

# IRVINE CUBESAT: REDEFINING INNOVATION

Three years ago when the founders of Irvine CubeSat STEM Program said they wanted to teach high school students to build and launch a miniature satellite, IPSF was the first on board to help make this dream become a reality. Because we believe that innovation is the foundation of educational excellence.

Now, Irvine students have become the first high school group in the country to successfully launch two operational miniature satellites into orbit. With guidance from mentors at industry-leading organizations like NASA JPL, Tyvak, and MIT, students in the program have gained an unprecedented amount of hands-on technical knowledge, balanced with real world teamwork and collaboration skills.

Made possible by private funds raised through IPSF, investments from Top 100 companies including FivePoint, Google, Arnold and Mabel Beckman Foundation, and Ingersoll Rand/Trane have made the program the success that it is today, and demonstrate the impact that corporate support can make on public education. Learn more at [www.ipsf.net/cubesat](http://www.ipsf.net/cubesat).



“ This program has broken new ground for Irvine students and further cemented the city’s reputation as an out-of-the-box center for learning. The recent launches reinforce our faith in IPSF as an ignitor of ideas and programs that differentiate our schools from the rest of the nation. ”

- Steve Churm, FivePoint  
IPSF Advisory Council Member

# IRVINE PUBLIC SCHOOLS FOUNDATION'S

# TOP 100

## COMPANIES SUPPORTING EDUCATIONAL EXCELLENCE

These socially responsible companies are investing in Orange County's future by ensuring educational excellence for each child in every school. We applaud their leadership and invite you to join them in support of public education.

### Summa Cum Laude \$100,000+

1. City of Irvine
2. Maruchan

### Magna Cum Laude \$50,000-\$99,999

3. FivePoint
4. Howard Core Company
5. Hoag Hospital
6. Paul Hastings
7. Ingersoll Rand/Trane
8. Hoag Orthopedic Institute

### Cum Laude \$25,000-\$49,999

9. Angels Baseball
10. Google Fiber
11. Galileo Learning
12. Arnold and Mabel Beckman Foundation
13. Broadcom Foundation
14. EON Reality
15. Ellison

### Fellow \$10,000-\$24,999

16. SoCal Elite Sports
17. Kading Briggs
18. Cox Communications
19. Montessori Schools of Irvine
20. Neiman Marcus, Fashion Island
21. Strawberry Farms Golf Club
22. Total Wine & More
23. Wells Fargo
24. Digestive Disease Consultants of O.C.
25. FUTEK
26. Konica Minolta
27. Matt Leinart Flag Football
28. KSK Medical
29. Meggitt Defense Systems
30. Puesto
31. KingMKR
32. Cater Tots Too
33. The Young Americans

### Scholar \$5,000-\$9,999

34. BrainStorm
35. Reproductive Fertility Center
36. School Spirit Pays

37. Gorjana
38. Waste Management
39. Kaiser Permanente Orange County
40. The Resort at Pelican Hill
41. B. Keene Photography
42. Assistance League of Irvine
43. Michael John Jewelry
44. Microsemi
45. Manhattan Stitching Co.
46. Simply Orthodontics
47. Tillys
48. SchoolsFirst Federal Credit Union
49. Break of Dawn
50. PJHM Architects
51. Google
52. University of California, Irvine
53. South Coast Plaza
54. Allergan
55. FLEX College Prep
56. Main Graphics
57. Greenberg Traurig
58. Air Liquide
59. Murphy & Evertz
60. BrightView
61. Korean Cultural Center
62. Kia Motors America
63. Bright Ideas
64. TGIS Catering Services
65. See America Travel

### Honor Roll <\$5,000

66. Fox Group
67. Del Mar Thoroughbred Club
68. Buchanan Street Partners
69. Lamborghini Newport Beach

70. TAPS Fish House & Brewery
71. TPC Danzante Bay
72. Rutan & Tucker
73. Ardent Academy for Gifted Youth
74. First Foundation Bank
75. The Capital Group Companies Charitable Foundation
76. Aviles Real Estate Group
77. Los Angeles Chargers
78. ARC Food & Libations
79. In-N-Out Burger
80. Harbottle Law Group
81. Global Media Group
82. Fluidmaster
83. Pacific Premier Bank
84. Pacific Mercantile Bank
85. AdvisoryWorld
86. Virgin Orbit
87. U.S. Army
88. Golden State Athletic Conference
89. Newport CH International
90. Cox Automotive
91. UPS
92. Cisco Systems
93. Lisa Hu Chen Photography
94. Hauté Productions
95. Cogito Debate
96. Habana & Mesa Restaurants
97. HoneyBaked Ham
98. Carbonadi
99. Greater Irvine Chamber of Commerce
100. Sports1 Marketing



Irvine Public Schools Foundation is a non-profit organization whose mission is to enrich the educational experience of each child in every school by providing programs, raising funds, and uniting the community.

# EDUCATION *& Training*

CUSTOM CONTENT • February 4, 2019



## K-12 STEAM GUIDE

Presented by



K-12 STEAM GUIDE



## The Next Generation of Innovators Are Here

Orange County is one of the most diverse and fastest growing technology sectors in the United States, creating a high demand for skilled and dynamic talent to support its growth. One local nonprofit has found a way to unite the academic and business communities to create opportunities for students to gain the skills, confidence, and determination needed to find success in today's competitive STEM workforce.

Three years ago, the Irvine CubeSat STEM Program started as a collaboration between Irvine Public Schools Foundation (IPSF), and Irvine Unified and Tustin Unified school districts as a way to attract and retain students, teachers, and faculty in STEM disciplines, as well as strengthen Orange County's future workforce. The goal was to change the way students experience STEM education and inspire the next generation of innovative thinkers, makers, programmers, and explorers. What has evolved has been truly groundbreaking, giving high school students a once in a lifetime opportunity to plan, build, test, and launch a miniature satellite into space, and then analyze data sent back to earth from orbit.

In winter 2018, the first two Irvine CubeSat missions, IRVINE01 and IRVINE02, successfully launched into orbit making history as the first high school program to send two functioning satellites into space.

"What started as a crazy idea to change the way that students experience STEM education, has evolved into one of the most progressive high school space programs in the country and a truly invaluable experience for all involved," explains Neda Eaton, president & CEO, Irvine Public Schools Foundation. "Over the past three years, our students have faced many real world obstacles that provided them with an even better understanding of the aerospace industry. They met these challenges head on, and we are so proud of their hard work and dedication to this program."

IRVINE02 and IRVINE03, the second and third missions, were both selected as one of 34 small satellites nationwide selected by NASA to participate in their CubeSat Launch Initiative to fly on their 2018 and 2020 launches. Irvine CubeSat is one of only two high schools chosen by NASA to participate in this prestigious program, alongside renowned universities and research centers. "It is a huge honor for Irvine CubeSat to be recognized and selected by NASA to

participate in their launches," said Neda Eaton, president and CEO of IPSF. "This unbelievable opportunity validates the hard work and dedication of the students, teachers, and all of the partners involved. The Irvine CubeSat STEM Program is a true testament to what can be accomplished through the collaboration of industry experts, corporate partners, and public education. These students are setting an example for young people around the world that anything is possible, and we are excited to be part of making their dreams become a reality."

The Irvine CubeSat STEM Program is made possible through dynamic partnerships between private funding and public education, facilitated by IPSF. Funding from corporate sponsors including FivePoint, Arnold and Mabel Beckman Foundation, Google, Ingersoll-Rand/Trane, and MEGGiTT Defense Systems, Inc., have made the program a true collaboration, and an inspiring example of what can be accomplished when communities come together in support of public education.

The students engaged in this program are learning much more than just how to build a satellite, they are gaining experience on how to collaborate, communicate, and present their ideas to not only their peers, but industry professionals and mentors from NASA/JPL, CalPoly SLO, Ecuadorian Space Agency (EXA), Accion Systems, Rocket Lab, and Tyvak Nano-Satellite Systems. The value of this experience will take students far beyond their classrooms and into their future careers.

A key goal of the program is to create opportunities for underrepresented groups in STEM-related fields, including women and minorities, and low-income students.

"After this exposure to the engineering field, I now have the confidence to go into the field. Even though it is a predominantly male field, there are so many females interested in it. I feel like I can go into this with no problem and actually succeed," said Melinda Chiao, CubeSat team member at Northwood High School. "I'm really excited to see where this program will go, and what students my age will accomplish in the future."

If you are interested in getting your company involved with the Irvine

CubeSat STEM Program and being a part of Orange County history, please contact Neda Eaton [neaton@ipsf.net](mailto:neaton@ipsf.net). To learn more about Irvine Public Schools Foundation, visit [www.ipsf.net](http://www.ipsf.net).

