



Everyday Engineering

Parachutes

Put your engineering skills to work and design parachutes to carry “passengers” safely down. By constructing and observing parachutes, you will gain an understanding of the effects of design on performance.

There are a wide variety of materials you could use to create and test a parachute. What do you have that would make a good parachute canopy? Here are some ideas:

- Paper of different types: construction paper, tissue paper, newspaper, brown paper bag, paper towel, etc.
- Fabric of different types: gauze, felt, burlap, cotton prints in different weights, etc.
- Plastic wrap
- Aluminum foil

Use string or yarn to attach “passengers” to the canopy. What kinds of weights do you have that could be used as “passengers”? Try small rocks, metal washers, or even taped bundles of 5-10 pennies, etc.

Now test your parachute by dropping it—perhaps as high as you can reach on your tippy toes, or as high as a grown up in your home can reach! What happened?

Things to try:

Record your findings on a piece of paper or notebook by writing down the shapes, measurements, and types of materials used. Experiment by changing different factors.

- How does the shape, size or material of the parachute affect how it moves?
- How does the way you release your parachute affect how it moves?
- Does your parachute work equally well at all heights?
- Does your parachute move differently with more, less, or no weights attached?

Try placing one or more restrictions on the parachute design:

- Parachute can be no longer than 12 inches in any direction
- Parachute must fold up into a space no bigger than a 1 inch cube