

## Science - Lesson 2 - States of matter

L.O: I know the properties of gasses.

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



### Identifying States of Matter



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

plastic lid  
solid

plastic bottle  
solid

bubbles  
gas

lemonade drink  
liquid

paper label  
solid



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.



## How Are Fizzy Drinks Made?

Fizzy drinks are made by adding **carbon dioxide** to liquid under huge pressure. The carbon dioxide dissolves in the liquid and settles in the space above the liquid in the bottle or can.



# Carbon dioxide

- ★ Very useful.
- ★ In fire extinguishers to stop oxygen getting to the fire.
- ★ Freezes to make dry ice -> used to transport food.



# Weight of gas

<https://www.bbc.co.uk/bitesize/clips/zt3fb9q>

I weighed a glass of fizzy lemonade -> 173.1g.

I then swirled the glass around to make the liquid flat -> remove the carbon dioxide.

I weighed the glass again ->172.6g.

The drink was **lighter** after the gas had been removed.



If you have some fizzy pop at home, why not try this experiment yourselves?

You will need:

Digital scales

A cup of fizzy pop

Something to stir it with.

1. Weigh out a cup of fizzy pop and record your result.

2. Stir the drink until it goes flat.

3. Weigh it again - has it become lighter?

## True or False?



Look at the statements and decide whether they are true or false.

Carbon dioxide is a gas at room temperature.

Gases keep their shape.

Carbon dioxide is useful.

The bubbles in fizzy drinks are bubbles of gas.

Gases that are lighter than air weigh nothing.

You can find the weight of gases.

# Answers

## True or False?



How did you do?

**True.**

**False.**

**True.**

**True.**

**False.**

**True.**