

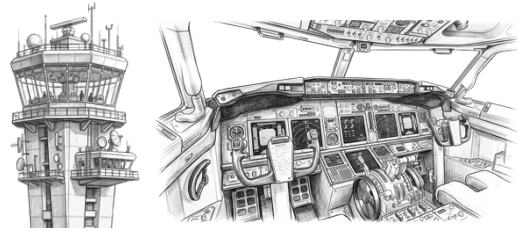


GOAL GETTERS CHALLENGE

AVIATION & STEM ACTIVITIES
GRADES 9–12 (HIGH SCHOOL)

Aviation careers combine physics, advanced math, and disciplined curiosity. Complete the challenges below and **submit this completed worksheet through the Google Form.**

Challenge 1



Curiosity Takes Flight

Curiosity and good questions open career doors.

David Lanum finished his Private Pilot license, completed instrument training, and now flies for Delta. He's on a path that could lead to captaining an Airbus A319, A320, or A321 in the years ahead – and every step started with curiosity.

Your Challenge:

Investigate a real aviation topic – for example: how lift is generated, what instrument flight rules (IFR) are, what it takes to become an airline captain, or how air traffic control works. Write a half-page (~150-word) summary of what you learned, then end with 3 deeper questions you'd want to ask a professional pilot like David.

Topic:

Summary:

3 questions for a pilot:

1. _____

2. _____

3. _____



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Challenge 2

Be a Test Pilot

Apply physics and algebra to flight.



Pilots use math constantly — for weight and balance, fuel burn, airspeed, and navigation. Choose ONE of the options below.

Option A - Hands-on experiment

Build a flying device (paper airplane, glider, or paper helicopter). Run at least 8 trials, changing one variable (wing shape, weight, or launch angle). Record your data, graph your results, and write a conclusion about how that variable affected flight.

Option B — Aviation math problem

Solve and show your work. A regional jet cruises at 450 knots (nautical miles per hour).

1. How far does it travel in 1 hour and 45 minutes?
2. If the flight is 600 nautical miles, how long will it take?
3. If it burns 2,400 pounds of fuel per hour, how much fuel does the 600 nm trip require?
(Ignore climb and descent.)

Show your work:

Reflection:

What surprised you about the physics or math of flight?

How might these skills matter in a real cockpit?
