

Worship 2 Go

Drawing School and Home Together

Thanks to all those people who have made some of the resources collated here available to share

Our friends at God and the Big Bang have provided lots of different science activities and experiments for you to try over half-term (thank you Sarah!). Scientists do their work by asking questions about the world and doing experiments to try and find out the answers. God created an amazing world for us and loves when we explore using science.



Bible Verses

"Our Lord and God! You are worthy to receive glory, honour, and power. For you created all things, and by your will they were given existence and life."

You can find this right at the back of the Bible, in the book of Revelation, chapter 4, verse 11

Tornado in a bottle

You will need: an empty clean plastic bottle with a cap; water; washing up liquid; glitter or cut up pieces of foil; a funnel is useful if you have one.

1. Using the funnel, add water to the bottle until it is filled up to about 5cm from the top. Add two squirts of washing up liquid and a pinch of glitter. Screw the top back onto the bottle (ask an adult to help you make sure it is screwed on tightly!).
2. Turn the bottle upside down. Hold on to the neck of the bottle and spin it in a circular pattern as fast as you can. Stop after about 20 seconds and hold the bottle.
3. You will see a swirling funnel of glitter that looks like a tornado. It might take a few goes before you see a tornado in the bottle.

What happens if you try again spinning the bottle in the opposite direction? The 'tornado' in your bottle is called a **vortex** and is caused by you spinning the bottle in a circle and a force called gravity which pulls the water towards the bottom of the bottle. Tornadoes are one type of weather that scientists help us to understand. How does knowing what the weather will be like help us in our lives?

Tie-dyed milk

You will need: a shallow bowl; some milk; two or three colours of food colouring or thin paint; some washing up liquid; a cotton bud or tooth pick.

Pour milk into the bowl so that it is about 1cm deep. Carefully put one drop of each of the colours of food colouring onto the surface of the milk, keeping them separate from each other around the edges of the bowl.

Use the cotton bud or toothpick to put one drop of washing up liquid in the centre of the bowl. Watch what happens next!

The washing up liquid changes the **surface tension** of the milk so that the colours can mix with each other and swirl together. The colours in this experiment remind me of a rainbow, which is a symbol of the hope that God gives us. What gives you hope today?



Making a fossil

You will need: 200g flour; 150g salt; 150ml warm water; plastic dinosaur toys, rolling pin, cookie cutter or glass. You could also use some kind of modelling clay like Play-doh or Plasticine.



1. Add your flour and salt to a mixing bowl and mix them together with a spoon
2. Pour the water into the bowl and mix everything together until it forms a dough
3. Form the dough into a ball and dust it with flour, then knead it until the dough becomes smooth
4. Roll out the dough until it is 1cm thick
5. Use a cookie cutter or glass to cut out circles of dough
6. Press the plastic dinosaurs into each of the circles and then carefully remove them so that an imprint is left—if you don't have a toy, you can draw freehand using an old pen or pencil
7. Leave the fossils to air dry - this will take 1-2 days so you will need to be patient!

Fossils give us clues about dinosaurs and other creatures which lived a long, long time ago. What can you learn about creatures from a fossil? Can you imagine what they might have been like when they were alive?

Floating water

You will need: table salt; food colouring or thinned watercolour paint; two clear drinking glasses or cups; two spoons; tap water



1. Add a couple of teaspoons of salt to one of your glasses and add several drops of your food colouring to the other glass.
2. Slowly pour in some warm tap water into both of the glasses (leave each glass less than half full). Stir and mix the salt water until the salt dissolves completely. Stir and mix the food colouring into the glass of food colouring until the food colouring mixes well.
3. Slowly pour some of the food colouring tap water into the salt tap water glass.

Watch to see what happens to the mixture. Keep a watch to see how the coloured water rises to the top of the salted water. The coloured tap water has moved to the top of the salted tap water because salt water is heavier than the tap water.

Water is really important for so many things in our world. What are some things you can think of that we need water for?

Chalk obstacle course

This is great to get everyone in the household moving!

You will need: chalk, a safe area of pavement or yard to draw onand lots of energy! Use your chalk to design an obstacle course. You can use any designs or patterns that you like!

Some ideas: zig zags, spirals, and loops to follow, shapes to hop into, lines to jump over, balance beams, hopscotch, a race track.

How quickly can you complete the obstacle course? Can you challenge someone to see who can complete it fastest? Are there some parts which are trickier than others? Isn't it amazing how our bodies let us move in all kinds of ways- thank God for that as you have fun on your



Make a volcano

You will need: water; white vinegar; bicarbonate of soda; washing up liquid; red or yellow food colouring (optional); plastic cup or glass

Make sure you have lots of space for this one—you might like to have the glass on a tray or do this experiment outside!

1. Fill your glass or cup with water until it is two thirds full.
2. Add in 2 tablespoons of bicarbonate of soda, 1 teaspoon of washing up liquid and a few drops of food colouring if you are using it. Mix it all together.
3. Measure out 75ml of vinegar and carefully pour it into the cup. Watch what happens

When you mix bicarbonate of soda and vinegar, lots of a gas called carbon dioxide is released which creates the foam in your volcano. Adding washing up liquid adds bubbles to an already explosive reaction!

Real volcanoes are big and can be scary, but they can also be beautiful. Where is the most beautiful place you have ever been?

Build an insect hotel

You will need: A large plastic bottle cut into two cylinders; natural materials to fill your hotel for example sticks, pine cones, tree bark, leaves, toilet paper tubes, anything else you can find in your recycling at home, in the garden or the park which you think might be useful.



Ask an adult to help you cut the plastic bottle down to size (like the photo). Next, arrange the materials you have collected into the tube, you might need to make some of the sticks smaller to fit them in. Make sure your materials are arranged nice and tightly so the insects have a cosy home to live in. Your insect hotel can either live on the ground or you could use some string to hang it up outside. After a few days, have a look carefully to see who has moved in!



What are some things about your home that you are thankful for? Why is it important that we protect the homes of all living creatures?

Playing with Oobleck

Oobleck is a funny word! It's a bit like slime- it's not quite a liquid but it's not a solid either. It's what is called a **non-Newtonian fluid**- something in the middle of a solid and liquid. It's really fun to play with and can get a bit messy!

You will need: 200g cornflour; 200ml water; a few drops of food colouring (optional)

1. Start by putting the water in a bowl
2. Add in the cornflour and mix it together- you can start with a spoon but it might get easier to mix with your hands. If you want to add in food colouring, do this after all the cornflour is added.
3. Play with it! Grab a handful, squeeze it, and let it ooze out your fingers. Make a puddle and quickly drag your fingers through it. Put it into a plastic container and shake it or quickly bump it against a table. Jab at the Oobleck and then slowly let your finger sink in.

If you made lots and lots of Oobleck, enough to fill a swimming pool, you could walk across it without falling in! That reminds me of the story of Jesus walking on water in the Bible. What would it be like to walk on water...or on Oobleck?!