

On September 21, 2021, the General Atomics Sciences Education Foundation announced awards of \$56,000 in funding to 7 organizations and programs to improve K-12 STEM education.

1. \$12,500 to Elementary Institute of Science to support the Girls Take Flight program

Girls Take Flight is the first drone pilot training program for high school girls in the US. The target population is female high school students who attend a Title 1 school in the low-income, ethnically diverse Southeastern San Diego, City Heights, and Paradise Hills neighborhoods. Girls Take Flight is a three-phase program beginning with building awareness of the uses and career opportunities of Unmanned Aircraft Systems for over 150 girls and progressing to FAA Part 107 Remote Pilot Certification of 10 high school students. The students learn about career opportunities in the UAS industry, focusing on women in engineering, aeronautics, and remote sensing technology. 10 girls are selected for the final phase of the program, an intensive practicum. The practicum provides female high school students with 150 hours of practical hands-on experience building, programming, and flying drones, leading to FAA Part 107 Remote Pilot Certification. Funds will support instructional and transportation costs and miscellaneous supplies such as study guides, spare parts, and batteries. Time frame is July 2021 through January 2022. Two of the program's alumni are currently studying to be commercial airline pilots. All the students who completed the program have gone on to higher education. To date, the program has produced 17% of all female FAA-certified drone pilots under the age of 20 in the US.

2. \$12,500 to Elementary Institute of Science to support the Steps-2-STEM program

Steps-2-STEM is a community partnership program of the Elementary Institute of Science and 11 Title I elementary schools that feed into Lincoln High School in southeast San Diego. It serves approximately 2,000 students in grades 4-5, 84% are from economically disadvantaged households. Students participate in hands-on activities such as structural engineering, DNA extraction, and building terrariums which helps connect scientific theory to practical application. Instructors are graduate-level with STEM expertise and a passion for equity in education. Funding supports instructor wages and supplies. To encourage diversity in STEM, the program prioritizes hiring instructors who are female and people of color, providing relevant role models for their students. Steps-2-STEM is a system-wide initiative that provides STEM learning experiences across multiple consecutive years. Time frame is Sep. 2021 through May 2022.

3. \$3,500 to the Coastal Roots Farm for their environmental STEM program

Funds will support the Farm's Environmental STEM programs for the 2021-2022 academic year. Last year it reached 3,600 students. Coastal Roots Farm's On-site and Virtual Equitable Environmental STEM & Nutrition Education Program provides low-income schools and districts with no-cost, barrier-free, quality outdoor science and nutrition education. For 2021-22, the Farm will offer approximately 200 farm-based environmental education programs that will reach 6,150+ students; of this no low-income, Title-I, Title-V school, or school district will be turned away for inability to pay and the Farm anticipates providing scholarships for 3,075 students to visit the Farm at no or reduced cost, including bus transportation to and from the Farm as needed. The Farm has formed a multi-year partnership with the Escondido Union School District to deliver a customized Farm-based Environmental STEM Education Program for every 4th grade class (1,500 students) from the District's 18 elementary schools. The Farm's Environmental STEM Education Programs offer comprehensive environmental education for Pre-K through 12th grade students. The Farm leverages its 17-acre outdoor "classroom" including an indoor-outdoor STEM Science Lab featuring science equipment, microscopes, and aquaponics system.

4. \$8,000 to the [Ocean Connectors for their environmental STEM program](#)

Ocean Connectors provides continuous, multiyear educational programs for 3rd-7th grade students, totaling over 3,000 students every year. All activities are provided free of charge and with a level of continuity that reinforces a long-term commitment to environmental stewardship and STEM learning. Ocean Connectors currently works with every low-income, Title I school in the National City School District, delivering ocean STEM education with accompanying hands-on learning using habitat restoration and coastal field trips. Funding over the period of October 2021 through June 2022 will provide educational supplies and instructional materials, curriculum development, and science equipment (microscopes, binoculars, water testing kits) to ensure access to STEM education in the time of the pandemic and beyond. The curriculum includes various activities that take place throughout the school year, such as class presentations, project-based learning assignments, ocean science readings, experiments, and videos, a bilingual knowledge exchange, and peer-to-peer discussion. Students also receive mentorship from local experts including park rangers, scientists, and marine life rescuers during field trips to sites around San Diego Bay. All Ocean Connectors lessons are aligned with Next Generation Science Standards, California Common Core, and Ocean Literacy Principles.

5. \$6,500 to [Biocom Institute for their Life Science Experience programs](#)

Funding will support the facilitation and management of 18 Life Science Experience programs to be held virtually at various Title 1 schools throughout San Diego County during the 2021/22 school year. These 18 experiences will be a combination of lessons and career panels. These programs will impact ~50 students at each school. The programs involve: (1) A focus on the Life Science/Biotech/STEM ecosystem; (2) Remote hands-on learning kits for each individual student; (3) Using these kits, virtual lessons facilitated by nonprofit partners; (4) Real world connections with diverse Life Science/Biotech/STEM industry professionals.

6. \$10,000 to [The Links Foundation Inc. for their San Diego Links to STEM program](#)

The Links to STEM program will serve thirty-five 4th through 8th grade students, 17 girls and 18 boys, who attend a variety of schools throughout San Diego. Students are accepted into the program in the 4th grade and remain in the program until they begin high school. The participants are 90% African American with the remainder Hispanic and most are from middle to low income households. The program includes robotics training, educational field trips, scientific experiments, math challenges, research projects, science fairs, career presentations and oral presentations by the students. The purpose of the program is to address the underrepresentation of diverse students pursuing STEM related college degrees and related careers. Funding will support the Links to STEM robotics team to compete in the First Lego League robotics competition and in the MATHCOUNTS Competition at the National Society of Black Engineers Jr. convention in Anaheim in March 2022; funds will defray the cost of attending and competing.

7. \$3,000 to [The New Children's Museum for the Innovators Lab makerspace](#)

Funds will support equipment, tools and materials needed for the Innovators Lab makerspace; as well as wages for the staff and professional teaching artists who develop and lead daily programming. The Lab is designed for children aged 7-13. NCM serves over 315,000 total visitors annually, with 26% receiving free or deep discounts including 12,600 schoolchildren, 60% of whom were Title I. Funding will be used during winter 2021 or spring 2022. Providing access to equipment and

materials allows school children to be introduced to engineering, prototyping, and manufacturing principles well before they reach junior high, high school and college. It also sparks interest and encourages pursuit of STEAM career paths much earlier in life.
