

Paper Airplanes

Research Information

Four forces are at work to make an airplane fly: weight, lift, thrust, and drag. Weight pulls the airplane down. Lift pulls the airplane up. Thrust moves the airplane forward. Drag pulls the airplane back. The same concepts that allow a commercial airplane to fly, cause a paper airplane to fly. In this investigation, weight, lift, thrust, and drag are considered in an effort to determine which paper airplane flies the farthest.

Terms

weight: gravitational force; the force that causes an aircraft to go down

lift: the force that causes an aircraft to lift

thrust: the force that causes an aircraft to move forward

drag: the force that causes an aircraft to pull back

Concepts

Weight, lift, thrust, and drag affect the flight of airplanes as well as paper airplanes.

Research Questions

What makes paper airplanes fly?

Does changing the way a paper airplane is folded, have an affect on the distance it flies?

Materials

- Directions for making paper airplanes
- Paper
- Tape
- Masking tape
- Measuring tape
- Calculator

Method

- Locate directions for making three different types of paper airplanes. Some suggested resources are provided in the bibliography.
- Gather the necessary materials.
- Fold the three different paper airplanes according to the directions?
- Determine an indoor location such as a gymnasium or auditorium to fly the planes. Flying the planes inside will keep the wind from being a factor.
- Use masking tape to mark a starting point on the floor.
- Throw each plane four times. Measure the distance each plane flew and record the distances. Use a calculator to add the distances each airplane flew and divide by four to find the average distance.

