



Design a Parachute

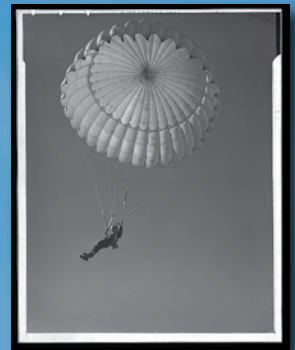
Theorize a design and test your engineering skills with this parachute activity. Select your materials based on your approach and try out different ideas as you design your parachute for maximum flight!



WHAT YOU NEED:

- Parachute material types (plastic bags, cloth, paper, coffee filter, etc.)
- String types (yarn, ribbon, twine, etc.)
- A weight/person (toy figure, paper clips, pipe cleaners, rocks, washers, etc.)
- Scissors, tape, pencil

Fun Fact



During World War II, parachutes were used for landing special troops for combat, supplying isolated or inaccessible troops, infiltrating agents into enemy territory and stabilizing and slowing airborne weapons. In the following years, as the speed of aircraft increased, the ejection seat was developed.

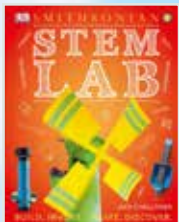
HOW TO:

- Create your parachute in a square or circle shape (about eight inches across).
- Cut four 12-inch pieces of string and attach them in four equally spaced spots around the parachute edges. Use a pencil to poke the holes in your material, or have an adult help cut holes if needed. You may need to reinforce your holes with tape after the string is attached.
- Attach the ends of the string to your weight.
- Drop your parachute from a height to see how it will fall.
- Try testing different sizes, lengths and weights. Do you think a larger parachute would fly better? If you change the weight to something heavier or lighter, what happens? Would a different type of string impact the flight?

WHAT'S HAPPENING?



A parachute creates air resistance (or drag) which pushes against gravity, slowing down the fall of a person or object. When you open your parachute, you create more air resistance, drifting to the ground more slowly and safely—much more like a feather. Simply speaking, a parachute works by increasing your air resistance as you fall.



Related Books:

- *STEM Lab: Build, Invent, Create, Discover* by Jack Challoner
- *Courage Has No Color: The True Story of the Triple Nickles: America's First Black Paratroopers* by Tanya Lee Stone
- *Science Comics: Flying Machines: How the Wright Brothers Soared* by Alison Wilgus