



Higher Orbits



IMPACT REPORT 2024



GO FOR LAUNCH!

DEVELOPING TEAMWORK, COMMUNICATION & LEADERSHIP
THROUGH SCIENCE, TECHNOLOGY, ENGINEERING & MATH (STEM)

MISSION

Higher Orbits is a non-profit with the mission to inspire and engage high-school students through the use of spaceflight, in hands-on, project based learning experiences that are designed to promote Science, Technology, Engineering, Arts, and Math (STEAM) and prepare them for future academic and career success by building confidence, perseverance, teamwork, leadership, critical thinking, creativity, and communication skills.

Go For Launch! is a multiday program that uses Space Exploration as a platform to launch student involvement in Science, Technology, Engineering and Math (STEM), STEAM (Art), teamwork, communication and leadership. The program was developed for high school-aged students.

Students are immersed in the wonder of Human Spaceflight through a variety of talks delivered by experts in the fields of space & STEM: such speakers have included an astronaut, former International Space Station (ISS) and Space Shuttle Flight Controllers, Astronaut Instructors, scientists, and engineers. Students get insight and feedback from experienced space and STEM professionals whose goals are to illustrate the numerous possibilities that exist in the world of STEM. A unique facet of *Go For Launch!* is that the students will work with an Astronaut throughout each day of the event.

Collaborative activities are designed to build leadership and teamwork skills, as well as enhance communication skills. The culminating exercise is a design project. Each team must define and design a space experiment. At the conclusion of each program, the teams will present their ideas to a panel of judges from the Space & STEM fields, who will then choose a winner from each *Go For Launch!* event. Depending on the Series, winning experiments will be launched to and conducted aboard the International Space Station or on a suborbital flight!





Higher Orbits

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Since the start of Higher Orbits programs in 2016, we have directly worked with 2,750+ students through our Space at Home & *Go For Launch!* programs.

We have conducted 82 *Go For Launch!* programs in 21 different states.

Launched 20 student designed experiments to the International Space Station (onboard 12 different Cargo Resupply Mission flights) and 1 aboard Blue Origin's New Shepard rocket.

The 3 experiments launched to the International Space Station in 2024 came from Michigan, Arizona, and Texas students.

Experiments:

Effects of microgravity on cellular respiration

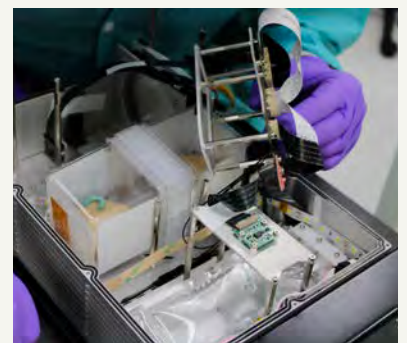
Bone density loss in microgravity

Effect of Radiotrophic Fungi on Satellite Components.

More than 40% of our students have been female that have participated in *Go For Launch!*

At *Go For Launch!* we have mentors from across the industry come in to speak to the students and support them in their project design efforts.

We had the privilege of selecting the only 5 US students to attend the International Science School at the University in Sydney Australia in 2019 and 2023. These students came from 8 different states across the country.



LANCHING LEADERS

IN ADDITION TO THE SKILLS INSTILLED IN OUR PROGRAMS, WE FURTHER MENTOR STUDENTS WHO WILL BE THE FUTURE LEADERS IN STEM.

FOSTERING OUR FUTURE

In addition to the skills instilled in our programs, our Higher Orbits teams and development mission is to further mentor students who will be the future leaders in STEM with critical leadership skills and experience.

We have taken students to conferences to attend, learn, network, and also present. Our students have spoken and presented at the following conferences:

ISS Research & Development Conference, ASCEND, AIAA Sci-Tech, and ASGSR (American Society for Gravitation and Space Research).

These future leaders in STEM have also presented to the public at Kennedy Space Center and Wallops Island about their experiments launching to the International Space Station.

EXPERIENTIAL PARTNERS

International Science School

The Professor Harry Messel International Science School (ISS) is a fee-free residential educational event for selected secondary students held for two weeks in July every two years and based at the University of Sydney in Sydney, Australia which has gained renown. ISS aims to honor excellence in senior high school science students and to encourage them to consider careers in science.

Higher Orbits Ongoing Events & Partnerships

Higher Orbits has hosted four Galactic Golf Tournaments since 2021 and raised over \$100K through these initiatives. We also are a primary partner with National Astronaut Day & the Astronaut Rock Star Awards and our students have been globally recognized for their accomplishments, specifically for their work with Higher Orbits.





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THANK YOU!

SUPPORTERS:

Burns & McDonnell
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Jacobs
Amazon Government Solutions
Midland Development Corporation
Ridgeline International

PARTNERS:

Midland ISD
Norwich University



Additional thanks to all of our supporters and partners for empowering and inspiring our students to reach for the stars.

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Higher Orbits[®]
through science, technology, engineering & math



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