GOAL GETTERS CHALLENGE

AVIATION & STEM ACTIVITIES
GRADES 6–8 (MIDDLE SCHOOL)

Pilots rely on physics, algebra, and constant curiosity to fly safely. **Complete both challenges below and submit this completed worksheet through the Google Form.**

Challenge 1

Curiosity Takes Flight
Asking great questions drives discovery.

David Lanum went from finishing his Private Pilot license to flying regional jets as a First Officer. He got there by staying curious and asking questions every step of the way — including learning to fly at night, which sharpened his spatial awareness.

Your Challenge:
Research one of the four forces of flight (lift, weight, thrust, or drag), OR how pilots communicate with air traffic control. Write a short paragraph (3–5 sentences) explaining what you learned, then list 2 new questions your research made you want to ask.

Topic I researched:

_____

What I learned:

_____

_____

_____

_____

_____

2 New Questions I now have:

1. _____

2. _____

Challenge 2

Be a Test Pilot
Use physics and algebra to test a design.

Pilots constantly use math — calculating speed, distance, time, and fuel. David flew the ERJ 175, a regional jet, and trained in one of the toughest programs in the industry.act out a scene

Your Challenge:
Design and build a paper airplane or paper helicopter. Test it at least 5 times and record the distance (or flight time) for each trial. Then calculate the average.

Trial Data

1. _____

2. _____

3. _____

4. _____

5. _____

Average (add all trials, then divide by the number of trials):

_____

Now change ONE thing about your design (add a paper clip, change the wings, etc.) and test 5 more times.

New average:

_____

Did your change improve performance? By how much?

_____

Using the formula Speed = Distance ÷ Time, estimate the speed of one of your flights.

_____