

**ELEMENTARY SCHOOLS****Jasmine Arjasbi ~ Silver Spur*****Moby Max***

A web-based K-8 adaptive curriculum program that provides a unique, individualized education plan for each student with targeted differentiated instruction aligned to the Common Core State Standards. *Moby Max* allows gifted students to progress as quickly as they like while simultaneously ensuring that remedial students get the extra instruction they need.

**Kristin Biggins ~ Soleado*****Lively Literature Circles through Shared Inquiry***

Students develop interpretative reading skills through utilization of the new Common Core Jr. Great Books. The purchase of these age-appropriate books will allow students to read about complex characters that grapple with developing kindness, honesty, communication, integrity, and other qualities that will help second graders reflect on and improve these qualities within themselves. Discussing theme-related questions will develop students' self-awareness and empathy which are both important for positive conflict resolution.

**Jill Beall ~ Soleado*****Magnetic Levitation Exploration***

Fourth grade science curriculum involves the study of magnetism including magnetic repulsion and attraction. *Maglev* Vehicle Kits will allow students to discover the concept of *Maglev*- magnetic levitation. *Maglev* is a method of transportation that uses magnetic levitation to carry vehicles with magnets rather than with wheels, axles or bearings. Working in small groups, students construct a vehicle and then test the *Maglev* concept by running the vehicle on an eight foot track.

**Jennifer Cosgrove ~ Vista Grande*****Building a Community***

A selection of various gingerbread stories will be purchased and read to the students. Discussion will note the gingerbread's travels and the changes in setting from story to story. Attention will be focused toward the author's purpose, voice and genre. Upon completion of the readings, students will be asked to collaborate in small groups and create their own 36 x 36 inch community inclusive of buildings and roads. Their square will be part of a puzzle created by the entire classroom and will incorporate math skills and teamwork.

**Mariana Donahoe ~ Soleado*****Scientific Minds Want To Know***

First grade students will become proficient in the scientific process of discovery. Supplies will be purchased to allow two hands-on experiments per week for 25 weeks. Students will observe, ask questions and establish hypothesis. The experiments will engage students in scientific testing and will involve investigating and modeling. Each experiment includes a response sheet and walks students through the scientific process.

**Stacy Dunn ~ Dapplegray*****Instructional Videos through Educreation.com***

*Educreations* is an exciting app that transforms an iPad into a recordable whiteboard. It records voices, handwriting and also allows the user to insert pictures to produce their own personal video lessons that the teacher and students can share online. Lessons are stored online and can be accessed by students on any computer or iPad both at home and in the classroom.

## ELEMENTARY SCHOOLS

### **Kimberly Fenimore ~ Point Vicente**

#### ***Literature for the 21st Century***

Multiple sets of a variety of nonfictional texts will enable K-5 teachers to use the books in their individual classrooms across grade levels to establish rigorous and dynamic lessons. By incorporating new vibrant texts into the classroom libraries, students can discover new nonfiction that can help teach science, technology, and math.

### **Heidi Hiatt ~ Mira Catalina**

#### ***Moby Max***

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### **Heidi Hiatt ~ Mira Catalina**

#### ***The Young Scientists Clubs Science Packs***

The Young Scientists Club Science Packs will provide several hands-on activities to 4<sup>th</sup> grade students focusing on sparking their curiosity and interest in science. The kits will be grouped in three units- *Mirrors, Electricity and Circuits, The Life Cycle and Famous Scientists and Their Experiments*. Examples of experiments include students designing circuits with on/off switches that illuminate light bulbs, students focusing on brine shrimp and their habitat and survival, and students exploring surface tension by making foil boats and blowing bubbles.

### **Jennifer Lajolette ~ Vista Grande**

#### ***Imagination Inspires Invention***

Collection of *Times for Kids* books will enable 3<sup>rd</sup> grade students to read about famous inventors Benjamin Franklin, Thomas Edison, Alexander Graham Bell and Henry Ford. Students will read, discuss and write about the inventors and the specific character traits that were necessary to make their inventions successful. A final project, the creation of a booklet, will help the students understand that they too can learn about, grow and change the world around them.

### **Kimberly Libby ~ Vista Grande**

#### ***The Power of Words***

Collection of picture books that focus on the power of words our Founding Fathers used or wrote and the affect they had on how our government was formed. In addition, students will examine the preamble of the Constitution and our country's national symbols and the powerful words associated with them.

### **Lori Marshall ~ Point Vicente**

#### ***STEM Thrillers!***

Creation of hands on learning projects will provide real world connections to design, friction, patterns and the nature of gravity. Students in 2<sup>nd</sup> and 3<sup>rd</sup> grade will create toothpick bridges, straw structures and racers that allow for opportunities to exercise spatial sense, practice taking of measurement, recording of data and learning how to make modifications based on observations.



## **ELEMENTARY SCHOOLS**

**Stephanie O'Brien ~ Lunada Bay**

***A Breeze in the Weeds***

Mechanical engineering involves the design of anything with moving parts. In this unit, students will think like mechanical engineers, use their understanding of air as wind, to design and create wind-powered machines. The storybook, *Leif Catches the Wind*, introduces students to wind turbines that generate renewable energy. Students will study how common machines such as mechanical pencils and egg beaters work, then use their mechanical engineering skills to design a windmill that catches the wind.

**Cathy Rodriguez ~ Rancho Vista**

***Engineering-Simple Machines***

*Engino* mechanical engineering sets cover the building of all simple machines, the lever, the wedge, the wheel and axle, the screw, the inclined plane and the pulley, as well as two more mechanisms, the gear and the linkage. Students will be able to build sixty working models, including cars, cranes and all different types of machines. These sets will allow 1<sup>st</sup> grade students to engage in scientific thinking and compare different methods for problem solving.

**Julie Tarango ~ Montemalaga**

***Growing 21st Century Learning: Transforming a School Garden to an Outdoor Classroom***

Expansion and upgrading of the existing 5<sup>th</sup> grade garden to allow the creation of an outdoor classroom for all Montemalaga students. This space would provide a platform to teach a robust, comprehensive science curriculum and other cross-curricular lessons. Students will have the opportunity to become better stewards of our environment, and find the indelible relationship between nature and cross-curricular themes including science, math, art, poetry, reading and writing.

## **INTERMEDIATE SCHOOLS**

**Regina Corwin ~ PVIS**

***Crossfit "Box Life" for Kids***

Supplemental physical education equipment for grades 6<sup>th</sup> through 8<sup>th</sup> will enable teachers to implement a *Crossfit* program and introduce students to elements of high intensity interval training. In addition, PE teachers will focus on students' developing upper body and core strength.

**Regina Corwin ~ PVIS**

***Functional Anatomy for Human Performance Lab***

Through the use of skeletal and muscular models, 7<sup>th</sup> and 8<sup>th</sup> grade students will learn the basic structure of the human body and its relationship to performance through sports and exercise. Understanding how anatomy affects movement, students will apply what they have learned to their own bodies in order to keep themselves physically fit. Students will receive a basic foundation about how the body functions through exercise. Methods learned will enable students with the tools to create their own personal circuit training session utilizing Warrior ropes, free weights, kettlebells, TRX bands, and body bars using their own body weight.



## INTERMEDIATE SCHOOLS

### **Scott Garman ~ PVIS**

#### ***Therm-App, Broad Spectrum Imaging System***

Broad-Spectrum camera system will be used in science and STEM (Science, Technology, Engineering and Math) classes, allowing students to understand of electromagnetic (EM) radiation and heat flow.

### **Scott Garman ~ PVIS**

#### ***Zobrist Cubes, They are like Spatial Intelligence Steroids***

Zobrist Cubes puzzles will enable students to develop their spatial skills. Spatial intelligence or spatial-temporal reasoning is the ability to perceive/imagine 3 dimensionally. Those with a more developed spatial cognitive ability are often far better at problem solving, organization, and a whole range of tasks that are important for success in the modern work force. Young girls often fall behind their male counterparts in the development of spatial skills due to the type of play they engage in. Building blocks give preteen boys an initial advantage but teen girls can catch up with the boys if they participate in spatial skill building activities. The puzzle are arranged by difficulty and divided into levels. Students can hone their spatial skills on hundreds of different puzzles in the same level or challenge themselves by trying different levels.

### **Scott Garman ~ PVIS**

#### ***Linkbot, Linkable Robots that Connect Students to Their Potential***

A fully functional, battery operated robot with two degrees of freedom specially designed for integrated computing and STEM education. The robots were designed to teach students to build and code. *Linkbots* can be programmed from a computer as well as programmed using position recognition. The students move the robots through a series of positions and the robots remember them. Push a button and the robots repeat the movements exactly. *Linkbots* are a fun way to foster creativity and enable students to easily learn programming.

### **Sandra Kim ~ Ridgecrest**

#### ***Voices from the Past***

Reproducible primary source ebooks will allow students to think like historians. Using primary source documents, first-hand accounts from people who witnessed or were involved in the events, students will hear voices from the past enabling them to understand a particular civilization. Documents could include letters or reports written by the people involved, official documents, or photographs of the events. Students will be asked to “unpack” primary documents to help them learn how to analyze, interpret, evaluate, make inferences and form opinions allowing them to gain insight into people and societies thus, making history come alive.

### **Vicky Lawson ~ PVIS**

#### ***Classroom ELMO- a computer free classroom***

ELMO document camera is able to magnify and project the images of actual, three-dimensional objects, as well as transparencies. They are, in essence, high resolution web cams, mounted on arms so as to facilitate their placement over a page. This allows a teacher to write on a sheet of paper or to display a two or three-dimensional object while the audience watches. Coupled with an existing Apple TV and iPad, this additional piece of technology will create an engaging learning environment.



## **INTERMEDIATE SCHOOLS**

**Campbell Nimick ~ Miraleste**

*Circuit Scribe Mixing Art with Electronics*

*Circuit Scribe* is a roller-ball pen filled with conductive silver ink that enables the creation of circuits by simply drawing them. Connecting components is as easy as doodling. The pen allows users to simply draw out their circuits, place components onto the lines, and connect a power source and then watch things come to life.

**Jaelyn Rosen ~ PVIS**

*Physics Fun*

Students will experience the enhancement of the 8th grade science curriculum through the purchasing of additional materials to allow more physics demonstrations and lab activities. Students will have the opportunity to experience fun and educational hands-on activities. In hands-on science, students' concrete, kinesthetic actions are related to abstract concepts. These activities increase student motivation and engagement and help build their understanding of physics science concepts and embrace their love of learning science.

**Katherine Santarosa ~ Miraleste**

*Weather Phenomena*

Inquiry-based, idea-centered, hands-on kits, will allow students a deeper understanding of weather phenomena, along with the measurement and interpretation of weather data. Teacher lead discussion along with hands-on activities will help students demonstrate concepts and understand local and global weather patterns.

## **HIGH SCHOOLS**

**Grace Anderson ~ Peninsula**

*More than a Magazine*

Live interactive Chinese magazine series enhances the foreign language classroom and adds to the curriculum by engaging student in reading, seeing and hearing the language in a hands-on and entertaining manner.

**Tecia Barton ~ Palos Verdes**

*Use of Media in Social Studies*

History comes to life as students experience important events through vivid reenactments, dramatic readings and interviews with historians in this DVD series and accompanying teaching resources. Presented as an overview, these videos cover United States history from the earliest Native Americans to the 21<sup>st</sup> Century. Resources include preview and post discussion and follow-up activities.

**Barbara De Witt ~ Peninsula**

*The Odyssey: A Dramatic Retelling of Homer's Epic*

Classroom set of *The Odyssey* by Simon Armitage, an adaptation that recasts Homer's Epic as a series of dramatic dialogues, enables students to read the book aloud as a play and actively participate in daily dramatic reading. This will be used as a springboard for project based learning on a wide range of topics inclusive of leadership, archeology, battle fatigue, natural disasters and antique map making.



## HIGH SCHOOLS

### **Marie Kuhn ~ Palos Verdes**

#### ***Natural Engineering: Creating Living Walls***

Biology students will design, plan and carry out an extended project to produce a publicly exhibited edible walls or living walls of plants. Students will use their green walls to teach others about organic gardening practices and sustainability.

### **Lorriane Loh-Norris ~ Palos Verdes**

#### ***Quad copter for Aerial Robots Development and Understanding***

Access to an aerial vehicle, a drone, will develop students understanding of aerodynamics and offer physical experience in aerial robotics. Exposure would enhance the other training currently offered to new students in electronics, programming and fabrication. The drone will be used for both engineering classes during aerodynamics units, as well as for the competition teams developing expensive, custom quad copters.

### **Stephanie Peppermuller ~ Peninsula**

#### ***A Dissection Lab Series: Promoting Equitable Access for All Learners***

A series of dissection labs will be used to educate students about fundamental concepts in physiology, anatomy, cell biology, ecology and evolution. The dissection labs help students understand the relevance of material learned from the text books and facilitating the connection of text to real-life.

### **Mike Spalding ~ Peninsula**

#### ***Innovative Equipment for New Lab-Center AP Physics Course***

New *College Board* classes AP Physics 1 and 2 allow for the development of enhanced lab experience. Updated lab equipment will enable hands-on experiments and provide students with a deeper understanding of physics concepts.

### **Rob Snodgrass ~ Peninsula**

#### ***The Ultimate 21st Century Learning Experience***

Coupled with an existing ELMO response system (clickers) and ELMO wireless tablet, an ELMO document camera will allow honors chemistry and biology students to be immersed in an interactive learning environment. The teacher will be able to make a quick assessment of the students' understanding of presented materials and create an engaging classroom setting.

### **Rob Snodgrass ~ Peninsula**

#### ***DNA Fingerprinting Electrophoresis Lab***

Students will be given samples representing crime scene DNA, two suspects DNA and marker DNA. Eight groups of students will prepare staining trays with four different samples of DNA by using micropipettes and micro centrifuge tubes to carefully inject samples into a battery powered electrophoresis apparatus. Students will discover who penetrated the crimes scene by analyzing their unique genetic patterns, or fingerprints

### **Jacqueline Valerio ~ Peninsula**

#### ***Improving Literacy***

Leveled Spanish readers will help to improve the students' reading and critical thinking skills, enhance vocabulary, increase comprehension and cultivate literary analysis skills thus preparing students for upper division Spanish language classes.