CHEMICAL CHANGES

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PRACTICE QUESTIONS goo.gl/9A7SBY

thinkle Science GCSE

CF CH SF SH

1

Our ancestors may have discovered chemical reactions up to **400,000 years ago!**

They didn't have chemical laboratories but lots of reactions were taking place in the natural world around them.

2 FIRE

Fire is a chemical reaction that changed the way we would live. It is the energy given off in a chemical reaction between fuel and oxygen. Early man did not understand it but it kept him warm!

COMBUSTION

THE OXIDATION OF A FUEL

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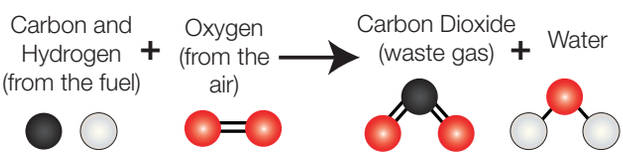

3

Why has our understanding of chemical reactions such as combustion improved so much?

The discovery of the atom and how different atoms behave

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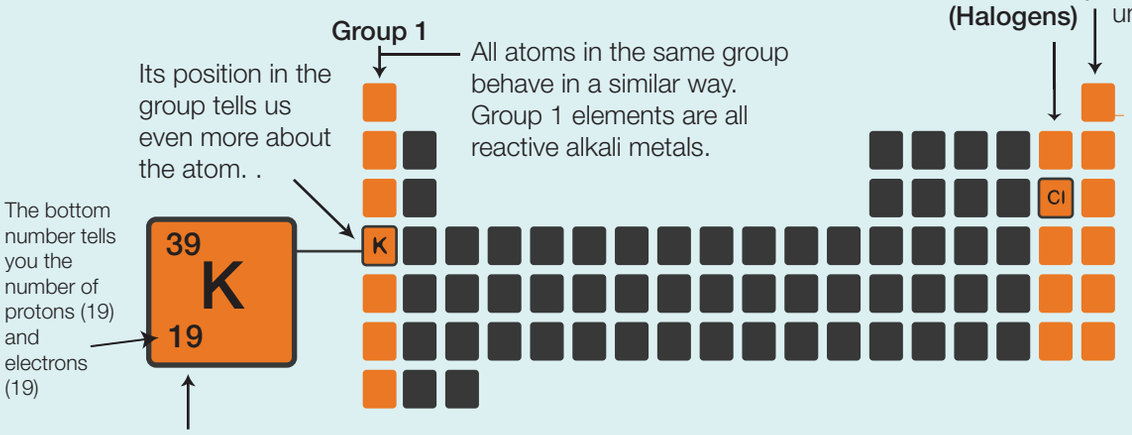
We now know how particles behave during a chemical reaction. We can find out:

-Are they reactive?
-Will they combine with other particles?
-Which types combine most easily?

4 ATOMS AND THE PERIODIC TABLE



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From the symbol we can work out the numbers of protons and electrons and neutrons inside an atom. The number of electrons tells us how the atom will behave in a chemical reaction.

WORD EQUATIONS

These include the names of the substances in a chemical reaction but they do not show the numbers of atoms involved in the reaction or their symbols.

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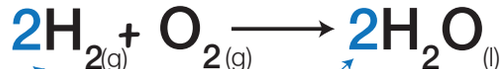
HYDROGEN + OXYGEN → WATER

This equation doesn't tell us how much hydrogen and oxygen is used or how much water is made.

Hydrogen explodes with a pop when a flame is added! Group 1 elements are very reactive.

SYMBOL EQUATIONS

These provide more detail about a reaction. We can see how many of each type of atoms are involved.



Sometimes numbers have to be added to the equation so they balance

4 hydrogens combine with 2 oxygens to produce 2 water molecules.

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