



Make A Water Diver

Buoyancy was discovered by the Greek scientist Archimedes. He said an object under water is buoyed up by a force equal to the weight of the water displaced by the object. Here is an experiment for you to investigate buoyancy.

You will need:

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| A plastic drink bottle | Plasticine |
| A bowl or bucket | Water |
| A pen lid with no holes in the top | |



What to do:

- Half fill the bowl with water.
- Roll some plasticine into a ball the size of a marble.
- Stick the clay to the pointed end of the pen lid.
- Gently lower the 'diver' into the bowl of water so that the lid remains full of air.
- If the diver sinks, remove some plasticine. If it floats, add some more plasticine.
- Adjust the amount of plasticine until the top of the pen lid only just sticks out of the water. The experiment will not work unless the amount of plasticine is just right.
- Fill the bottle with water.
- Gently lower the diver into the bottle.
- Screw on the lid.
- If you squeeze the sides of the bottle, the diver should sink. If you stop squeezing, the diver should float back to the top of the bottle. If the diver does not sink when you squeeze really hard, you need to add more plasticine.
- If you are careful, you may be able to make the diver sink to the middle of the bottle, then just hover in the water.

