

Eggstra Strength Experiment

Materials (per group)

- 1 raw egg
- 1 flat baking tray
- A small piece of play dough
- Heavy books



What makes the egg shell so strong?

You will test the strength of a simple egg to determine just how strong it can be.

Make a Prediction

How many books do you think can be stacked on top of the egg before it breaks? _____

Why do you think so? _____

Try It Out

1. With your group, place the play dough onto a table and stand the egg up in it. The smaller end should be pointing straight up.
2. Put a small stack of books next to it so that the top of the stack is level with the top of the egg.
3. Place the tray on top of the egg and stack of books so it sits flat.
4. With your group, discuss how many books you think can be stacked on top of the egg before it breaks.
5. Gently begin placing one book at a time on top of the tray...be **VERY** careful. Keep stacking books until the egg breaks.



Explain It

Compare the results of your tests with other students in your class.

How many books were you able to stack on top of the tray before the egg broke? _____

Were you surprised at the amount of books the egg was able to support? Why or why not? _____

Why do you think it was possible for the egg to support that amount of books? _____

What would happen if we tried this experiment on an egg lying on its side? _____

What could we build differently at our school using domes? How would that benefit us? _____

Build on It

Conduct an investigation to see where domes have been used in structures.

Try squeezing an egg sideways and then try squeezing it long ways. Can you explain the difference?