

How Do Airplanes Stay in the Air?

There are four forces of flight: THRUST, DRAG, LIFT, AND WEIGHT.



THRUST is the force that moves the airplane forward. LIFT is the force that works against the WEIGHT of the airplane, keeping it in the air. DRAG is the force that works against LIFT to slow the airplane down.

WEIGHT is the force caused by gravity, which brings the airplane back to the ground.

Airplanes need **THRUST** to keep moving forward. That is why airplanes have engines to create the force that pushes them forward.

Airplanes need to maintain LIFT to keep them in the air. That is why airplanes have wings. Wings generate the most LIFT.



Flight Experiment

INSTRUCTIONS:

Step 1

Tape each strip of cardstock paper to the ends of your straw.

Step 2

Toss your paper flyer in the air! See how it glides through the air.

Step 3

Reflect on how you can improve the glide of your flier. Try trimming the paper strips and/or the straw with scissors, or even adjusting the placement of your paper strips on the straw.



SUPPLIES:

- 1x10 inch strip of cardstock
- 1x5 inch strip of cardstock
- Plastic straw
- Tape
- Scissors