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Connect-A-Thon 2013

CORONADO SCHOOLS FOUNDATION

Foundation Focus

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STEAM Funding Preps Islanders for Life Beyond CHS

When the Coronado Schools Foundation (CSF) received the amazingly generous Frances G. Harpst legacy gi in excess of $3.8M in 2010 at a time when many school districts were making drastic budget cuts, Coronado Uni ed School District (CUSD) administrators and teachers were given a chance to dream. is gi , coupled with CSF's own endowment, provided over $5M in perpetual funding with 4% now returned annually.

"When we restructured existing resources in our Regional Occupational Program to introduce engineering courses in 2010, I believed that student interest would demand that we expand course o erings. At the time, we weren't sure how we would be able to continue growing our career technical education pathway courses," said Karl Mueller, Coronado High School (CHS) Principal. "When this wonderful gi came to our schools through CSF, it was clear to me that we, as a district, needed to capitalize on our students' interests in STEAM (science, technology, engineering, art, and math). is additional funding has provided K-12 opportunities for CUSD students to pursue passions beyond the traditional/core subject areas. All of these programs align with Dr. Felix's goal of nurturing the 21st Century Learner."

anks to this opportunity to dream, career technical education programs in STEAM are continuing to expand for students. is year, CHS has introduced new courses in woodworking and advanced woodworking where students are exposed to creative design and industry-standard equipment. In addition, CSF STEAM funding has provided cutting edge resources (CNC Router and 3D printers) that use computer-aided design so ware (CAD) to turn creative design into tangible products. Mr. Mueller shared, " ese new resources will challenge our students in Engineering, Woodworking, and Robotics to apply technological skills to problem-solve and create components for various projects, such as robots." ese practical applications in the areas of STEAM are preparing our students to be competitive in a 21st Century job market and contribute to our 98% graduation rate.

" rough the generous support of CSF, district educators are dreaming BIG. We envision a district where students are introduced at the elementary level to opportunities in STEAM. ese interests and depth of knowledge are already transferring to opportunities available at CMS, culminating in a solid foundation for pathway courses at the high school," said Mr. Mueller. " ese opportunities are signi cant in that they develop critical thinking skills, collaboration, and problem-based applications that will serve our CUSD students well beyond their time in our district. e impact of this nancial support through CSF is evidenced in CUSD again being acknowledged as the highest-performing uni ed school district in San Diego County.

e Biotechnology Program at CMS and CHS, under the direction of Mrs. Gail Massey, include: Garret Opachko, Maddy Montague, and Emma Schwartz.

Project-Based Learning at CMS

By Jay Marquand, Principal

I cannot imagine how our school would function without the funding to directly support STEAM, a nationwide effort so our students can compete in a global society.

CSF's support has a critical role in working side by side with our school to enrich the learning needs of students by providing educational opportunities in the form of curriculum materials, technology tools, teacher professional development, and sponsoring four STEAM- related classes that directly coincide with our district-wide and school-wide strategic plans.

Engineering Class: Now in its second year, engineering at CMS lets students enrich their Science, Technology and Mathematics curiosity all while focusing on the larger picture of preparing for real-world application, with lessons on automation and robotics, design and modeling, ight and space, and the magic of electrons. While studying mechanical and computer control systems, these students can envision, design, and test their ideas with the same advanced modeling so ware used by companies like Lockheed Martin, Intel and Sprint. Robotics, animation, and exploring the importance of renewable and innovative energy sources prepares these students for success in STEAM-related programs at CHS, including the expanding Engineering Program, leading to a compact with San Diego State University for admittance into its engineering program.

Introduction to Health Careers Class: Also a second-year class, this class has students researching and demonstrating knowledge of the concepts, issues and skills found in health care careers. Additionally, students investigate and visit/job shadow career services within the healthcare eld to gain an understanding for the job duties and responsibilities, educational requirements, certi cates and licensing, and medical terminology associated with each career.

Environmental Studies/Gardening Class: Over 180 sixth grade students participate in this course during a six-week rotation throughout the school year. Students are introduced to the issues a ecting the environment locally and globally and use their skills in science, math and technology by learning about environmental topics that impact their world. Students are able to cultivate plants, owers, vegetable and fruit produce in an organic garden through the laboratory of the school garden.

MOUSE Squad Class: In the rst year of MOUSE Squad, this incredible elective course for 8th graders empowers them to learn, lead and create with technology, and prepares them with skills essential for their academic and career success in an ever growing 21st century global education. e MOUSE Squad program trains students to become digital media and technology experts in their schools, improving the use of technology to enhance learning, while also building con dence and developing skills for 21st-century innovation and assisting CMS sta and students with technology needs on campus as they arise. Founded in 1997, MOUSE programs are having a positive and lasting impact on over 4,000 students in 345 sites across the USA.

Aerospace Engineering at CMS

Bringing "real life" experiences is a key component of STEAM learning and that was evident in January when Colonel Woody Spring, a NASA astronaut, visited the Intro to Engineering class taught by Elizabeth Wertz at CMS. "It was the coolest thing ever to meet someone who actually went into outer space. You have inspired me to continue my interests in Aerospace Engineering," said Madelyn, engineering student.

STEAM 2012-13 Student Bene t

CSF provided over $726,000 to Coronado's public schools for 2012-13 with $210,000 specifically targeted for STEAM-related programs. Benefits include:

- Opportunities in career technical skills in areas like biotech, health sciences and engineering at CMS and CHS via courses and enrichment clubs;
- Robotics clubs at the elementary level leading to Mouse Squad and Robotics in CMS and enrichment classes at CHS;
- Computer lab classes for all students in K-5 leading to courses like Mouse Squad and KCMS at CMS; engineering and KCHS or CoSA Digital Media at CHS;
- Music classes K-5 leading to band and choir at CMS and preparing students to continue at CHS or apply for acceptance into the CHS's Coronado School of the Arts (CoSA); art programs for students K-12, with collaborative hands-on student projects and Visiting Artist program at CHS;
- With LIPP Family Foundation Grants, K-5 weekly science lab instruction; labs at CMS and CHS have the equipment and manipulative to bring science alive;
- CUSD's STEAM Leadership Team of K-12 educators working together to integrate STEAM-related programs K-12;
- Multiple course choices and pathways for students as they promote from Coronado Middle School to Coronado High School;
- Support of all CUSD Strategic Plans, including CUSD Strategic Plan, for STEAM;
- CHS Career Technical Education and the health career courses at CHS, which meet speci c grant criteria
- Support of the initiative for "Personalized Education Plans" (PEP) for all students by allowing more choices and learning opportunities;
- Opportunities to help keep students connected and engaged to school in addition to core subjects which prepare students for real world application in a competitive, global society.