



Excellent eggs

Practical activities



The incredible egg experiment

Starter
experiment

Is an egg strong or weak?

How do you know?



How many books will it take to crush a whole egg?

**Main experiment 1
whole egg strength**

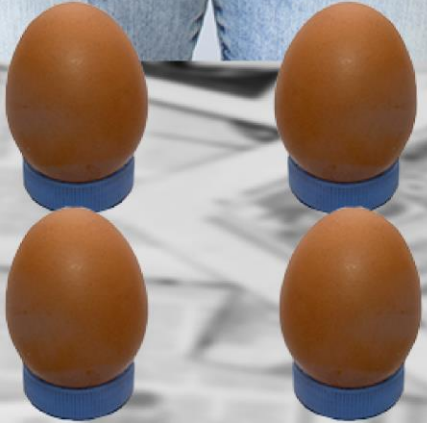
You will need:

- 4 eggs
- 4 plastic bottle caps
- 5-6 heavy books
- 1 newspaper

How many do you think?

Will whole eggs be stronger than eggshells?

Why?



How many books will it take to crush an eggshell?

**Main experiment 2
eggshell strength**

You will need:

- 4 eggshell halves
- 5-6 heavy books

How many do you think?

Why?

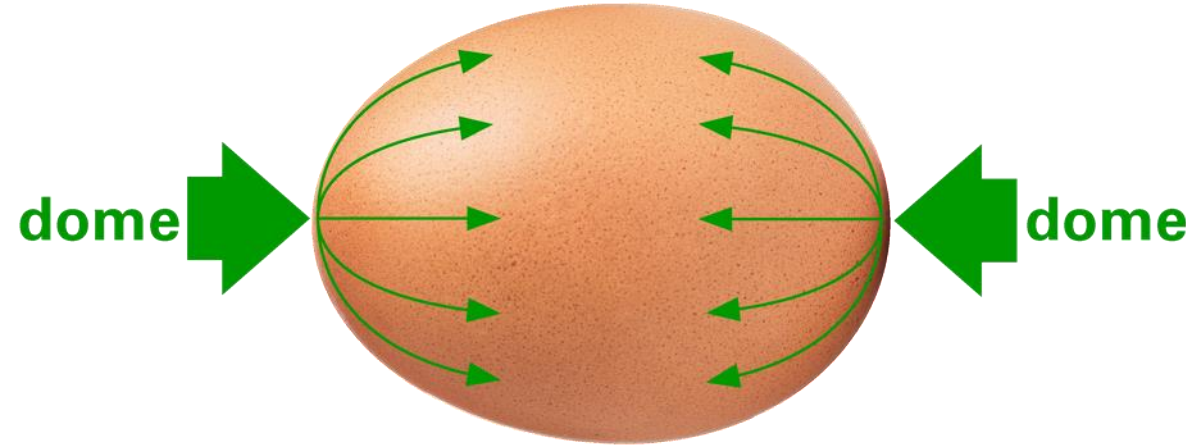


Eggs crack easily if we hit them on the side but the dome-shaped ends can support a lot of weight.

Let's talk!

Why is a dome such a strong shape?

Domes are very good at spreading weight evenly in all directions. This means no part of the dome has to support more weight than any other part.



**Why do you think birds' eggs are dome-shaped?
Why don't they lay round eggs?**

Let's talk!

Try rolling an egg and see what happens. Compare it to rolling a perfectly round ping pong ball or tennis ball.

- So they don't roll away or out of the nest and break.
- So they can be laid easily.
- The strength of the dome shape helps make eggs strong enough not to crack when they are laid and sat on by the mother.

Can you think of some animals that have dome-shaped eggs?



Let's talk!

Ostrich



Crocodile



Blackbird



Starling

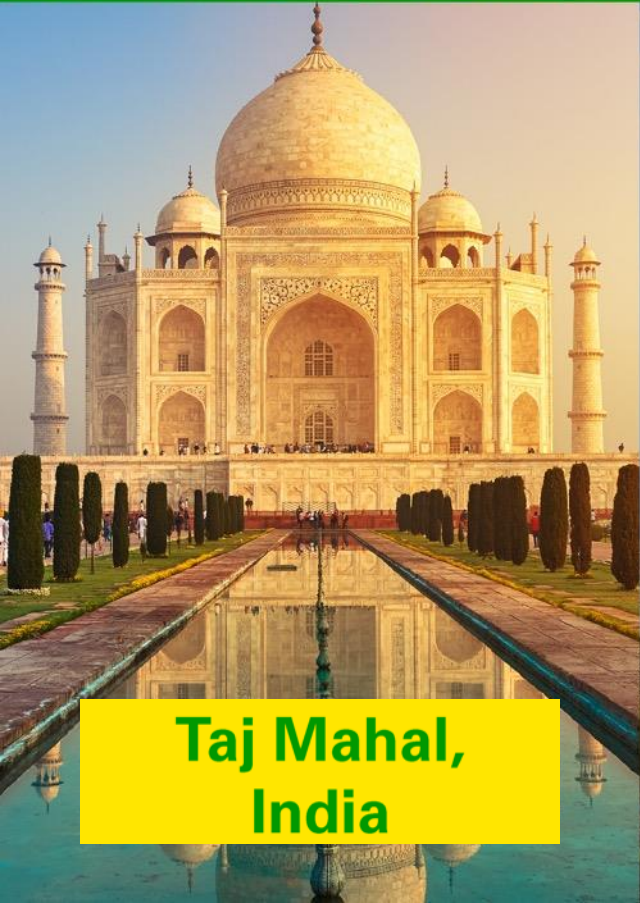


Goose



**Strong dome shapes are used in buildings.
Do you recognise these buildings?**

Let's talk!



**Taj Mahal,
India**



**Grand Mosque,
Abu Dhabi**

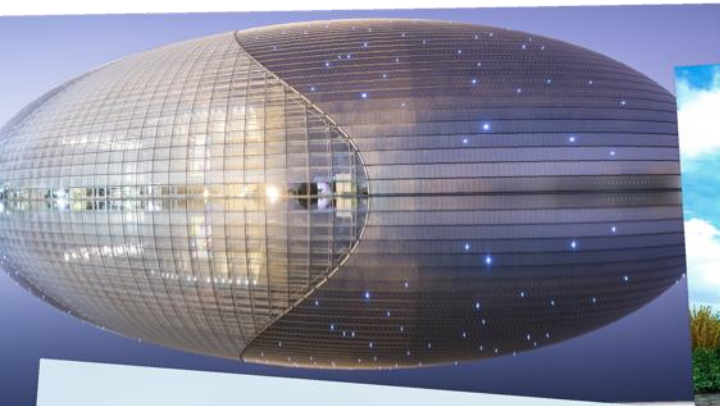


**St. Paul's
Cathedral, England**

Are there any dome-shaped buildings where you live?



Let's talk!



Would you like to live in a dome-shaped home in the future?



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About this resource

BP Educational Services activities are developed in partnership with practising teachers. This resource has also been informed by the Enterprising Science research partnership of BP, the Science Museum Group and King's College London, who collaborated to create, measure and test science capital – a concept that gets to the heart of how people engage with science.

[Find out more here](#)

