

Giant bubbles

Location

First floor, Curiosity zone exhibition

In a nutshell

Use our hoops and soapy bubble mix to create huge bubbles.

What to do

Dip the ring into the bubble mix then lift it up through the air. Lift it high and walk backwards to create bigger bubbles or try to create a bubble around someone.

Time Required

KS3 & KS4 2-3 minutes per student.

What's happening?

For water to form a bubble, water molecules need to stretch around a puff of air. But plain water is not very good at stretching - and bubble-making - because its molecules are highly attracted to each other and tend to stick together. This quality known as cohesion, explains why water beads up on a newly waxed car. Water becomes less sticky when you add soap, which is why the soap-water mixture can stretch out to make giant bubbles.

The bubble skin is very stretchy; you can blow into it and make a large bubble. If you stop blowing into it, the bubble will return to a flat shape. If you turn the wand, the bubble will seal up, it is trying to use the least stretch to cover the air inside. The shape that does that best is a sphere.



Curriculum links

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| KS3 | Science - Pressure in fluids <ul style="list-style-type: none"> - pressure measured by ratio of force over area – acting normal to any surface Science - Light waves <ul style="list-style-type: none"> - the transmission of light through materials: absorption, diffuse scattering and specular reflection at a surface - colours and the different frequencies of light, white light and prisms (qualitative only); differential colour effects in absorption and diffuse reflection English - Reading <ul style="list-style-type: none"> - learning new vocabulary, relating it explicitly to known vocabulary and understanding it with the help of context and dictionaries |
| KS4 | Science - Different kinds of chemical bonds: ionic, covalent and metallic bonding <ul style="list-style-type: none"> - explain how the bulk properties of materials are related to the different types of bonds they contain, their bond strengths in relation to intermolecular forces and the ways in which their bonds are arranged, recognising that the atoms themselves do not have these properties Science - Pressure and pressure differences in fluids <ul style="list-style-type: none"> - recall that the pressure in fluids causes a force normal to any surface, and use the relationship between the force, the pressure, and the area in contact Science - Colour and frequency; differential effects in transmission, absorption and diffuse reflection <ul style="list-style-type: none"> - (single) explain how colour is related to differential absorption, transmission, specular reflection and scattering English - Spoken <ul style="list-style-type: none"> - listening to and building on the contributions of others, asking questions to clarify and inform, and challenging courteously when necessary |

Relates to:

| Workshops & Theme Days | Shows | Trails | Other exhibits |
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| <ul style="list-style-type: none"> • A Trick of the Light (KS3 & KS4) | <ul style="list-style-type: none"> • Light Fantastic (KS3) | | <ul style="list-style-type: none"> • Racing bubbles • Rainbow soap film • Bubble trouble |

