

Microbe Magic Experiments

<http://microbemagic.ucc.ie>

Your lungs and breathing

Did you know that the air you breathe takes up space? You can't see, taste or smell air and you only feel it when the wind blows but still, it takes up all of the space around you. You can amaze your friends with this simple experiment that shows you how air fills things to the brim!

What you will need

An empty plastic bottle

Deflated balloon

A friend

What to do:

- Put a deflated balloon into the empty plastic bottle and fold the top of the balloon around the mouth of the bottle so that the bottle is sealed and the balloon is inside the bottle like shown in the picture.(Picture here)
- Show the bottle to your friend and tell them that, although the bottle looks empty, it is actually full!
- When they say that there is nothing inside the bottle, ask them to blow up the balloon without taking it from the bottle.
- Watch as they try to blow up the balloon but can't!

Why this happens:

Because the top of the bottle is sealed, air has become trapped. When air enters the balloon, the balloon tries to expand, but it can't because the air trapped in the bottle fills the space and cannot escape to make room for the balloon.

In your body, your ribs and diaphragm move to make room for your lungs to expand when they fill with air as you breathe it.