

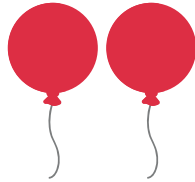
STETHOSCOPE AT HOME



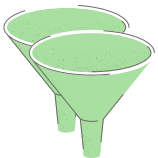
Materials



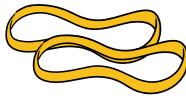
1x flexible tubing



2x balloons



2x small funnels

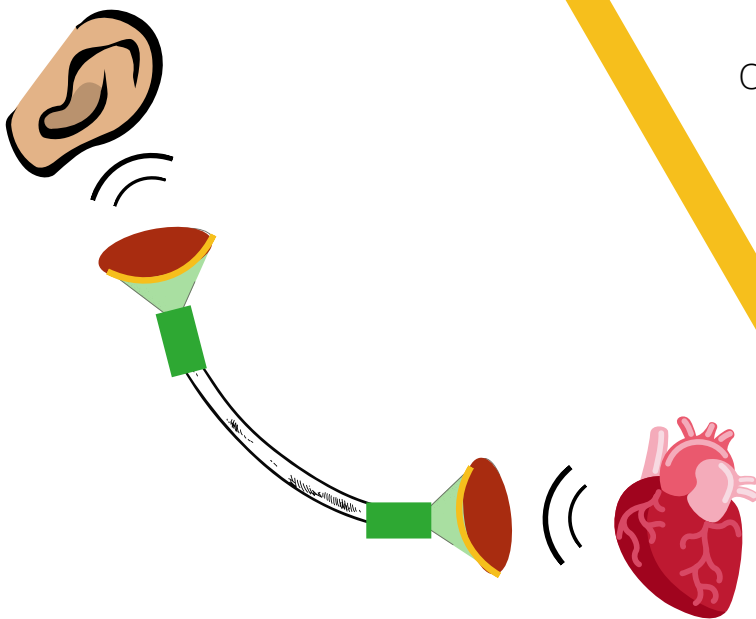


2x elastics



Tape

Final Setup



Assembly

Cut the end of the balloons off with scissors. Put the balloon around large part of the funnel. Make sure the balloon is smooth and tight like a drum!

Use the elastics to tightly secure the balloons to the funnels

Fit tubing into OR over narrow part of funnels. Use tape to make the fit snug and secure

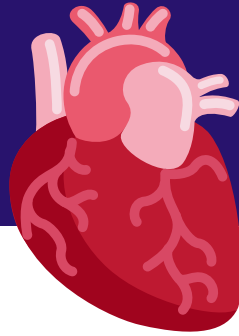
How does it work?

Our hearts are constantly beating, they never take a break, even when we are sleeping!

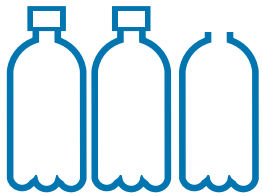
The beating 'lub-dub' sound our heart makes is the results of the valves opening and closing as it pushes the blood around inside our bodies

Use the stethoscope in a quiet space to listen to the heartbeats of family, friends and tolerant pets

WORKING HEART MODEL



Materials



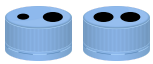
3x water bottle



Water with dye



Tape



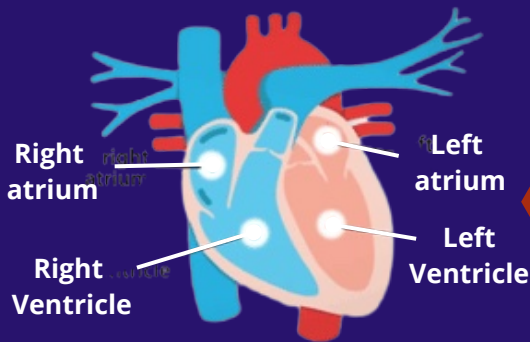
2x bottle caps with holes



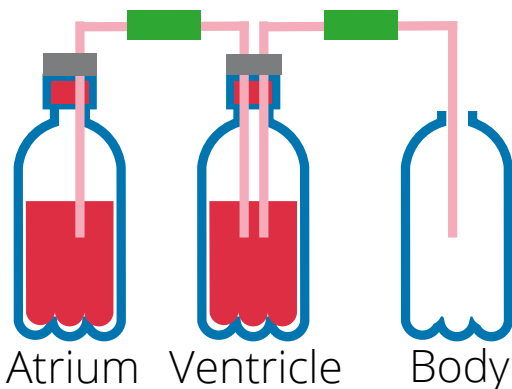
4x straws



Clay



Final Setup



Assembly

Have a parent drill holes into both bottle caps to fit 3 straws and one smaller hole

Slide one head of a bendy straw into another (might have to pinch one) and tape together. Repeat for the other 2 straws

In a pitcher mix about 3 cups of water with red food dye. Pour into the two bottles until about 80% full

Slide straws into caps as shown in the final setup diagram, use hot glue or clay to seal the straws to caps.

How does it work?

Squeeze the ventricle bottle and pinch the straw between atrium and ventricle.

Where does the 'blood' go?

While **still** squeezing the ventricle bottle, move your fingers to pinch the straw between the ventricle and body. and release the ventricle bottle. Does the blood go to the atrium?

REPEAT!



QCPCU
Queen's CardioPulmonary Unit

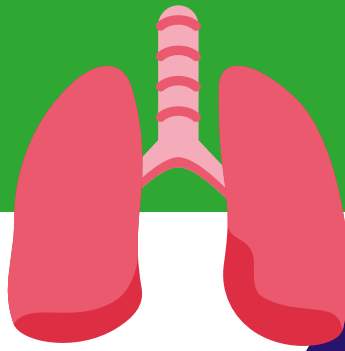


Queen's
UNIVERSITY

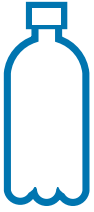
Watch our YouTube tutorial!

<https://youtu.be/nOheaF1fTBY>

WORKING LUNG MODEL



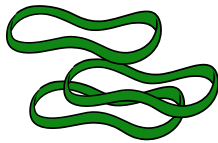
Materials



1x 2L bottle



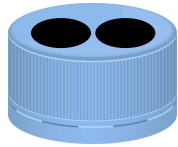
2x plastic straws



3x elastics

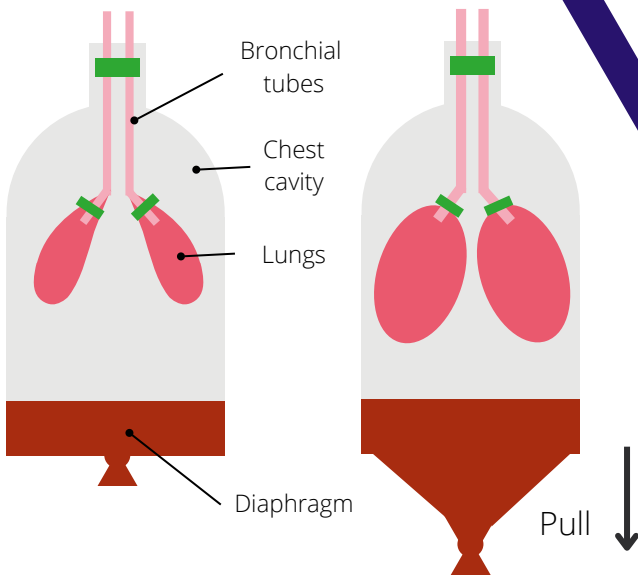


3x balloons
(2x small, 1 large)



1x cap with
2 holes

Final Setup



Assembly

Have a parent drill holes into the bottle cap to fit 2 straws

Peel off label of the 2-litre bottle and cut off the bottom as cleanly as possible

Put the opening of the balloon around the head of the straw and tie tightly with elastic. Repeat for other straw

Push the tails of the straws into the bottle cap (seal with hot glue) if not tight. Put cap onto 2L bottle

Knot the base of the large balloon and cut off the top, stretch the opening tightly around the base of the 2L bottle

How does it work?

When you pull down on the diaphragm the lungs inflate!

When we inhale, our diaphragm moves down, and this is what draws air into our lungs. When we exhale, the diaphragm moves back up and the air is pushed back out of our lungs.



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