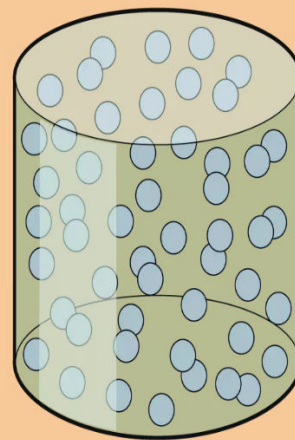


Science

Week 3

WALT: I can investigate gases and explain their properties.



Pre-assessment skill

Observe, describe and compare using KS2 scientific vocabulary

On your table, you will see a bottle of fizzy drink.

Which states of matter can you identify in materials that make up the bottle of fizzy drink?

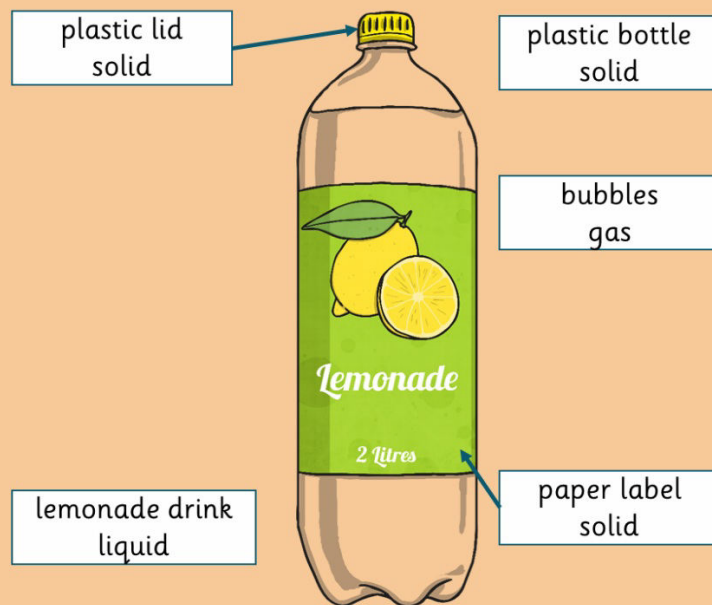


Solid

Liquid

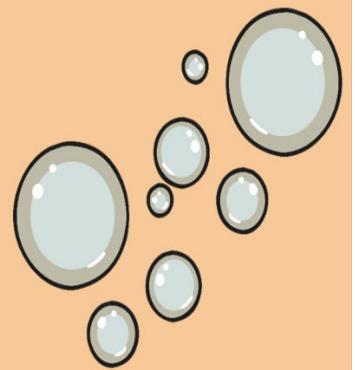
Gas

Which of these materials and states of matter did you identify?



Talk to your partner

What are the bubbles in fizzy drinks made of?

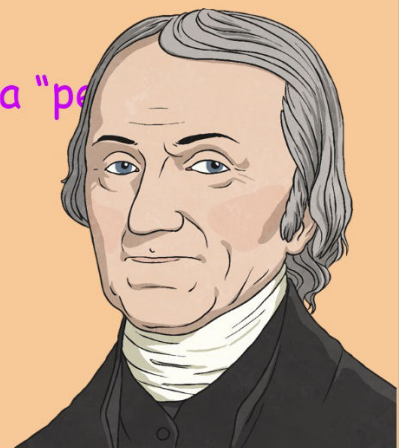


Bubbles in fizzy drinks are made from a gas called carbon dioxide. Carbon dioxide is a gas that is all around us. It makes up only about 0.04% of the Earth's atmosphere.

Who invented the first fizzy drink?

In 1767, a clergyman and scientist called Joseph Priestly accidentally invented the first fizzy drink. He found a way to dissolve gas in water, making the first soda water, or carbonated water.

When he drank the fizzy water, he described a "pleasurable satisfaction".



Watch the following video to see how fizzy drinks are made.



Carbon Dioxide can be very useful

Some fire extinguishers use carbon dioxide to cool flames and to stop oxygen getting to the fire.

Carbon dioxide freezes at -78°C and it becomes a solid called dry ice. It is used to transport food that needs to be kept cool and fresh, such as on areoplanes and trains.

And as you have read, carbon dioxide is dissolved in water to create fizzy drinks.



Do gases weigh anything?

Who do you agree with?

These children are talking about the weight of gas. Who do you agree with?



Gases are lighter than air, so they do not weigh anything.



Gas has no weight because it is invisible.



A gas does have weight because it is a material.

Watch the film to see some children thinking about this question by wondering about whether the bubbles of fizzy drink affect its weight.



Comparing the Weight of Gases

Maya wants to find the fizziest drink to serve to guests at her party.



What type of scientific enquiry do you think would be a good way for Maya to find out which drink is fizziest?

E.g. Observing
noticing patterns
grouping and classifying

Investigation

You will carry out a fair and comparative test.

You will weigh each fizzy drink, then shake it until it is flat and weigh it again.

The difference between the two weights will tell you how much carbon dioxide is in each drink.

You will need:

Fizzy drinks

Measuring cups

Weighing scales



Liquid	Weight (g)

Evaluating

Can you think of any ways this investigation could be improved?



