

HOW MUCH AIR CAN YOUR LUNGS HOLD?

Materials



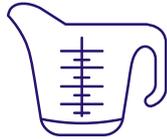
1x large bowl



1x 2L bottle



2x plastic straws



1x measuring cup

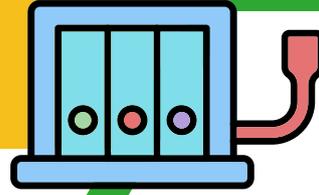


1x large pitcher of water



1x marker

Spirometers like this one measure lung capacity



Assembly

Fill up the large bowl halfway with water and fill the 2L bottle all the way up to the top and secure with lid

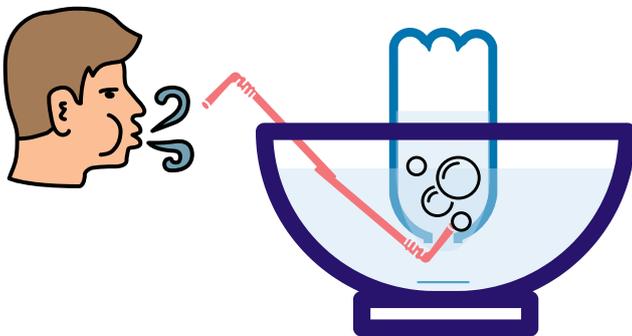
Place the 2L bottle (lid down) into the bowl with the water. While submerged, carefully remove the cap without letting any of the water out of the bottle

Place a bendy straw so that the small end is in the submerged opening of the bottle and the other end is sticking out of the bowl

Fill your lungs with as much air as possible, blow it into the straw - watch for air bubbles forming in the bottle!

Use the marker to mark the level of air in the bottle. Turn the bottle upright and fill with water back up to the line, then pour the water into the measure cup to see how many litres of air your lungs can hold

Final Setup



How does it work?

As you blow air from your lungs into the bottle it pushes the water inside the bottle out to the water in the larger bowl.

The volume of air in the bottle is the same volume as what your lungs hold

Try repeating this experiment with people that are different sizes to see how their lung volumes compare to your



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