

Why did the titanic sink?

If the ship was built to be unsinkable...

...how did it manage to sink?

Was the ship too heavy to float?

Were there too many passengers?



I went to the fruit bowl in my kitchen and picked out a grape and a watermelon, but I accidentally dropped them into my washing up bowl! To my surprise, the watermelon floated on the water. Even more surprising, the grape sank to the bottom!

Why did the watermelon float when it's so heavy?

And why did the grape sink even though it's so small?

Predict, Observe, Record

Check with an adult that you can use a bowl or the sink for some scientific explorations. Fill with water. Choose a variety of fruit to put in the water.

Which do you predict will float? Which will sink? Why?

Observe what happens to each fruit and record. Were your predictions correct?

Can you make something that floats sink? (e.g. what happens if you poke a hole in it? Can you wrap it in something e.g. an elastic band?)



Why did the Titanic sink?

Can science help us to answer this mystery?



We can make a model of the Titanic and simulate what happens when a ship strikes an iceberg.

We added some pebbles to simulate a lot of water in the front of the ship. Our model tipped up. Water flowed over the top of the tops of bulkheads and into the other chambers.



The Titanic was designed to be 'unsinkable', but the bulkheads were too short to save the ship. Is the ship's designer the only person to blame?



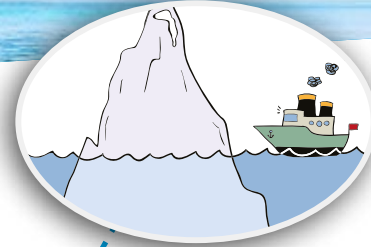
This is our model of the Titanic!



Buoyancy is a term for how well something floats.



Air trapped inside a ship gives it more buoyancy. Air takes up space but has very little weight.



The Titanic struck an iceberg. It tore a hole in one side. Water began to break in.



The Titanic tipped up and sank.

Gravity pulls the ship downwards. Upthrust is the upwards push of the water on the ship.



The Titanic had bulkheads. So does our model. These are walls inside. If water breaks into one chamber it can't get into the rest of the ship. Why did it still sink?