

PLANEPath™

Lesson Directions Overview

Equipment List

- 1 Ream Paper
- 2 Hoop Targets
- 1,000 Craft Sticks
- 100 Paper Clips
- 4 Rolls Tape
- 40 Binder Clips
- 2 STEM Supplies™ Poly Bars (1 red, 1 blue)

Learning Objectives

1. Understand that forces allow planes to fly.
2. Conduct experiments by modifying variables to make a paper airplane fly further.
3. Understand the four forces that act on an airplane (thrust, weight, lift, and drag) and how each applies to the performance of a paper airplane.
4. Utilize the Engineering Design Process to develop an airplane that can fly the greatest distance through a hoop.

Grade Levels: K-8

Vocabulary Covered

- Force
- Flight
- Gravity
- Variable
- Engineering Design Process
- Thrust
- Drag
- Weight
- Lift

Next Generation Science Standards

- K-2-ETS1-1
- K-2-ETS1-2
- K-2-ETS1-3
- K-PS2-2
- 2-PS1-2
- 3-5-ETS1-1
- 3-5-ETS1-2
- 3-5-ETS1-3
- 3-PS2-1
- 3-PS2-2
- 4-PS3-4
- MS-ETS1-1
- MS-ETS1-2
- MS-ETS1-3
- MS-ETS1-4
- MS-PS2-2
- MS-PS2-4