

# Properties of common gases

In the box below there are some common gases named. Write these names next to the correct properties in the table. You may need to complete some research on some.

Argon    Carbon dioxide    Helium    Methane  
Nitrogen    Nitrogen dioxide    Oxygen

Gas	Properties
	This gas is in the air we breathe out. It puts flames out. It turns limewater milky.
	This is the gas we need to stay alive. It is also needed for burning. A burning splint will burn brightly in this gas.
	This is a brown gas with a strong smell. It is poisonous. It can cause acid rain.
	This gas makes up most of the air. It does not react very much. A burning splint will go out in this gas.
	This is the gas in the gas taps. It comes from under the North Sea. It burns with a blue flame if there is plenty of air.
	This gas does not react at all. It is used in light bulbs so that the metal in the light bulb can get very hot without burning.
	This gas is very light, so we use it in balloons. It does not react at all and will put out a flame. Divers use this gas.

Create a fact sheet outlining the properties of each common gas mentioned above.

## Questions

- ① Suggest two things that tell you a chemical reaction has taken place.
- ② Plot a line graph to show the volume of gas after each pass. Join up the points with a line of best fit.
- ③ Is the reaction finished after four passes of air over the copper? How do you know?
- ④ How do you know that the reaction has finished after 10 passes of air?
- ⑤ The black solid is called copper oxide. Which gas in the air do you think has reacted with the copper to form the copper oxide?
- ⑥ Does the mass of the copper go up or down when it reacts?
- ⑦ Explain why this change occurs