

The Awesomely Amazing WHIZZ POP BANG! Science club

Teacher-led activity

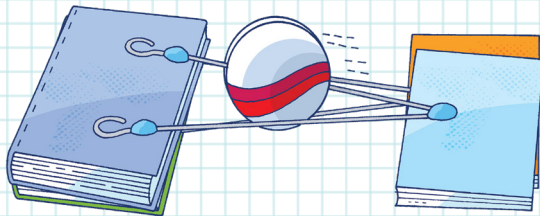
GRAVITY-DEFYING BALL TRICK

What you do:

1. Use sticky tack to stick the ends of the two skewers together onto the thinner book.
2. Stick the other ends onto the thicker book so that they are almost as wide apart as the width of your ball.
3. Place the ball on top of the skewers and see which way it rolls. Experiment with differently sized books or balls to see what works best.

You will need:

- 2 skewers or long rulers
- Sticky tack
- 1 thick book
- 1 slightly thinner book
- 1 smooth ball



You should find:

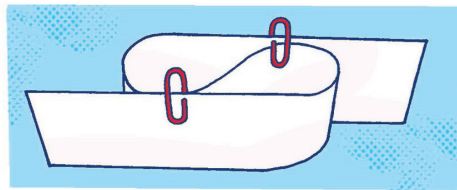
The ball appears to defy gravity by rolling uphill from the thinner book to the thicker book. However, if you look carefully from the side, you'll see that the ball is actually getting lower, not higher. The angled skewers allow the ball to sink lower and lower into the gap. So, although the ball rolls towards the taller book, it isn't actually defying gravity at all!

Pupil activity

PAPERCLIP JUMP

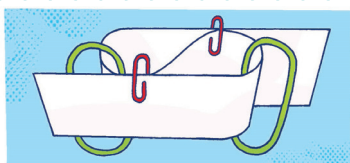
What you do:

1. Bend your paper into an S shape and clip the paperclips to the paper, as shown.
2. Pull the ends of the paper firmly away from each other



You should find:

The paperclips appear to magically link together and jump off the paper! Try the trick again more slowly and see if you can watch what happens. As you pull on the paper, the paperclips are forced in between each other, clipping them together and pushing them into the air.



Now experiment with adding an elastic band into each loop of the paper. What happens now?

You will need:

- 2 paperclips
- Strip of paper
- 2 elastic bands

