



~~DO NOT~~ TRY THIS AT HOME

Challenge #1	Is it possible to pour light?
Resources	<ul style="list-style-type: none">• Clear plastic bottle, a torch, foil, sticky tape• Dark room• Instructions below
Extra	What would need to change in this experiment if you wanted to see colours?

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Challenge #2	Make a musical coat hanger!
Resources	<ul style="list-style-type: none">• Metal coat hanger, piece of string, fork, instructions below
Extra	<ul style="list-style-type: none">• Investigate whether you make a larger or smaller vibration using different materials.

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Challenge #3	Make a magic balloon!
Resources	<ul style="list-style-type: none">• Clear plastic bottle• A pen• Balloon

Extra

Try using different size bottles. Does this change the results?
Film/take pictures of your experiment

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Challenge #1: Is it possible to pour light?

Investigate



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The Light Collection

INTERNATIONAL YEAR OF LIGHT 2015

What you need: •A clear plastic bottle •A torch
•Kitchen foil •Sticky tape •A dark room with a sink

Thanks for pouring me a drink Milo but let me show you how to pour light!

Wrap the bottle in kitchen foil, leaving the bottom bare.

Vic Le Billon

Fill the bottle with water, ...

... switch on your torch ...

Shine the torch through the bottom of the bottle and start pouring the water into the sink. Keep the torch close to the bottle at all times.

Almost all the light from the torch is reflected every time it hits the edge of the stream of water, so the light follows the path of the water and you see a spot of light where the water hits the sink.

www.physics.org search term: total internal reflection

We'd love to see all the great learning your children are doing at home. A way to share this with our community is to take a photo of your child's work and tag us at [q1ehomelearning](https://twitter.com/q1ehomelearning) - this is on either [Twitter](https://twitter.com/q1ehomelearning) or [Instagram](https://www.instagram.com/q1ehomelearning).

Challenge #2 : Make a musical coat hanger

Investigate





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Challenge #3: Make a magic balloon

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Issue #7

Featuring: Marvin and Milo

What you need: • a clear plastic bottle • a pen • a balloon (blow it up a few times beforehand)

Watch my amazing balloon trick!

Make a hole in the bottom of the bottle with the pen.

Push the balloon inside and stretch it over the mouth.

Blow up the balloon. Notice air is coming out of the hole.

Cover the hole with your finger and stop blowing.

Look! It stays inflated!

As the balloon expanded, it pushed air out of the bottle. That made the air pressure inside the bottle lower than that in the balloon, so it wasn't strong enough to squeeze the air out.

Vic Le Billon

www.physics.org keywords: air pressure

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