

STEM

with



PARACHUTE LAUNCH

iFLY's state of the art wind tunnels simulate the experience of skydiving – without ever having to jump out of an airplane! This experiment allows you to explore the fundamentals of parachute design. You will discover how gravity, surface area, and air drag affect a parachute's performance – something every skydiver knows is important!

MATERIALS

- 1 square paper napkin
- 4 pieces of string, each 12" long
- 1 paperclip
- Tape

INSTRUCTIONS

1. Unfold the paper napkin into a square that is at least 12" x 12".
2. Tape one string to each corner of the napkin.
3. Gather the ends of all 4 strings and tie these to the paperclip.
4. Launch your parachute from overhead or from a high place.

MORE TO EXPLORE

The speed and duration of a parachute's fall depend on how heavy it is, and the amount of air drag pushing upward on the canopy. A heavier parachute will generally fall faster. But if a parachute is too light, it will fold in on itself and tumble to the ground.

A larger parachute will have more surface area, and will catch more air. This will create more air drag to slow it down. But if a parachute is too large, its weight may actually cause it to fall faster. It could also crumple and fail to open fully.

Experiment with your parachute to see if you can get it to fall more slowly. What happens if you change the parachute's size or shape? What happens if you use more paperclips? How about if you change the number or length of the strings?

Be sure to change and test one variable at a time.



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