

How to inflate a balloon the easy way

Learn about air pressure

Equipment

- ◇ An empty plastic 2 litre bottle
- ◇ A balloon
- ◇ Some ice
- ◇ Some hot water

Method

1

Put the empty and open bottle in a freezer or on some ice for long enough to let it really cool down.

2

Now quickly put the balloon over the mouth of the bottle.

3

Pour very hot water over the sides of the bottle and see what happens! Cold air is more dense than warm air. As the air in the bottle warms, it expands, inflating the balloon.



How does this relate to the atmosphere?

When air is heated – maybe because it is in contact with warm ground, it expands and rises. As it rises the pressure falls and the air cools. If the air rises far enough, clouds form



What else can I try doing?

Have a look at some of our other experiments – make a barometer, see if you can get an egg into a bottle, ask how heavy is air and see whether you can crumple a can. All these explore what we mean by air pressure.

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