Year 5 - Week 2 - Working At Home

Choose one activity for each subject a day. You can do them in any order!

Give everything a go and think back to things we have done in class to support you.

English Daily 15 minutes reading	CGP – complete Workout 4. Spelling Shed	Continue researching Shackleton, this time focus on his previous expeditions and later life.	CGP – complete Workout 5. Spelling Shed	Using all of your facts about Shackleton create a timeline of his life.	Using 1 of the images write a short story, 500 word maximum.
Maths Daily Rockstar times tables	CGP – complete workout 1.	Choose 1 of the Whiterose resource sheets on the website to complete.	CGP – complete workout 2.	Mathletics	CGP – complete workout 3.
Topic	Answer the enquiry question we have been looking at in Geography **''Extreme climates provide us with natural resources to survive.''** True or false. Answer in full sentences giving examples and justifications.	Continuing on our healthy living theme, create a menu for a restaurant. Explain the health benefits and consider what food groups you should include.	Learn about our wider world using some of the following websites: https://world-geography-games.com/ https://www.sporcle.com/games/category/geography https://www.google.co.uk/intl/en_uk/earth/ https://mapfight.appspot.com/	Make a model igloo at home. You can use any resources: cushions, toilet roll, suger cubes, lego etc…. Take a photo of your model.	Design a board game linked to survival and Antarctica. Play it with your family.
Active	Joe Wicks "5 minute move" https://www.youtube.com/watch?v=d3LPrhI0v-w	Just dance https://www.youtube.com/watch?v=f3XyYOLfTU4	Super movers – https://www.bbc.co.uk/teach/supermovers/ks2-collection/zr4ky9q	Just Dance https://www.youtube.com/watch?v=gCzgc_RelBA	Joe Wicks "5 minute move" https://www.youtube.com/watch?v=9uw9ug_g-gM

	Joe Wicks 30 minutes PE lessons every morning at 9am https://www.youtube.com/channel/UCAxW1XT0iEJo0TYlRfn6rYQ				
Science	Choose a science experiment to do from the resource list below.	Choose a science experiment to do from the resource list below.	Choose a science experiment to do from the resource list below.	Choose a science experiment to do from the resource list below.	Choose a science experiment to do from the resource list below.

Free Additional resources:

https://www.twinkl.co.uk/

https://www.bbc.co.uk/bitesize/levels/zbr9wmn

https://www.merdon.hants.sch.uk/special/kidszone/

https://whiterosemaths.com/resources/classroom-resources/problems/

English images:

FAT FINGERS

Ever wondered how some animals stay comfortable in freezing weather? Here's how they do it.

You will need

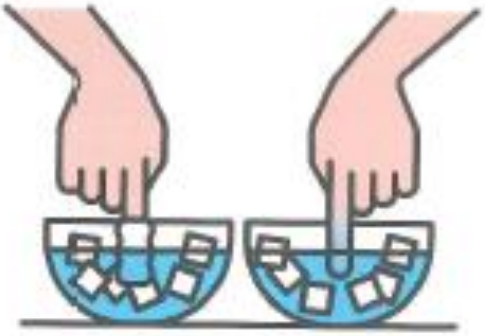
- two bowls with water in them
- ice cubes
- some white fat (sometimes called lard)

1 Add the ice cubes to both bowls of water and let them get nice and cold.

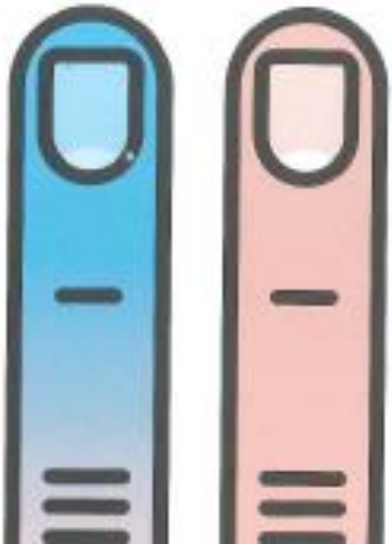
2 Press or roll the fat out so it forms a square about the length of one finger.

3 Wrap the fat round the first finger of one hand, making sure it also covers the tip.

4 Put that finger and your other finger into the two bowls of water.



5 Pretty soon the finger without the fat will get so cold you can't keep it in the water any more. But how does the other one feel?



What's the science?

The fat is a poor conductor of heat, which means it keeps out the cold in the icy water. At the same time, it keeps in the natural warmth in your finger.

In the real world

A whale's body temperature is pretty close to a human's – between 36.1 and 37.8 degrees Celsius. Whales often swim in very cold water, so they have a layer of fat or blubber under their skin that keeps them warm. It can be between 15 and 60 cm thick, depending on the season.

PETRIFIED PEPPER

Pepper, eh? Thinks it's tough ... not scared of anything, right? Well, let's just see...

1 Sprinkle the pepper over the water so that it lightly covers the entire surface (or most of it, at least).

2 Dip one end of the cocktail stick into the washing-up liquid.

You will need

- a bowl half-filled with water
- ground pepper (out of a shaker)
- wooden cocktail stick
- washing-up liquid

3 Very carefully, touch the tip that has washing-up liquid on it onto the water (right in the middle is best).

4 The pepper shoots away from the cocktail stick as if terrified!

What's the science?

Water molecules are very strongly attracted to each other, and this creates something called surface tension. Adding a drop of washing-up liquid breaks that surface tension, but the water molecules carry on being attracted to each other. Since they can't 'compete' with the washing-up liquid, they pull away from it and towards each other, taking the specks of pepper with them.

Take it further You can see surface tension in action when you overfill a glass of water. It literally bulges over the top of the glass.

HANDS UP!

Most people think they have control over what their arms do, but sometimes, that's just not so.

You will need

- doorway you can stand in
- your arms

1 Stand in the door frame.

2 Hold your arms by your sides with the palms facing towards you. Raise them until they touch the door frame.

3 Push out with your arms against the door frame for about one minute.

4 Put your arms back to your sides, step out of the door frame and relax.

5 Your arms will rise magically into the air!

Take it further If you really concentrate, you can prevent your arms from lifting in the air. It will feel as though an actual force is trying to lift them up!

What's the science?

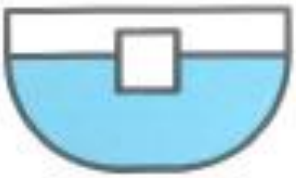
When you push against the doorframe, you're doing something called a voluntary muscle contraction – that's the pressing bit. When you stop, your body wants to continue this movement with an involuntary muscle contraction, which is why your arms want to lift up like wings!

ICE CUBES AWAY!

Pick up an ice cube with only a matchstick? That's impossible, isn't it?

You will need
- bowl of water
- matchstick
- ice cube
- table salt

1 Place the ice cube carefully into the bowl of water.



2 Gently place the match lengthwise on top of it and try to use it to lift the ice cube.

3 It doesn't work, does it? Now put the matchstick back and this time sprinkle a little salt along the line where it touches the ice cube.

4 Wait 30 seconds or so and try again. You'll be able to lift the ice cube out of the water!

In the real world

This is more than just a cool trick. It shows why we sprinkle salt on icy roads – it melts the ice.

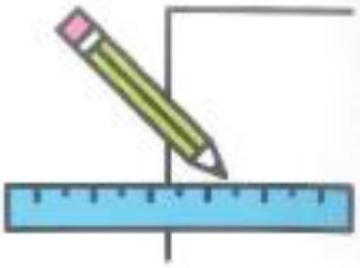
What's the science?

At first, the ice cube and water are in 'equilibrium' – the rate of freezing and melting is the same. Adding the salt lowers the rate at which the water freezes, so the ice melts faster. This releases lots of energy in the form of heat, so everything gets colder, including the ice cube. Where there's no salt (under the match) the ice cube re-freezes, freezing the match in place.

HOW MANY CUBES?

How is it possible to look at the same set of cubes in a drawing and see different numbers of squares each time?

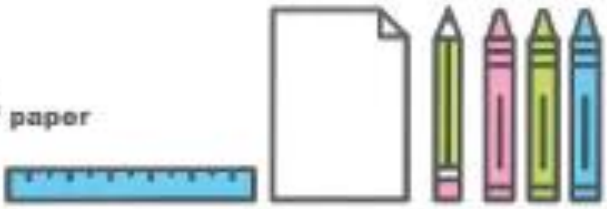
1 You could just use the drawing on this page, but to get the full effect, copy out the shape for yourself.

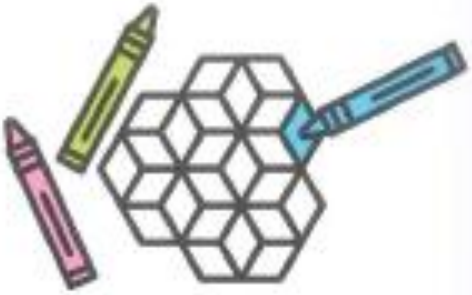


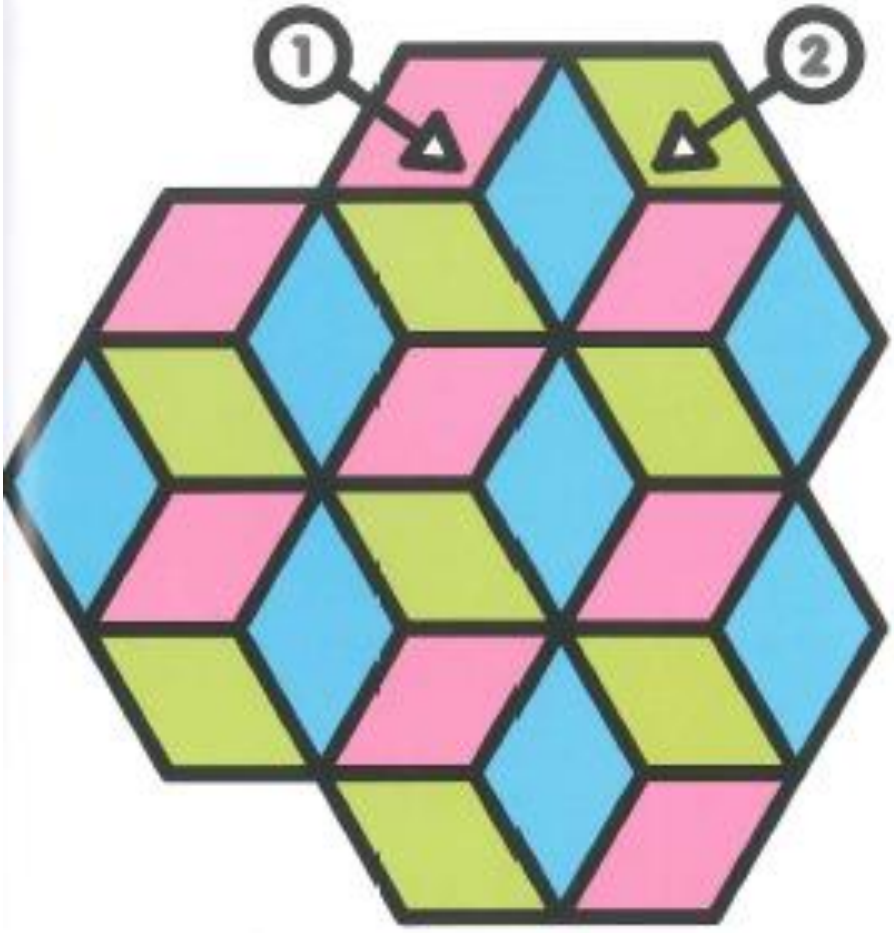
2 Colour in each side of your square with one of your three favourite colours, following the pattern in the drawing.

You will need

- pencil
- ruler
- crayons
- sheet of paper







3 The first time you look at the drawing, focus on Starting Point 1 and count the number of cubes. There are seven.

4 Then look at Starting Point 2 and do the same. This time there are only six.

What's the science?

This is a two-dimensional drawing, so it has width and height. Because of the way it's drawn, your brain wants to turn it into something that has three dimensions – width, height and depth. Depending on where your eye 'falls' you might see two cubes on the top row first and go on to count seven in total. Or maybe you'll see a single square first and go on to count six.

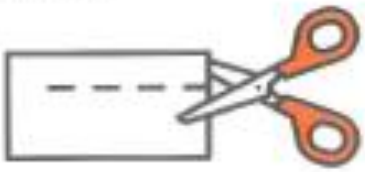
TWIRLY BIRDS

Helicopters use rotor blades to take off and hover. You can make your own simple helicopter-style spinner in just a few moments.

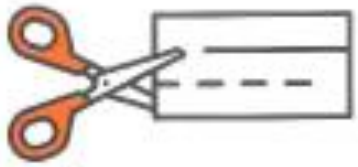
You will need

- rectangular piece of paper (white or coloured)
- paper clip
- pair of scissors

1 Starting about one-third of the way along the short end of the paper, make the first cut like this. You should stop cutting before you reach the edge of the paper.



2 Turn the paper around and make a second cut, just like the first one.



3 Pick up the two ends, one in each hand.

4 Put the two ends together.

5 Secure the ends with the paper clip.

6 Toss your Twirly Bird into the air and watch it spin slowly to the ground.

Take it further Experiment with different sizes and weights of paper and paper clip to make more Twirly Birds. Watch how the different materials and sizes affect how long your 'bird' stays in the air.

What's the science?

As it spins, the Twirly Bird acts like a helicopter. It generates lift – a force that pushes upwards and slows its descent.

HE IMPOSSIBLE IGNATURE

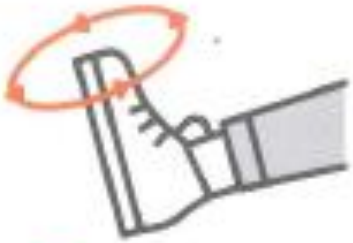
u remember how to write your own name, ht? Not when you try doing it this way, u won't!

u will need
- piece of paper
- pencil
- chair and table

ake the pencil and try and rite your name – either as a ture or as if you were spelling , it doesn't matter.

1 Sit at the table with the paper in front of you.

2 Lift your right foot and start moving it in a circle, clockwise.



4 No matter how hard you try to prevent it, your foot will start to follow the 'path' of your signature!

hat's the science?

ur brain and your body lk' to each other all the ne – they're having a nstant conversation! cientists believe that some rts of this conversation e more important than hers. In this experiment, ur brain pays more tention to what your nd is doing because it nsiders your hand to be ominant'. When you start tting, your foot begins follow the path of your gnature.