

One Way Screen

You will need:

Net curtain material, milk bottle, water, 7x7cm card, elastic band

What to do:

1. Attach double layer of net curtain to bottle with elastic band
2. Pour water through the screen
3. Place card on top of screen, hold in place with hand and invert bottle.



Fig. 4



Fig. 5

What do you think will happen if you try to pull the card away?
This is your **Hypothesis** – a carefully thought out guess!

4. Slowly slide out the card.

What happens? Does it agree with your hypothesis?

Take it further:

Try experimenting with tilting the bottle at different angles to see what effect that has on the water flow.

The Science:

Molecules of water have greater attraction to themselves than the screen (surface tension). When inverted, a small amount of water is lost from the bottle; the air that remains expands slightly so the pressure inside the bottle is less than outside.

The combination of surface tension and greater outside atmospheric pressure causes water to remain in the bottle.

