



What you'll need

- Empty yoghurt pot or plastic cup or similar item
- String or thread
- Plastic carrier bag or bin bag
- Sellotape
- An egg (optional)
- J-cloth or other scrap piece of cloth (optional)

What to do



Being safe

Take care if you're dropping your parachute in a public area. Make sure there is no risk of your parachute hitting anyone on its way down.

Make a parachute based on the instructions Jackie gives in the video. You can vary the design by adding more strings and making other alterations that you think might be useful.

Decide what cargo your parachute will carry. You can put anything you like inside your container, but we found using an egg makes it more eggciting.

Decide where you will drop your parachute from and how you will judge what makes a 'good' parachute. Is it how long it takes to hit the ground or whether or not it protects the cargo?

Investigate what happens if you have a bigger or smaller parachute.

Investigate what happens if you change the design of your parachute in other ways, for example by changing the length or number of strings you use and changing the material you use or even cutting holes in the material.

Questions to ask children

Before activity: what is the purpose of a parachute?

Why do you think a parachute slows down a falling object?

Do you think the size of a parachute makes a difference to how quickly it falls? Why?

What else could we change?

Do you think it matters how you release the parachute?

Continues >>



Questions to ask children (continued)

If we're comparing two different parachutes, how can we make it a fair test? Answer: Drop them from the same height at the same time.

Do you think the shape of a parachute makes a difference to how quickly it falls? Why?

Do you think the number of strings you use to tie the parachute to the yoghurt pot will make a difference? Why?

What do you think will happen if we use a different type of material for the parachute? Why?

The science

Going Further

Watch this short video on parachutes and air resistance
<http://bbc.in/1mhmcY4>

Play this interactive game to design a parachute strong and light enough to control a rover's descent to the surface of Mars.

<http://bit.ly/MarsPara>

Learn more about the history and development of parachute design

<http://bit.ly/ParaHist>

Learn more about the science of falling safely

<http://bit.ly/FallSafe>

The job of a parachute is to slow things down as they fall through the air. We don't usually notice the effect of the air on us when we're walking about. But if it's really windy, or we stick a hand out of a moving car, we can feel that the air pushes against us in the opposite direction to which we're moving. This is called air resistance.

A crumpled ball of paper will fall quickly through the air, but a flat sheet falls much more slowly. That's because, even though they're the same weight, the flat paper has a bigger surface area and so has to push past more air. This slows it down. Things with a larger area experience more air resistance when they move through the air. Parachutes make use of this effect and, generally, the larger the surface area one has, the slower it will fall.

The precise shape a parachute makes as it falls can also make a difference to how fast it falls and that depends on the shape of the plastic or cloth used for the parachute and the way in which it is attached to the falling object.