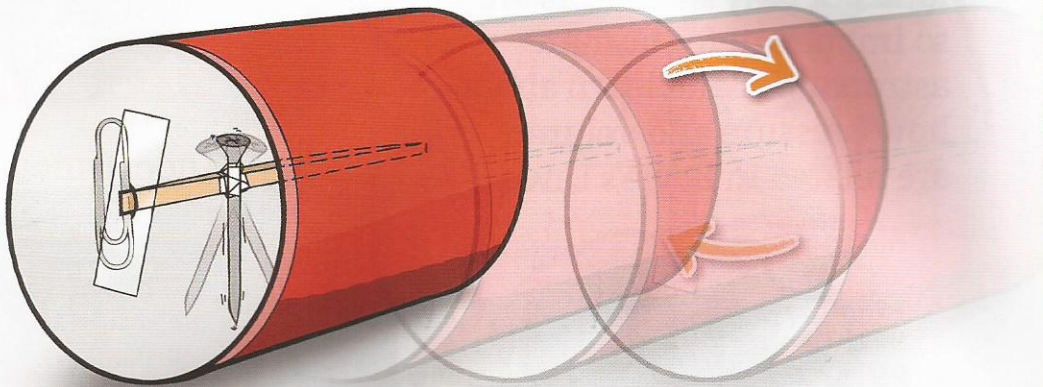


Make a 'comeback' can

Use kinetic energy and a rubber band to make a can come back to you like a boomerang

Suitable for **Cubs+**



What to do

- 1** Fix the screw/bolt to the middle of the elastic band, as shown, with tape so that the screw/bolt head sits between the two sides of the band.
- 2** Make a hole in the bottom of the container (in the middle). It should be big enough to push one end of the elastic band through, so that a small loop shows on the outside.
- 3** Push a paperclip through the loop to hold the elastic band and stick it down with tape.
- 4** Make a similar hole in the lid of the container and push the other end of the elastic band through. Secure it with the other paperclip and tape it down.
- 5** When you put the lid back on the container, the elastic band should be taut and the screw/bolt inside the container. If the band isn't taut enough, and the screw/bolt touches the sides of the container, try a shorter elastic band.
- 6** Now roll the container away from you and see what happens. It should come to a stop and then start rolling back towards you.

You will need

- Round cardboard container with a lid – an empty gravy or breadcrumbs tub would be perfect
- Large, thick elastic band
- 2 paperclips
- Sticky tape
- Screw or bolt (a short fat one works best, about 40mm long)
- Scissors or craft knife for making holes

What's happening?

This experiment is about the transfer of energy. When you push the container, it has kinetic energy. This energy is transferred into the elastic band as the container rolls (twisting the band). When the container stops rolling, the elastic band releases the energy back into the container again (as the band untwists) and the container rolls back towards you.

More info

Rolls-Royce sponsors the Cub Scout Scientist Badge. Its activity pack is filled with activities that replace fear with fun when it comes to science. Visit scouts.org.uk/rolls-royce to download the packs.

