



Band rollers

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Clockwork Challenge Combats Climate Change

Designers say clockwork technology could help to slow down climate change. Inventors of wind up radios, torches and children's toys that don't need batteries, or fuel, are invited to enter them in the CLIMATE CHANGE CHALLENGE at the Startown Technology Show.



Talk about

- ★ How do clockwork toys work?
What might make a difference to how long they keep going?
- ★ Why are elastic bands like clockwork?
- ★ How could wind up toys help to combat climate change?

★ Your challenge

Can you make a wind up toy for the Technology Show? You might not be able to make a clockwork toy but you could use elastic bands instead.



★ **Here is one way to make a band roller**

- ★ Use a piece of candle, about 1 cm thick. Remove the wick to leave a hole.
- ★ Push an elastic band through the centre hole of a cotton reel (**Figure 1**).
- ★ Put half a matchstick through one end of the elastic band loop and tape it to the cotton reel (**Figure 2**).
- ★ Thread the other end of the elastic band through the hole in the candle (**Figure 3**).
- ★ Now put a whole matchstick through the elastic band loop by the candle (**Figure 3**).
- ★ Wind the long matchstick to twist the elastic band. Put the band roller down and see if it moves!

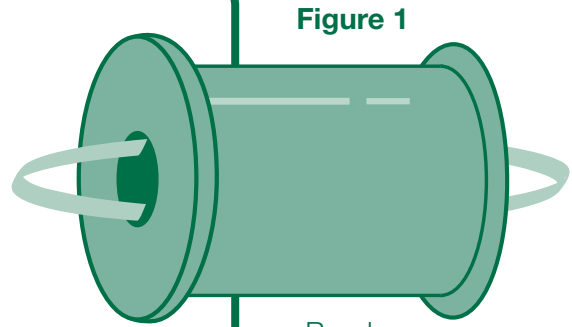


Figure 1

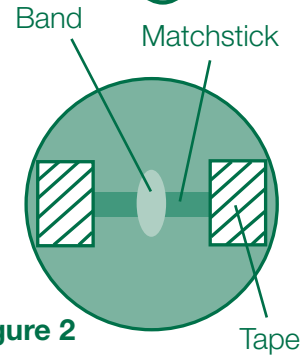


Figure 2

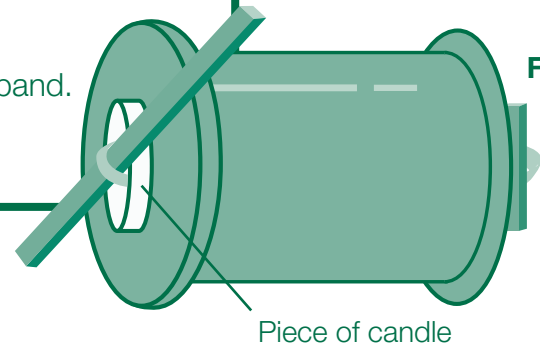


Figure 3

★ **Now put your band roller to the test**

- ★ When it is working, think about what you might change to make it work better.

★ **Sharing your ideas**

Race your band roller against other groups. Which band roller went the fastest or furthest? What made a difference?

Congratulations!

You are now a clever climate change challenger. Collect your stickers and get ready for your next challenge.

★ **Here are some extra challenges**

- ★ Will your roller go uphill?
- ★ Can you make it look really interesting?
- ★ What else could you make using wind up power?

