

SCIENCE SPECIAL

When you think of the word 'Science' you probably think of a fat textbook, white lab coats, microscopes and really hard equations. But not to worry science can be fun! Science is a way of discovering what's in the universe and how everything worked in the past, present and future.

Without science we wouldn't have the iPad you play your games on, the TV that your parents watch the news on, the way you travel in a car and much much more. Science has categories that could go on for ever but some of the main groups are Astronomy, Biology, Chemistry, Physics and Mathematics.

WHAT'S IN THE FUTURE?

Will you discover how to survive in space, or how to breathe underwater? The options are endless when it comes to science.

KITCHEN CHEMISTRY

When we think of chemistry we usually envisage someone in a white coat heating chemicals in a test tube, or a chemist behind a counter dispensing medicine.

However chemistry is all around us. In the kitchen we use the reaction of chemicals when we cook. For example, flour, sugar, liquid and raising agents and heat all react with one another to transform into a cake.



WHAT IS CHEMISTRY?

Chemistry is the study of substances, their elements, and how they change when they are mixed, heated or cooled.

We know of 105 chemical elements, each one with its own characteristics. Some elements can be combined to make a new mixture, such as melting tin and copper to get bronze, or combining sodium and chlorine to form table salt.

Some substances contain more than one type of element. For example, each molecule of water has both two hydrogen atoms and one oxygen atom (H_2O).

At home we can combine simple chemicals from the kitchen to create our own chemical experiments. One of the most interesting ways of seeing chemicals react to one another is to combine an acid with an alkali.

When acids and alkalis are mixed they combine to form a salt water solution and carbon dioxide.



DID YOU KNOW?

Did you know that there are 206 bones in the adult human body and there are 300 in children (as they grow some of the bones fuse together).

If all the LEGO bricks ever manufactured were clipped on top of one another, they would make a tower ten times as high as the distance to the Moon.

Our eyes are always the same size from birth, but our nose and ears never stop growing.

Tigers have striped skin, not just striped fur.

Sound travels about 4 times faster in water than in air.

Diamonds are the hardest substance known to man.

A single bolt of lightning contains enough energy to cook 100,000 pieces of toast.

A red blood cell can make a complete circuit of your body in 20 seconds.

The average person has 100,000 hairs on their head. Each hair grows about 12.7 cm every year.

AT HOME EXPERIMENTS

At the beginning of this article we told you that science is fun, so to prove that here are some super cool experiments you can do at home to bring out the nutty professor inside you.

SLIME

The first one on our list is Slime! Now prepare for things to get a little sticky.

1. Mix 250 ml of hot water with 7 ml of borax powder until all the borax dissolves. Set this solution aside. It is called borax solution.
2. Get a cup and mix 30 ml of PVA Glue with 20 ml of water.
3. Add two or three drops of food colouring to the glue/water mixture.
4. Once the glue, water, and colouring are mixed together well, add 20 ml of borax solution. Stir this all together.
5. Take the mix out of the cup and knead it in your hands (it's messy). Be sure to pop all of the bubbles of glue. More borax solution can be added if it is very gluey. Knead it until it has a consistent texture.

You now have silly putty! Keep it in a closed Ziploc bag when you are not using it.



MAGIC MUD

Now this one is a personal favourite. Magic Mud!

1. All you need to do is add 3 or 4 parts cornstarch.
2. And the rest 1 part cold water. Don't forget to add your food dye, make it any colour your heart desires.
3. Then start mixing! You will notice that when this substance is moving slowly it turns to liquid but when you slap, punch squeeze the 'mud' it turns to a soft solid. This gooey mud feels so good in between your hands and gives you hours of fun.



RAIN IN A JAR

Have you ever wanted to control the weather? Well this last experiment will let you!

All you need is a jar, shaving cream, blue food dye and water.

1. Firstly fill your jar up with 3 quarters of water.
2. Then on the top of the water use some of your dad's shaving cream and swirl it on top, to resemble a cloud.
3. Finally grab your blue food dye or whatever colour you want to make it rain and drip it over the shaving cream. The dye will slowly trickle through the cream and into the water making it look like it's raining.



WARNING:

Always ask for assistance from an adult when performing any of these experiments.