

## Live Lesson: Activity 2a - Balloon-powered cars

(Follow-up activity)

### Make your own balloon-powered car

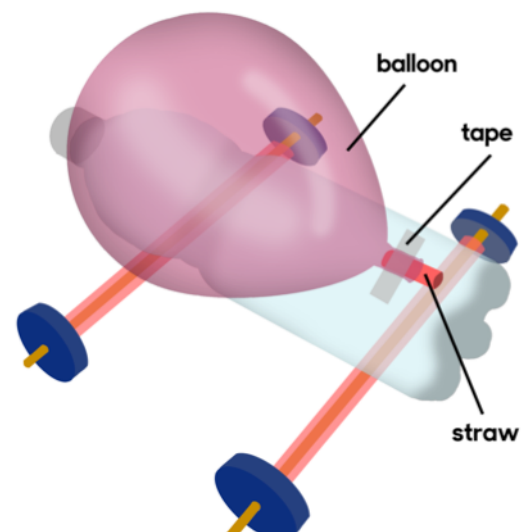
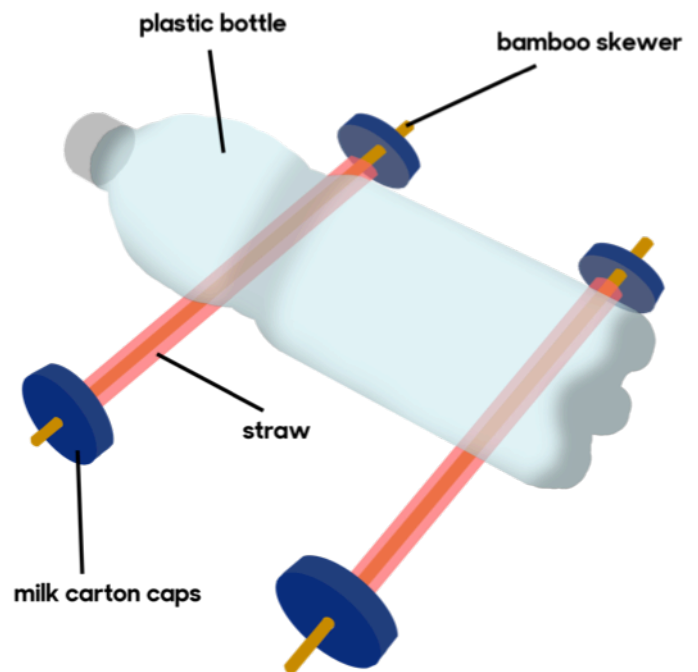
You can try making your own low-cost version of a balloon-powered car, and carry out your own investigations in the classroom.

You'll need:

- A lightweight disposable bottle
- Four bottle caps from plastic milk cartons
- Two bamboo barbecue skewers
- Two thin straws
- Balloons
- Wide straws
- Sticky tape
- Scissors

Instructions:

- 1) Tape the two thin straws to the bottom of the bottle. 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 small 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. You should now be able to roll the car across the ground smoothly.
- 4) Cut a short length of the wide straw to form a small mouthpiece.
- 5) Put the mouthpiece in the mouth of the balloon, and tape the balloon and the mouthpiece securely together so the balloon forms a tight seal around the mouthpiece. You should be able to blow up the balloon by blowing into the mouthpiece.
- 6) Tape the balloon and mouthpiece to the bottle car, with the mouthpiece facing the back of the bottle.



7) Now when you blow up the balloon and let the car go, the air in the balloon should propel the car forwards.

## Planning your investigation

Now that you've built your balloon-powered car, you can carry out your own investigations in class.

If you thought that the car might go faster if it had two balloons on it rather than just one, why not try it out by adding another mouthpiece and balloon to your car? Or if you thought that the car might go faster if it had a bigger balloon on it, test it out!

Use the plan below to help you.

### Which variables could you change?

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We will change \_\_\_\_\_.

### Which variables could you measure?

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We will measure \_\_\_\_\_.

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

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