GRANDPAPPY AIRLINES

THE SCIENCE of FLIGHT

Field guide for educators

EXPLORE • DISCOVER • SOAR



GRADES

K-5

Subject Connections:
Science • Math • ELA
Social Studies • Art
STEM

Exhibit Partner

ABOUT THE EXHIBIT

Climb aboard and discover how pilots use science, math, communication, and teamwork to fly safely. Explore the cockpit identify airplane parts, and imagine taking to the skies!

ESSENTIAL QUESTION

How do forces, design, and teamwork help an airplane fly safely?

GEORGIA STANDARDS CONNECTIONS

SCIENCE

SKP2, S2P2, S4P3.
Investigate motion, forces, gravity, weather, and aircraft design.

MATH

2.MDR.5, 3.MDR.5
Measure flight distances, compare results, and represent data.

ELA

2.T.SS.1, 2.P.EICC.1
Ask and answer questions; explain ideas using aviation vocabulary.

SOCIAL STUDIES

SSKG2, SS1G2
Explore maps, locations, transportation, and aviation careers.

AVIATION VOCABULARY

LIFT – the upward force that helps an airplane rise

THRUST –the forward force created by the engine.

DRAG –air resistance that slows an airplane

GRAVITY – the force pulling the airplane toward Earth

FUSELAGE – the main body of an airplane

WINGS – surfaces shaped to create lift

PROPELLER – spinning blades that help move an airplane forward

COCKPIT – where pilots control the airplane

STUDENTS WILL...

- Identify the basic parts of an airplane.
- Explain lift, thrust, drag, and gravity.
- Explore how weather affects flight.
- Recognize the many careers that help airplanes fly.

GRADES K-5

GRANDPAPPY AIRLINE



SCAVENGER HUNT!

Find these items in the Grandpappy Airlines Exhibit!

- ○ Cockpit controls
- ○ Propeller
- ○ Wings and tail
- ○ Landing gear
- ○ Pilot or crew information
- ○ Something designed for safety

MUSEUM CHALLENGE

Take on a flight role: pilot, copilot, passenger, air traffic controller, or ground crew. Complete a safety check and plan your route.



Think like a Pilot!

WHAT INFORMATION DO YOU NEED BEFORE TAKEOFF?

TAKE IT FURTHER
BACK IN THE CLASSROOM

Fold two paper airplanes with one design difference. Predict which will travel farther, test each three times, measure the distances, and compare the results.



CAREER CONNECTION

People with many different jobs help every flight take off safely!

- ✓ **Pilot**
- ✓ **Air Traffic Controller**
- ✓ **Aircraft Mechanic**
- ✓ **Aerospace Engineer**

What job would you like to try?

DID YOU KNOW

The four forces of flight are

lift, thrust, drag, & gravity!

THANK YOU

for inspiring the next generation of creators, designers, and innovators!

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LEARN TODAY. LEAD TOMORROW.

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