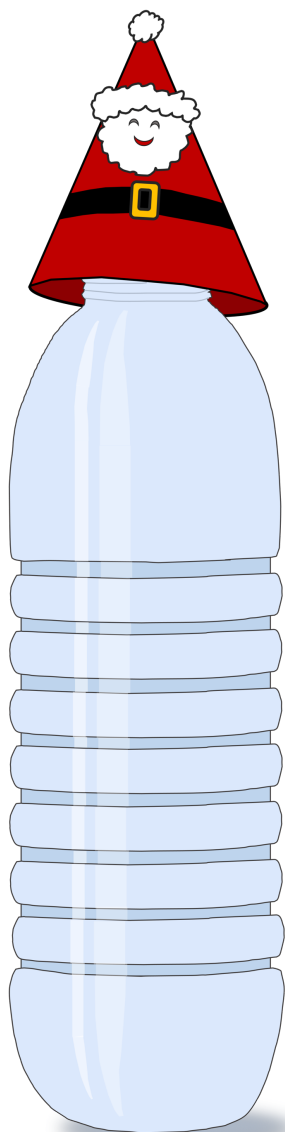


# SCIENCE FUN AT HOME CHRISTMAS SPECIAL!

Have some festive fun at home with these science activities from Science Sparks and the Primary Science Teaching Trust

**BEFORE YOU START!** Please read through this with an adult:

- \* Please make sure you have read the 'IMPORTANT NOTICE' at the bottom of this page
- \* You can do these activities indoors, or in a safe space outside.
- \* Talk to your adult about the science you have done and if they want to share any pictures on social media, please tag @ScienceSparks and @pstt\_whyhow



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## FLYING SANTA

Draw a circle with diameter 7cm (or draw round a small plate) on a piece of paper. Cut out the circle and then cut it in half. Each semi-circle will make one Santa. Bend the semi-circle round to make a cone. Overlap the straight edges and stick them together with tape or glue. Colour in your Santa. You could start by cutting your circle from paper that you have already coloured red, and then cut out a belt, bobble and beard and stick them on.

### You will need

- \* Paper and pens
- \* Scissors
- \* Tape or glue
- \* Empty plastic bottle or milk carton

Next you need an **empty** plastic water bottle or milk carton with the lid off. Put your Santa cone over the top of the bottle or carton and make sure you aren't pointing it towards anyone's face. On a count of three, squeeze the bottle as hard as you can by clapping your hands with the bottle in the middle, and watch Santa go flying!

### WHAT DO YOU NOTICE? Things to talk about ...

- How far can you get your Santa to go?
- What happens with a really big or a really small Santa?
- Or with a narrower cone, using a third of a circle?
- What happens if you tilt the bottle or carton?
- What difference does it make if you use a bigger bottle or carton? Or a smaller one?



**IMPORTANT NOTICE:** Science Sparks and The Primary Science Teaching Trust are not liable for the actions or activity of any person who uses the information in this resource. Science Sparks and The Primary Science Teaching Trust assume no liability with regard to injuries or damage to property that may occur as a result of using the information and carrying out the practical activities contained in this resource. These activities are designed to be carried out by children working with a parent, guardian or other appropriate adult. The adult involved is fully responsible for ensuring that the activities are carried out safely.

# 2

# RACING REINDEER



### You will need

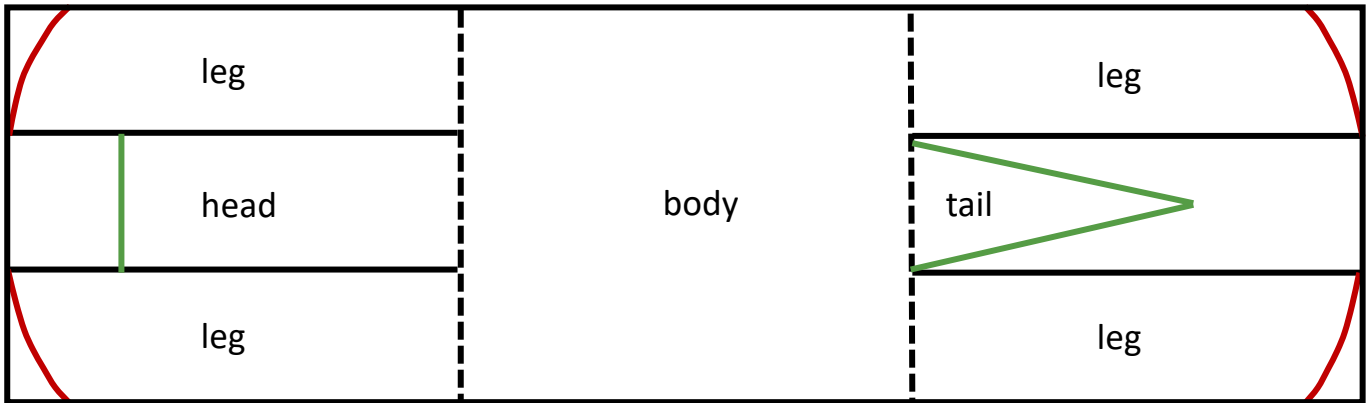
- \* Cardboard (from a box or a piece of old packaging is ideal)
- \* Scissors
- \* Ramp

Use the template below to cut out your reindeer. Fold the four legs down and the tail and head up. Remember to cut the shape of its feet. If you want, draw a face on the head and cut out and stick on some antlers. You could give your reindeer a name too .... be as creative as you like!

Find something to use as a ramp – this could be a plank of wood, or a big book, or a chopping board – anything that is at least 30cm long and has a flat surface. Prop one end of your ramp on some books or a box, so that you have made a slope ready for your reindeer races.

Now see if you can get your reindeer to walk down the ramp!

It might not work first time – you may need to adjust the angle of the legs or its head and tail. Or your ramp might be too steep, or too shallow. **Be patient** and keep trying as it will work!



- Cut along solid lines
- - - Fold along dotted lines
- Cut along red lines to create angled foot shape
- Cut head and tail shapes along green lines

**Why not get friends and family each making their own, and then have reindeer races?!**

### WHAT DO YOU NOTICE? Things to talk about ...

- What difference does the size of the reindeer make?
- Why not try a **HUGE** one? Or a tiny one?
- What happens if you make the reindeer with longer legs? Or shorter legs? Or thinner or fatter legs?
- What happens if the ramp is too high or too low?
- Can you find out the best height for the ramp?
- Does the reindeer keep walking on a really long ramp?
- What if you change the surface of the ramp?
- What difference does it make if you don't cut triangles off the ends of its feet? Or you cut off bigger ones?