

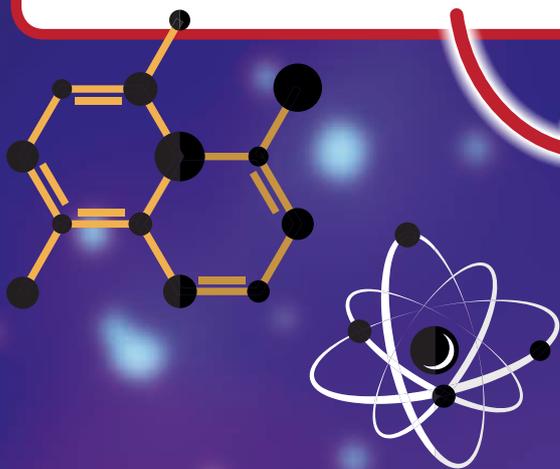
Particle Theory

Overview

This term, science will be explosive! Children will be learning all about the properties of solids, liquids and gasses and how chemical reactions occur. Older students will be looking in more depth about how chemical reactions occur, while younger children will be exploring different types of chemical reaction.

Here are some key topics we'll be studying:

1. What we mean by particles and defining what they are
2. Solids, liquids and gasses and how they interact with their environment
3. The changing the state of particles
4. Different types of chemical reactions



Key investigations

Our children love practical science and they will be involved in a number of investigations that really help them to develop their scientific skills; planning, data capture and analysis and evaluation. Here is an example of the type of investigation they'll be doing:

The combustion of iron wool. This experiment shows children what happens when iron and oxygen are combined. They will burn iron wool on a set of scales and observe how the wool changes weight. The result isn't what you would expect!

Exciting things

Did you know, one bucket of water contains more particles than there are buckets of water in the all the oceans! To make water, you need to combine Hydrogen (H) and Oxygen (O) – we know this as H₂O. The "2" after the Hydrogen means that you need to have 2 Hydrogen atoms with 1 Oxygen atom to make '1' molecule of water. There are around 30,000,000,000,000,000,000,000,000 molecules of water in 1 litre or 30 septillion! Now that is a big number!



Things to do at home

Why not try your own experiment using just milk, food dye, a drop of washing up liquid and a cotton bud?

Pour milk into a plate so that it just covers the bottom, then put a few drops of food colouring in the middle – the more colours you have the better – and one drop of washing up liquid. Place the cotton bud in the middle of the plate and watch what happens to the food dye.

Why not tweet your findings using #empiriboxhomescience and find out more interesting things you can do at home with your children.

For more information on this experiment, visit this website - <https://www.stevespanglerscience.com/lab/experiments/milk-color-explosion/>

