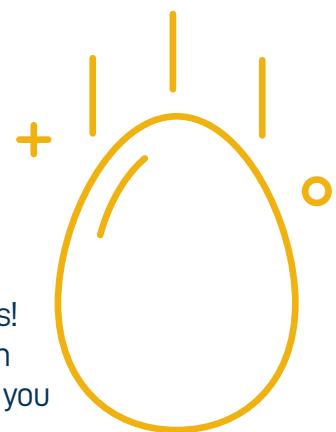


# Egg drop challenge



## The Challenge:

Your friend downstairs wants to boil an egg for breakfast but has run out of eggs! You have decided to use your engineering know-how to pass down the egg from your balcony window to their kitchen, in the apartment on the ground floor. Can you fight gravity and pass the egg downstairs in one piece without cracking?

Can you design a system to protect an egg from cracking or breaking from a high fall?

## You need to:

- Decide as a group how high you want to drop the egg in this challenge. We suggest from a table or chair and no more than 1m.
- Create a system that will protect a raw egg from cracking when you drop it from your chosen height

We suggest going somewhere that you can make a mess to complete the egg drop, like outside.

## Materials List

- Raw egg
- Paper towels
- Straws
- Cardboard tubes
- Tape
- Paper
- Cereal boxes



## Talking points:

- Decide as a group how far you want the eggs to drop without cracking. We suggest 1m, or from a table or chair to the ground.
- Examine the materials you have at hand and look to see their material properties. Are they soft, hard, flexible, sturdy, etc.? Will any of these help to protect your egg?
- Examine how far the egg will drop. Do you think that the egg falling faster or slower will protect the egg more? Based on this, can you think ways to slow down or speed up your egg drop?
- Look at the pictures provided and use these for inspiration.

## Key words

<b>Material properties</b>	How can you describe the material? Is it hard, soft, flexible, does it bounce, etc.?
<b>Gravity</b>	The force that attracts a body towards the centre of the earth.
<b>Flexible</b>	Capable of bending easily without breaking.