

INCOSE STEM Report 2016
Stuart Mesa Middle School, Oceanside

Since our grant application we have installed a brand new STEM lab (opened January 2016). Thanks to INCOSE we have been able to supplement the experiences given to our students in the lab. We have begun the process of change and looking at educational experiences differently. We have created an opportunity to address STEM and Design Thinking not seen previously in our district. Through the utilization of a SmartLab and grant funds from INCOSE we have a fully integrated classroom program that allows students to choose and work through real life problems and solutions to reach academic objectives.

Our approach to learning is aligned with Common Core and STEM, and more importantly, a way to ensure our students are on a path for colleges and careers. We have created time each day for students to participate in activities that develop students' academic and social behaviors through 21st century learning skills. We have laid the foundation for these behaviors in the elementary setting by creating classroom activities that develop children's executive function and their ability to direct their own attention, activity, and learning. The resources purchased with the grant monies impact nearly 500 students in grades 1-8, with grades 6-8 going in the lab daily. Students utilized the items purchased through a series of "Learning Launches" that have a focus on K'Nex, coding, robotics, and circuitry to name a few.

Congruent with the vision shared with INCOSE we have created a separate space away from the core classroom with a full time facilitator guiding students and educators through the curriculum. Stuart Mesa is committed to the long term implementation of STEM for all students and providing the educators the tools to facilitate the learning. Through partnerships and the kind support of INCOSE we have a plan and resources in place that support sustainability and growth.

I am very pleased with what I have witnessed students doing. Students are fully engaged in learning which is the goal of any academic institution. I cordially invite anyone from INCOSE to come out and see the great things that are happening as a result of your grant funding and generosity. I have included on the second page the actual item purchased with grant funds.

Items Purchased

- I. Arduino Starter Kit (2) @ \$84.70
- II. K'NEX Education – Renewable Energy Set (1) @ \$136.99
- III. K'NEX Education – Exploring Machines (1) @ \$104.76
- IV. K'NEX Education Investigating Solar Energy (3) @ \$63.31
- V. K'NEX Education Exploring Wind and Water Energy (3) @ \$66.00
- VI. K'NEX Education Simple and Compound Machines (3) @ \$46.99
- VII. K'NEX Education – Intro to Simple Machines: Levers and Pulleys (3) @ \$25.99

Total: \$1017.02 (This does not include taxes and shipping)