



Explore gravity and air resistance.

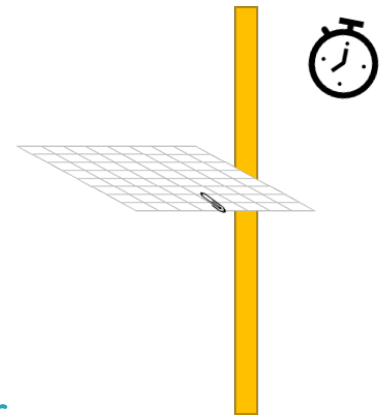
You are going to investigate how the area of a piece of paper affects how long it takes to fall 1m.

Method

1. Cut out a piece of paper that is 16cm x 16cm, clip a paperclip to the paper. Stand a metre stick upright or affix it to a wall.
2. Hold the piece of paper at the top of the metre stick and release it. Use the stopwatch to time how long it takes the piece of paper to reach the floor. Record the time in the table.
3. Fold the piece of paper in half to make an 8cm x 16cm rectangle clip the flap together with the paperclip. Drop this from top of the metre stick as before.
4. Repeat this folding the paper in half each time and use the paperclip to keep the paper together.

Equipment

- Metre stick
- Stopwatch
- Paper
- Scissors
- Paperclip



Area (cm x cm)	Time (s)
16 x 16	
16 x 8	
8 x 8	
8 x 4	
4 x 4	

Stretch

Explain the roles of weight and air resistance in this investigation.

Challenge

Why is it important for the paper to always have the paperclip and not be cut.

Describe the pattern in your results. Explain why you think this occurred.



Explore gravity and air resistance.

Make and launch your parachute and record your findings.



I made my parachute using the following materials:

Stretch:
Make observations about their parachute design and suggest how it could be further improved.

I launched my parachute: Discuss height, location and wind factor.

Challenge:
Make observations about their parachute design.



Discuss the effectiveness of your parachute design and how it could be improved.



Explore gravity and air resistance.

**Draw your parachute design to scale in the space below.
What will your parachute look like when it is laid out flat?**

A large, empty rectangular area with a thin teal border, intended for drawing a parachute design.