

Broadening STEM Pathways for Rural Learners

About the Program

[Take Flight](#) is an established program that increases middle school students' interest in STEM careers. Funded by the National Science Foundation (NSF), the program uses the Universal Design for Learning framework to make sure all students have access to and can engage in STEM career development.



**75+ schools
across
11 states**

**1,100+ rural
students
engaged**

**100+ teachers
trained**

**349 students completed pre-
and post-surveys for NSF-
funded research study**

Key Outcomes For Students

Participation Led to Higher STEM Interest & Confidence

Findings included **statistically significant increases** in:

- Students' beliefs they can pursue STEM careers
- Knowledge of drone careers
- Drone skills and interest
- Interest in taking STEM-related classes in high school

Statistically Significant Skill Development

78% increase in students' comfort with technical skills including coding, mapping air space, and creating drone flight plans after completing Take Flight.

Statistically Significant Increase in Students' Understanding of STEM as Collaborative, Altruistic, and Iterative

Students were more likely to report that communication, teamwork, and persistence were integral to success in STEM careers after participating in Take Flight.

Key Outcomes For Educators

Confidence & Readiness

Increased comfort using drones in the classroom

Shift in Teaching Practice

Increased knowledge of how to leverage UDL to engage a wider range of learners in STEM

Sustainable Networks

Support and resources to build cross-school STEM communities and launch after-school drone clubs

Educators love Take Flight!



“The students loved **hands-on activities**.”

“The **career videos** filled in gaps where I couldn’t get a guest speaker.”

“Without the **curriculum**, I would not be where I am today. I needed a **jumping-off point**.”

“The students loved it and **picked up the technical skills** so quickly.”

“I loved it so much that **I will be doing it again** for grades 3-5 in summer school!”

“Even students who struggle academically are leading drone operations. **Watching their confidence grow has been incredible.**”

“It changed everything I thought about when I delivered STEM to students. **Now I’m such a stronger teacher.**”



Why does it matter?

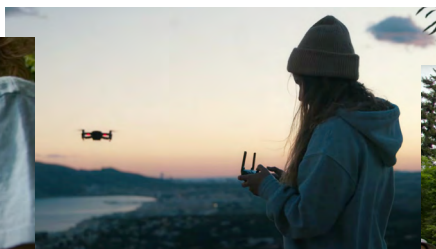
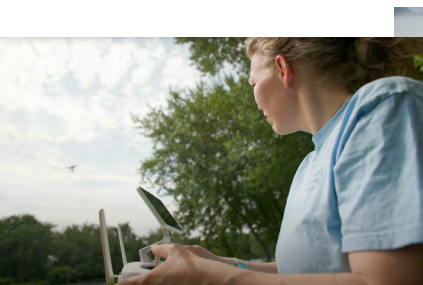
Rural students face persistent barriers to **STEM exposure** due to geographic isolation, resource constraints, and limited access to technical mentors. Take Flight addresses these gaps by:

- Providing **hands-on, UDL-aligned curriculum** and teacher PD
- Leveraging **drones** to make **STEM** accessible, engaging, and career-connected
- Building students’ **STEM identity** and confidence

Check out the Take Flight video series!



Go to bit.ly/take-flight-videos



Start your Take Flight training!

Reach out to takeflight@cast.org to learn more about our professional development services.

