

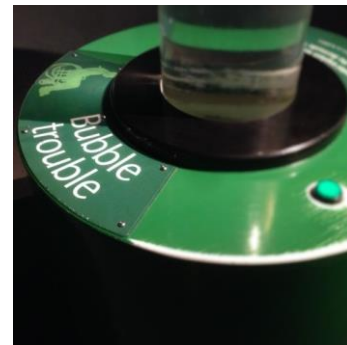
Bubble trouble

Location

First floor, Curiosity zone exhibition

In a nutshell

Take a look at what happens to our model boat when a large bubble of gas is released from below.



What to do

Press the button when it is lit and the boat is visible at the top of the tube to release a large bubble of gas.

Time Required

KS3 & KS4 2 minutes per student.

What's happening?

It has long been known that large pockets of methane gas are trapped below the ocean floor. These pockets can be released if disturbed or if the pressure becomes too large. When the released gas reaches the surface it could cause a large area of bubbling low density froth. A ship would not be able to float in this lower density fluid and so would sink.

A trawler discovered resting in a large methane crater off the east coast of Scotland is believed to have sunk because of this phenomenon and this could also account for why so many ships disappeared in the 'Bermuda Triangle'.

Curriculum links

Curriculum links	
KS3	Science - Forces <ul style="list-style-type: none">- forces as pushes or pulls, arising from the interaction between two objects- using force arrows in diagrams, adding forces in one dimension, balanced and unbalanced forces Science - Pressure in fluids <ul style="list-style-type: none">- pressure in liquids, increasing with depth; upthrust effects, floating and sinking 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 - 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- describe a simple model of the Earth's atmosphere and of atmospheric pressure, and explain why atmospheric pressure varies with height above the surface- explain why pressure in a liquid varies with depth and density and how this leads to an upwards force on a partially submerged object; describe the factors which influence floating and sinking 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
<ul style="list-style-type: none">• Bloodhound Rocket Car day (KS3 & KS4)• On Shaky ground? day (KS3 & KS4)	<ul style="list-style-type: none">• Launch it! (KS3)		<ul style="list-style-type: none">• Bernoulli blower• Launch it• Pump it up• Under pressure

