Live Lessons EXTRA: Activity 1 – How does weight and mass affect movement?

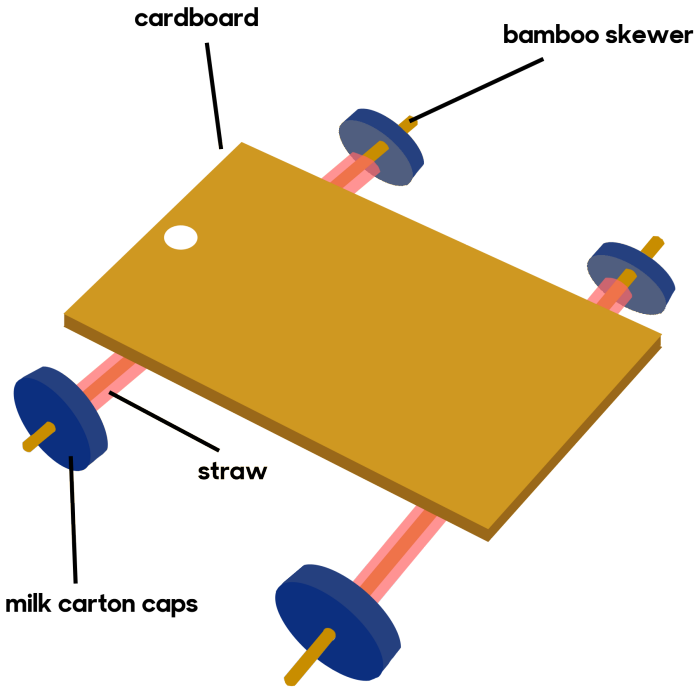
In the Live Lessons EXTRA programme, we'll be exploring how weight and mass affects movement and speed.

Make your own cardboard buggy

You can try making your own low-cost version of a buggy and carry out your own investigations in the classroom.

You'll need:

- A piece of cardboard with a hole punched in it on one end
- Four bottle caps from plastic milk cartons
- Two bamboo barbecue skewers
- Two thin straws
- Sticky tape
- An assortment of different masses
- Force meter



Instructions:

1) Tape the two thin straws to the bottom of the sheet of cardboard. Take care to make the two straws parallel, otherwise your car might not go in a straight line.
2) Ask an adult to carefully poke a hole in the middle of the milk carton caps. This needs to be in the centre of the cap.
3) Thread the bamboo skewers through the straws and then poke the ends of the bamboo skewers into the holes in the milk carton caps.
4) You should now be able to roll the buggy across the ground smoothly.

Test how different weights affect the force it takes to move it

Now that you've built your cardboard buggy, you can carry out your own investigations in class.

Place the different weights on top of the cardboard and use the force meter, pulling the buggy by the hole in the cardboard to see how much force it takes to pull the car along.
Use the plan below to help you.

Which variable will you change?

We will change _____.

Which variable will you measure?

We will measure _____.

To make it a fair test we will keep these variables the same:
