

Parachutes

What Do I Need?

- plastic drop cloth or Mylar
- weight (washers or small toy)
- ruler
- marker
- scissors
- string
- tape
- stopwatch

What Do I Do?

1. First, you will make your canopy. Choose either plastic or Mylar and cut out a shape for the canopy. Possible shapes include squares, circles, hexagons, etc.
2. Next, cut four 10-inch pieces of string. Use tape to secure one end of each piece of string to opposite corners or edges of your canopy (ex. the four corners, if your canopy is in the shape of a square).
3. Tie the loose ends of the four pieces of string into a knot around the washer or small toy.
4. Find a place from which to drop your parachute or go outside to a clearing and toss your parachute up in the air. Time how long it takes to fall to the ground.



Now Try This!

Do you think the time would change if you altered one of your materials? Which materials could you change to increase the length of time your parachute falls? Try changing different variables one at a time to observe how each variable impacts your parachute's descent.

What's Going On?

We are experimenting with FORCES! A force is a push or pull that gives energy to an object. Forces can cause objects to start moving, stop moving, or change the direction of their movement.

In this experiment, we are witnessing two forces at work: gravity and air resistance. Gravity is the force of attraction that pulls two objects together; in this case, gravity pulls the parachute towards the ground. Air resistance is simply a form of friction that opposes the force of gravity and pushes up on falling objects. The canopy of your parachute provides a surface by which air resistance can act against gravity. The size and shape of your parachute will likely have an impact on how fast your parachute descends to the ground.