes something to sink or float? How can engineers help explore and protect the ocean below? These questions and more are all explored in Junior Marine. 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.

Master Engineer Classes

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.



Field Trip: Ralph B. Clark Regional Park

Ralph B. Clark Regional Park includes a beautiful interpretive center with an extensive marine fossils dating from about one million years ago, to more recent terrestrial mammals of thousands of years ago. These specimens were recovered inside the boundaries of Clark Park, and from the development of the Coyote Hills area in northern Orange County.

Week 11: BBQ Hawaiian Day- August 21-25

Celebrate our last day of Summer School!!

Students and Families are welcome to partake in a Luau-type BBQ with fun games and activities for all to enjoy.

Engineering for Kidz;

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, hot air balloons, and more.

Master Engineer Classes

Civil Engineering - Do you have what it takes to engineer a magnificent city from an inhabitable environment? During this week, students form their very own construction crew and work together as a team to build a city from the ground up. Crews design essential urban structures, develop processes to purify water and generate their own power. Join up with a crew to compete in challenges designed to test the strength of their designs.



Field Trip: In- House Field Trip

Academic Program

We provide an excellent accelerated Montessori Academic Program to Master your skills in Math, Languages & Technology directed by Montessori Certified Teachers.



Call to schedule a TOUR to our beautiful campus for Summer & School Year 2017-2018 (Ages 6wks – 14yrs)

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