

**Family Activity Packs** 

# Fun Activities

# Parents/ Guardian's

We hope you are all keeping well and safe.

We have put together this activity pack to give you activity ideas to do with your children. These would be very engaging activities to do through our virtual visits.

"We enjoy the video calls, its keeping their routine going, we love the new ideas we are getting. -

Parentchild+ Family





Emmy is making Good Night Gorrilla props for her story book, She is really concentrating, and using her fine motor skills and hand-eye coordination. Well Done Emmy!

Here you will find a great set of Science experiments to conduct with kids at home.

These fun and easy science experiments are great to do at home because they require ingredients you are likely to already have in the kitchen.

The pack contains Five different science experiments including a dissolving experiment, make your own lava lamp, fun with density, making playdough and fireworks in a glass.

Designed by teachers, they are sure to inspire your children to take an interest in different areas of science and bring the laboratory into the home.

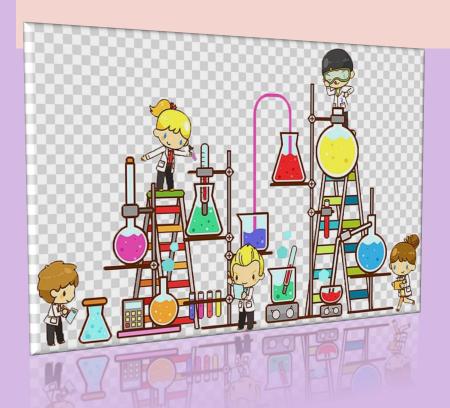
This Science Experiments at Home is a fun way to introduce children to scientific investigation, using everyday objects, promoting mathematical skills measuring ingredients, pre numeracy counting the quantity of ingredients needed.

There is many more fun arts and crafts activities for your family included in this...

To make these activities easier we have based the resources on items you may have at home.

Please send us pictures of your child doing this activity, we love to see their work and interaction

# Have fun!!!





This is a fun, simple activity for toddlers, it promotes their fine motor skills, hand -eye coordination, colour recognition, pre numeracy skills and language development.

Just mix the flour, salt and water together into a bowl, allowing the child to help scoop up the ingredients. At the end add in the desired amount of food colouring

Words to use to promote language development:

**Mix** 

**Flour** 

Salt

**Bowl** 

Roll



# Which solids dissolve in water?

ou Will Need

- · Water (hot and cold)
- Transparent Containers
- Substances to try and dissolve; sand, sugar, salt, coffee etc



## Method

- 1 Add a teaspoon of whichever solid you are testing to a glass of cold water and a glass of hot water, stir and observe the difference.
- 2 Look to see if the solid dissolves in the hot water and cold water and if one is better than the other.
- 3 Can you design a chart to record your observation?

e Science Bit

Things like salt, sugar and coffee dissolve in water. They are soluble. They usually dissolve faster and better in hot water. Pepper and sand are insoluble, they will not dissolve even in hot water.

## For Older Children

Everything is made of particles which are always moving. When a soluble solid (solute) is mixed with the right liquid (solvent), it forms a solution. This process is called dissolving.

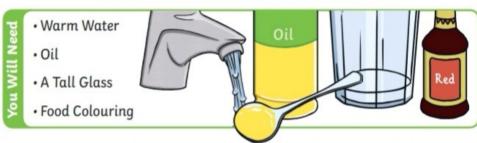
Two things that affect the speed at which the solid dissolves are temperature and the size of the grains of the solid. Caster sugar which is made of fine particles will dissolve quickly, but bigger sugar particles will take longer.

Solids dissolve faster in hot water as in hot water the water molecules are moving faster, so bump into the solid more often which increases the rate of reaction.





# Fireworks in a Glass



This is a very cool, simple and fun experiment, and also completely safe, just don't drink the water!

### Method

- Fill the tall glass with warm water.
- 2 Pour a small amount of oil into another container and add a few drops of food colouring.
- 3 Give it a good stir, if it doesn't mix, add a bit of water.
- 4 Pour the food colouring and oil mixture into the warm water and watch the fireworks!

ne Science Bit

Oil and water don't mix. Also oil is less dense than water (meaning there is less of it in the same volume) and therefore floats on top of water in a nice layer. The food colouring we used was water based and therefore does not mix with the oil, instead it sinks through the oil into the water below. Since the addition of the colouring makes the food colouring heavier than the water, it sinks to the bottom leaving trails (resembling fireworks) as some of the colour diffuses into the water.





# Fun with Density

• Honey
• Milk
• Water

Vegetable oil

Milk
 Food colourings

Water
 Golden syrup

A Glass
 Washing up liquid



**Density** is a really tough concept to grasp. We confuse ourselves by referring to our weight all the time when we really mean our **mass**. **Mass** is effectively 'how much stuff' is there. **Density** is how much mass is in a volume (or space).

One way to illustrate density is to pour different liquids (which have different densities) on top of each other. The liquids with the greatest density sink to the bottom.

### Method

- Measure out the same volume of each of the liquids. Colour the water and the milk if you wish.
- 2 Starting from the bottom, pour in the honey. Make sure it goes into the middle of the glass and that you don't get any honey on the sides.
- 3 Slowly pour the golden syrup on top, followed by the washing up liquid.
- 4 Then add the milk, followed by the water.
- 5 Finally top with vegetable oil and admire your rainbow glass!

ne Science Bit

Each of the liquids have a different mass of molecules or different numbers of parts squashed into the same volume of liquid, this makes them have different densities and therefore one can sit on top of the other – the more dense a liquid is the heavier it is.

Do you think you could float small objects on each of the different levels? We'd love to see a photo if you can.



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# Lava Lamp

- Vill Need
- Water
- · Vegetable Oil
- A Clear Plastic Bottle or Jar
- Food Colouring
- Effervescent Tablets



### Method

- 1 Fill the bottle or jar a quarter full with water.
- 2 Top up, almost to the top with the vegetable oil
- 3 They should separate into two layers, water at the bottom and oil sitting on top.
- 4 Add about 6-8 drops of food colouring once the oil and water separate.
- 5 The colour will mix with the water at the bottom.
- 6 Pop in half an effervescent tablets and watch the bubbles form. Add more effervescent tablets bit by bit to keep the bubbles rising and falling.

The Science Bit

Firstly water and oil will not mix – this is because we say that water is a polar molecule – its structure means that is has a positive charge one end and a negative charge the other. Water molecules stick together because the positive end of one water molecule is attracted to the negative end of another. Oil molecule structure is different – it is non polar, meaning that its charge is more evenly spread out, so the oil is not attracted to water – in fact we call it hydrophobic (water fearing) so it tries to get as far away from water as possible and will not mix. The reason that oil rests on top of the water rather than underneath is because it has a different density to water.

As the effervescent tablets is added (this is made of citric acid and sodium bicarbonate) it reacts with the water and form carbon dioxide gas and sodium citrate. It is the carbon dioxide bubbles that carry the coloured water to the top.











# Make your own Puzzle all you need is Cereal box & Scissors





# Design our own hands and nails



Crayons, paint & glitter can be used instead of nail polish.

Make a feathery bird, all you need is feather, glue googly eyes, crayons & white paper



# **Binoculars**

All you need is 2 toilet rolls, cellotape, string and cray-ons/paint to decorate.

Enjoy a game of I spy!

