

# Tots Make & Do

British Science Week Special with Ursula



**Audience:** Perfect for children aged 6 months to 3 years old, with their grown-ups.

**This activity is great for:** exploring how things work, testing out ideas, and exploring the world around them by learning about movement and forces through play!

**How long will it take?** As long as you want, depending on the number of experiments you'd like to do! We recommend taking at least 15 minutes to have a go at a few different techniques.

**Introduction:** The Museum of Making has all sorts of different objects that move, from aero engines to model railways! Have a go at building some ramps to run your own experiments to see how fast or slow different objects can move.

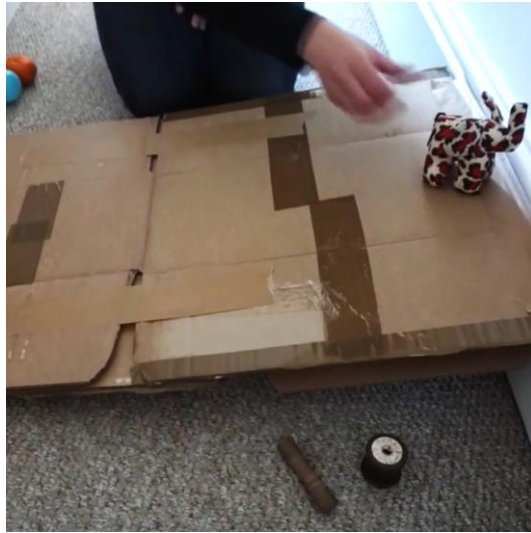


## You will need:

- Something to build a ramp with. Here are some good options:
  - A piece of cardboard (like an old box)
  - A plank of wood
  - A sofa cushion
  - Paper that you can tape to a hard surface like a wall
- Objects of different shapes and sizes to roll down your ramp
- Textured materials to lay on the surface of your ramp, e.g.
  - Bubble wrap
  - Tin foil

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## Step 1

Set your ramp up in a spot with plenty of space and ask a grown-up to help you secure it using tape if it needs it.

Then, get your different objects and start experimenting! Ask yourself, do you think it will roll? Then, test it out! Try moving your object around to see if it moves faster or slower on its side or front. Guess which objects you think will be fastest and then race them!

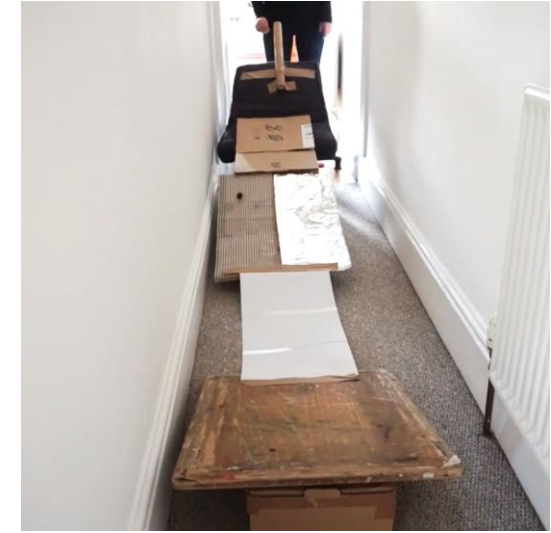


## Step 2

Once you've tested out all of your objects you can try changing the surface of your ramp. Try wrapping or sticking a different material to the ramp.

When you roll the same objects down, does it make them roll quicker or slower than they did before? Do they make a different noise?

If you have two of the same object, test them at the same time to see which material gets them to the bottom first!



## Step 3

You can also try changing the height of your ramp to see how it might change how objects roll down your ramp.

Why not try joining lots of objects together to create one long ramp? How far do you think you can get an object to travel? Can you get your object to travel back up a ramp after it's travelled down?

Enjoy experimenting!