

Making a Model of the Lungs

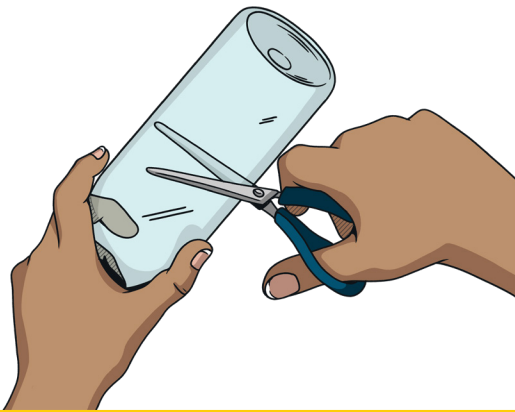
Equipment

a clean, clear plastic bottle (at least 500ml)
 scissors
 narrow, bendy plastic drinking straws × 2
 wide plastic drinking straw

sticky tape
 small balloons × 2
 large balloon
 modelling clay

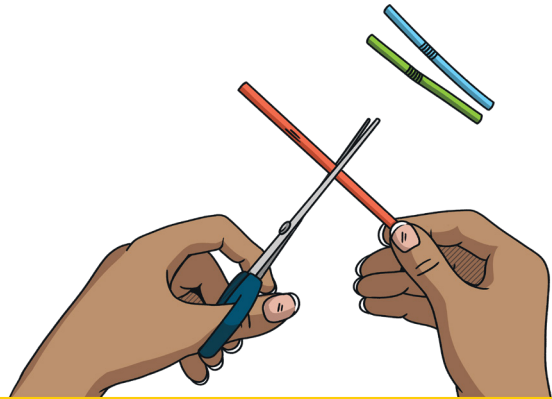
Instructions

1



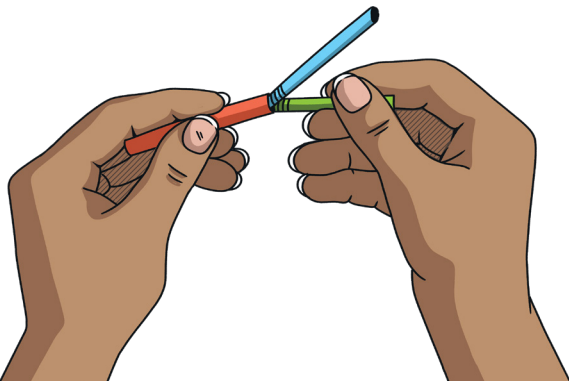
Remove and discard the lid from the plastic bottle. Carefully cut off the bottom of the bottle using a sharp pair of scissors. The plastic bottle represents the chest cavity.

2



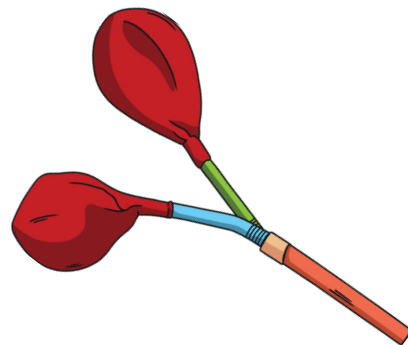
Take two bendy plastic straws and cut about a third off the straight end of each straw. Then, cut a wider plastic drinking straw in half. The wider straw represents the trachea and the bendy straws represent the bronchi.

3



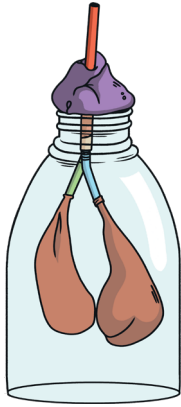
Insert the ends of the two pieces of bendy straw into the end of the wider plastic straw and secure with sticky tape. Make sure not to squash the straws so air can still get through the opening.

4



Carefully insert the end of each bendy straw into the opening of a small balloon. Secure well with sticky tape to ensure there are no gaps. This represents the lungs attached to the bronchi.

5



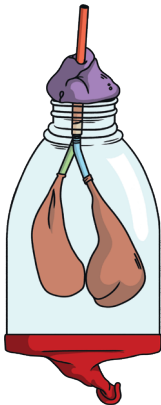
Put the end of the wider straw through the neck of the bottle and secure with modelling clay, making sure that it is completely airtight without squashing the straw.

6



Tie a knot at the end of a larger balloon, then use the scissors to cut about 1 cm off the top of the balloon. This will represent the diaphragm.

7



Stretch the open end of the cut balloon over the open end of the bottle so it is tight. If needed, you can use sticky tape to secure the balloon to the plastic bottle.

8



Pull down on the knot in the balloon to see the lungs in action. As you pull down, the balloons inside the bottle should inflate. What happens if you push the knot up into the bottle?