Primary science investigations
rsc.li/3q3AtYf

Heavy sugar

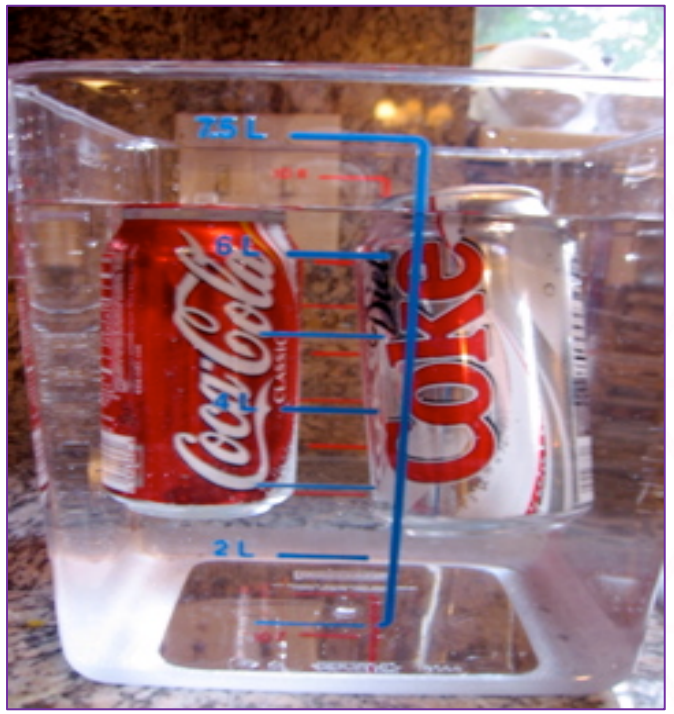
why & how? PRIMARY SCIENCE TEACHING TRUST

ROYAL SOCIETY OF CHEMISTRY

Heavy sugar

We will be:

Exploring floating and sinking to understand how much sugar there is in soft drinks.



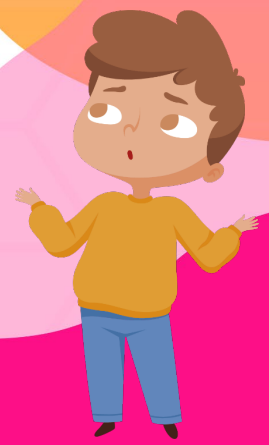
Learning objectives

Understanding

- I understand why some objects float whilst others sink.
- I know that mass is a measure of how much matter an object contains and is measured in grams.
- I know that density is a measure of the amount of mass in a certain volume.
- I understand how sugar can affect health.

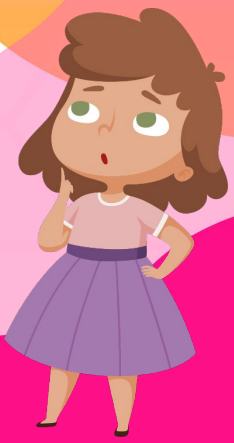
Enquiry skills

- I can make predictions and observations.
- I can evaluate an investigation.



Useful vocabulary

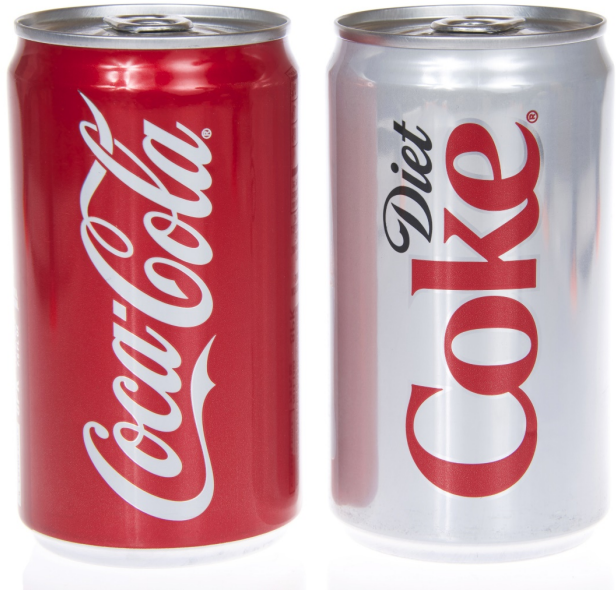
- **Dissolve:** to mix a substance with a liquid so that this substance is no longer visible.
  Can you think of an example of dissolving?
- **Solvent:** a liquid that can dissolve another material.
  Can you think of a liquid that is a solvent?
- **Solute:** a material that can be dissolved.
  Can you think of a substance that dissolves in water?
- **Soluble:** able to be dissolved in a solvent. Sugar is soluble in water.
- **Density:** a measure of mass in a certain volume.

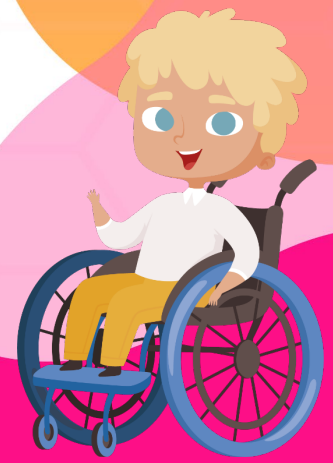


Method: comparing ordinary and diet colas

1. Place the two cans in the tank of water.
2. What do you observe happening? Try to explain what you see.

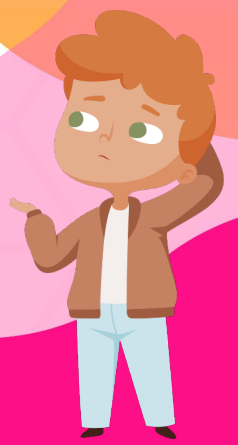
Think about how we can find out the differences between the cans.





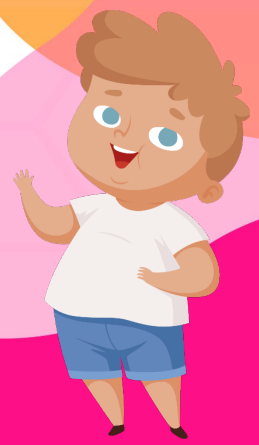
Method: finding the sugar content of ‘ordinary’ cola

1. Balance a plastic cup over the diet cola. Can you predict how many teaspoons of sugar need to be added until it floats at the same level as the ‘ordinary’ cola?
2. Observe closely and count the spoonfuls as you add sugar to the plastic cup – this is a measure of the amount of sugar in a can of ‘ordinary’ cola.
3. Use nutrition labels on other soft drinks to find out their sugar content.



Discussing our experiment

- What are the differences between cans of ordinary and diet cola?
- How do we know they are different?
- What are the similarities between the cans?
- Why does the diet drink float whilst the ordinary drink sinks?
- Why should we care about sugar in our drinks?

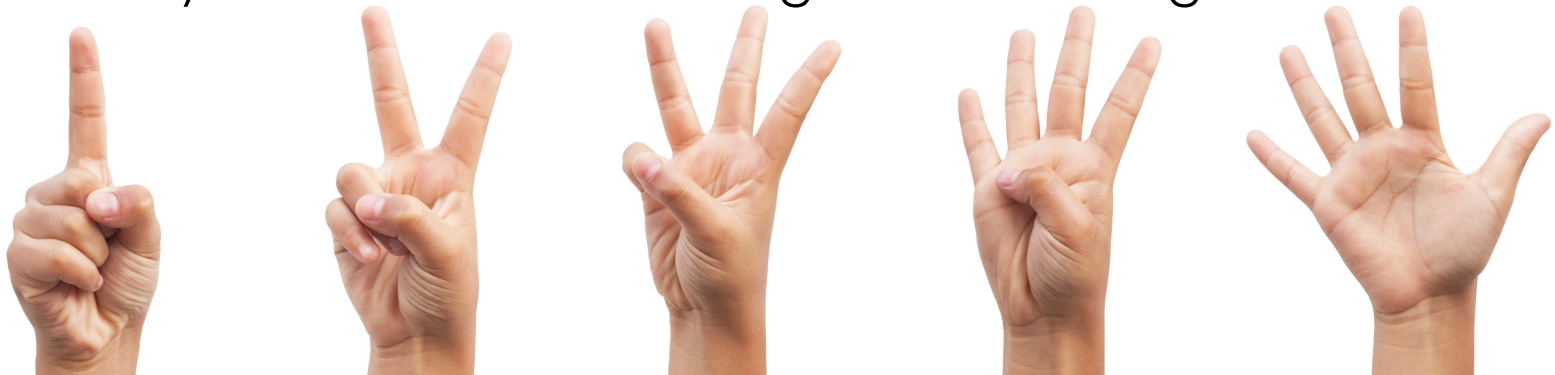


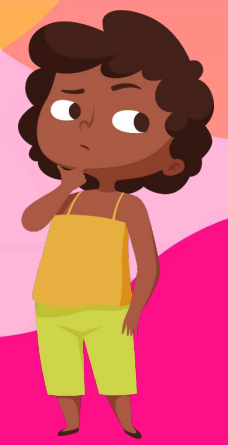
Evaluation

How do you feel about our **learning objectives** today?

- I understand why some objects float whilst others sink.
- I know that mass is a measure of how much matter an object contains and is measured in grams.
- I know that density is a measure of the amount of mass in a certain volume.
- I understand how sugar can affect health.
- I can make predictions and observations.
- I can evaluate an investigation.

If you feel confident that you can, show your teacher 5 fingers, or show 1 if you feel that you need to chat through the lesson again.





Acknowledgements

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