

# **NDIA Gulf Coast Chapter ACCEerator Grant Recognition Page 1 of 3**

NDIA = National Defense Industrial Association ~ ACCEL = Accelerator

## **Jennifer Ueberroth ~ Milton High School**

### **Description of Project:**

High school students are interested in exploring career opportunities which are both interesting and economically feasible for their future. I felt the need for my students to experience the collection and practical use of physiological data such as they might encounter in medical occupations. Predictions by government agencies and population scientists indicate the health field will be such a large area of opportunity. We plan for students to measure EKG data using the newly released Vernier probes which work with the Lab Quest interface units we already have. Students will work in groups to sample heart rate and EKG pattern data from fellow students under various conditions of exercise, then make analysis of the data using the many features the Logger Pro software that we have available in the classroom.

## **Danna Chatwell ~ Woodlawn Beach Middle School**

### **Description of Project:**

Earth Science through Multimedia Project:

Teaching Earth Science through Claymation and Video Productions.

The students will be in groups and given a rubric and discuss their project ideas. They will choose an area studied in Earth Science such as Earth's Interior, Plate Tectonics, Continental Drift, Convection and the Mantle, Fossils, Relative Age of Rocks, Pangaea, Mid-Ocean Ridge, Sea-floor Spreading, Divergent Boundaries, Convergent Boundaries, Transform Boundaries, Faults, and Rift Valleys.

Students will choose their media type which may include Claymation (stop animation), music video, or informational video.

## **Dianna Hayden ~ Flight Adventure Deck**

### **Description of Project:**

My grant request was for funds to buy new EKG equipment used in our 7th grade curriculum. We take pre and post simulated flight EKGs for (4) 7th grade students on each 7th grade fieldtrip. We email those results to the classroom teacher after each fieldtrip. The classroom teacher then aids students in creating hypotheses regarding whether or not simulated flight affects heart rate, in calculating pre- and post-simulated heart rates based on the EKGs they receive for the 4 students, and in drawing conclusions about simulation and heart rate based on those EKG results. The grant money paid for a Labquest 2 interface, EKG sensor attachment, EKG electrodes, and other accessories.

### **Deanna Barr ~ Hobbs Middle School**

#### **Description of Project:**

My grant was for “littlebits” computer components.

These components can be used to build a Mars rover but also can be combined to build other robotics. They can connect to Legos or be used with recycled materials.

### **Kathy Moore ~ Holley Navarre Middle School**

#### **Description of Project:**

With grant funding for the past several years from the NDIA ACCEL grant, Holley Navarre Middle school’s STEM program has been growing! For 2014-2015, the vision and mission of this project is to continue to implement the aspects of technology and engineering into the STEM course, but with more of a focus on aeronautics.

Students will continue to use the skills of science, technology, engineering, and mathematics through the process of rocket building; however, for this year our focus will revolve around robotics, aeronautics and drone technology. Students will continue to build and launch (with our new multi-rocket launcher) their own Estes rocket. We will build the wooden 3-D model airplane, helicopters and the hydraulic robotic mechanical arm. I also plan to implement several engineering sorties from AAIA publication. The engineering skills include applying the six- step design process: identify problem, define the project constraints, research and brainstorm, develop a prototype, test – analyze – optimize, evaluate and present. For each engineering activity, students will be required to observe their prototype for performance and analyze strengths and weaknesses. Then they must explain improvements could be made to improve the structure or function of their prototype.

The technology skills that will be used include researching aeronautics and drone technology. Students will use digital cameras and Flip Video cameras to document their activities. Each student will create Power Point Presentations and Movies using Movie Maker to document their experiences. They will create a technology project at the end of the semester. After practicing for ten hours on the flight simulator, students will have the opportunity to fly the remote controlled model airplanes through an obstacle course.

### **April Jardine ~ Woodlawn Beach Middle School**

#### **Description of Project:**

I requested and received LittleBits engineering components with the ACCEL grant. My gifted students will be encouraged to explore the world of STEM education by designing everyday objects like speakers, flashlights and microphones. We will then take that knowledge further in order to design space objects like the International Space Station, Mars Rovers and Satellites.

### **James McGhee ~ Milton High School**

*Will not be able to attend*

#### **Description of Project:**

Grand was for using accelerometer equipped carts to measure various aspects of momentum and energy.

### **Joy “Beverly” Bunning ~ Holley-Navarre Primary School**

*Will not be able to attend*

#### **Description of Project:**

Science Kits for independent Learning

### **Karen Gudmundson ~ Navarre High School**

*Will not be able to attend*

#### **Description of Project:**

My grant was for digital microscopes. New and up to date technology. Important technology for the science vocation in the future.

### **Hannelore Sanger ~ Holley-Navarre Primary**

*Will not be able to attend*

#### **Description of Project:**

Germs exploration