

This book belongs to:

Class:

Author: TTS Limited

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Published by: TTS Group Ltd Unit 1 Park Lane Business Park Kirkby-in-Ashfield Nottinghamshire NG17 9GU

www.tts-group.co.uk

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We hope that you enjoy the lessons in this book which have been carefully planned by our TTS Teachers. We have created these to support and compliment the home learning provided by schools. It is in no way intended to replace the brilliant curriculum materials your child's school will have created – but as a little something from us to you to support your child when learning at home.

All resources have been written by qualified teachers and using TTS resources. Please respect our intellectual property by keeping this pack together as it was intended and not republishing it in any way for commercial gain. Please feel free to share the free download with anyone who may benefit from it!

It is recommended that children undertake a Literacy and Numeracy task everyday plus one other lesson from another subject area. The lessons have been designed to be "pick and mix" so you do not need to follow any particular order.

Try to find a quiet place for your child to work, ideally at a table, with limited distractions.

Remember that all children work at a different pace and if you feel they are getting restless move on to another task and you can always revisit an activity later.

Encourage your child with their work and ask lots of questions, some of our lessons offer a great opportunity to learn together and share the experience. Remember to encourage your child to hold their pen/pencil correctly, think about the presentation of their work and take their time.

Use the opportunity of working at home to develop independence, perseverance, problem solving skills and creativity. Children will love the opportunity to show you what they are capable of as they work through the activities in this book. Remember, the most important thing is for children to enjoy these activities and have fun!



This science activity will require a few items from your kitchen and an adult to help. Many thanks to **Sue Martin** for this amazing kitchen science lesson.

## For the grown ups

Making 'lava lamps' seems like a difficult proposition for a group of primary school children – but it couldn't be easier! Gather together some readily available materials and they will be up and running in minutes. Now your children are learning about immiscible liquids, chemical reactions, dissolving; and having fun!

## What you need

- Large jar or bottle with screw lid
- I Cooking oil
- I Alka-seltzerTM or effervescent vitamin C tablet
- Food colouring (optional)
- Water

# What you do

1. Pour cooking oil into the test tube until it is approximately <sup>3</sup>/<sub>4</sub> full.



- 2. Top up the tube or beaker with water. Leave about 1cm of space at the top to prevent overflowing. Notice that the water falls to the bottom of the bottle.
- 3. Break an Alka-seltzer or effervescent vitamin C tablet into around 6-8 small pieces and drop a piece into the test tube. Again, watch as it travels through the oil and into the water at the bottom. The water will begin to fizz and your mini lava lamp erupts into action.
- 4. As fizzing stops, add further pieces of tablet, until all bubbling ceases.
- 5. With a lid screwed on you can tip the jar or bottle back and forth, watching waves appear. (Be careful not to screw a lid onto the bottle or jar when the tablet is still active as pressure will build up in the container, either forcing the contents out as you open it or blowing the top off).

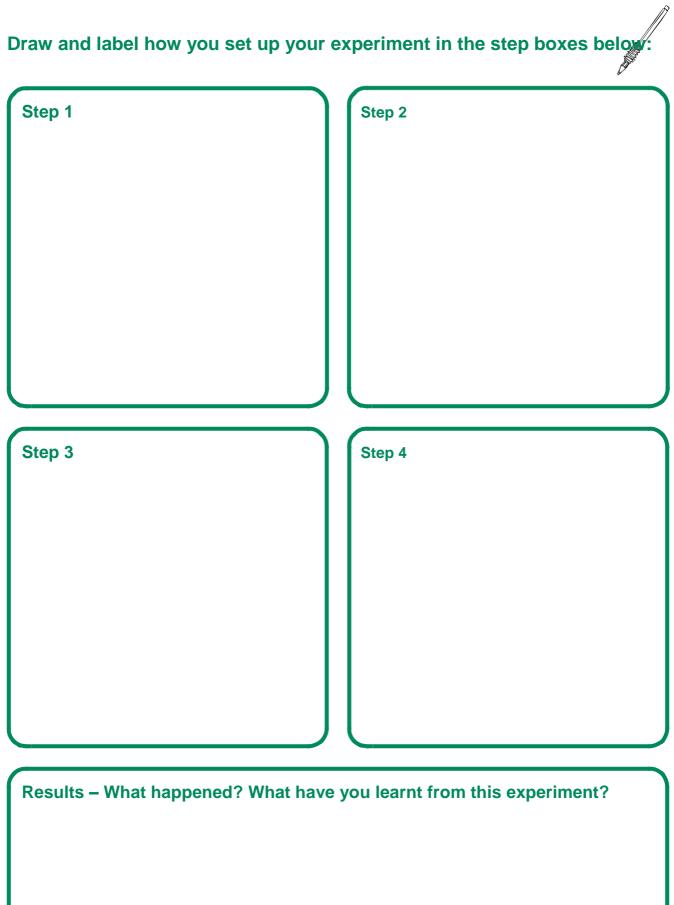
# What's happening?

Water and oil are immiscible (they don't mix). Water is also denser than oil (i.e. for the same volume of each, water is heavier than oil). So the water sinks below the oil, which floats on top. Alka-seltzer and effervescent Vitamin C tablets contain chemicals that can only react together when they are wet. They are denser than both oil and water, so fall to the bottom of the test tube.

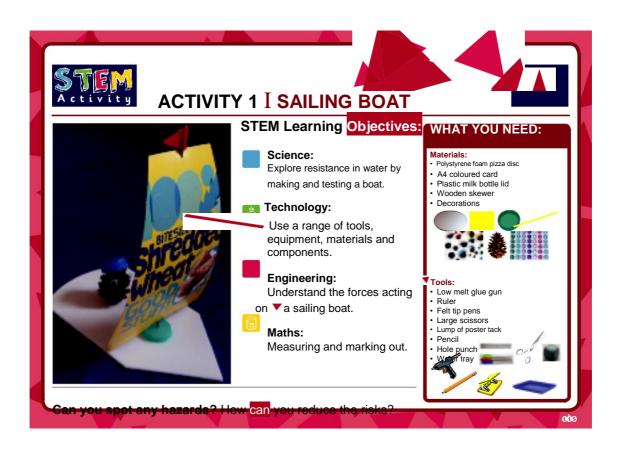
As soon as a piece comes into contact with the water layer, a reaction occurs between the chemicals, producing carbon dioxide (CO<sub>2</sub>) gas. These CO<sub>2</sub> bubbles attach themselves to 'blobs' of the water like floats, causing them to rise to the surface, through the oil layer. There, the gas bubbles pop, the water loses its float and sinks back through the oil to the bottom of the test tube.

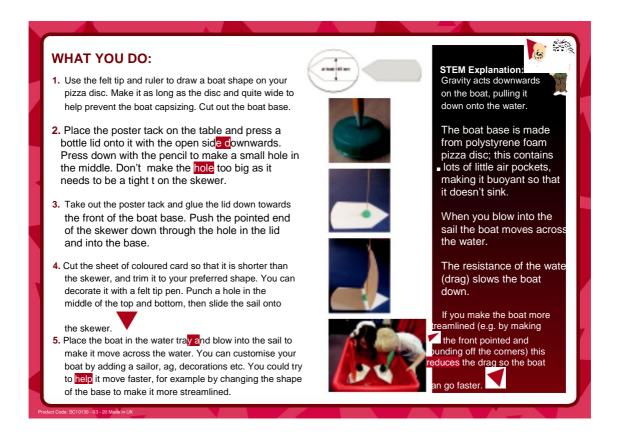
This process can continue whilst the tablet continues to react and produce CO2. When the reaction stops, the two layers settle back. If you use Vitamin C tablets, dye (food colouring) is often also present in the tablet. This dissolves in the water layer and produces coloured 'lava'. The children may observe that this occurs over a short period of time rather than immediately. Dissolving is a physical change, which is reversible. The dye is simply dispersed in the water. A few drops of any food colouring may also be added to the bottle if colourless tablets such as Alka-selzer are used and will be observed to dissolve only in the water layer, to create coloured 'lava'.

Once the reaction is over, with a lid on the test tube you can observe the motion of oil and water as you rotate the test tube – the oil layer remains above the water. Even if it is shaken, mixing only occurs









Draw and annotate your sailing boat here:	
Draw and annotate your canning boat nero.	
Explain two improvements you could make to your boat:	
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### WHAT YOU DO:

The aim is to construct a parachute to allow an egg to be dropped out of an upstairs window onto a hard surface without it breaking. Here are some suggestions:

1. Tie four or more strings near the corners or edges of the piece of thin material so

that it will act as a parachute.

- 2. Use the hard boiled egg initially. Package it well, particularly underneath, to cushion the impact when it lands.
- 3. Attach the other end of the strings to the egg package or basket without getting dthe strings tangled up!

Ask an adult to hold the parachute by the middle, with the egg package hanging down, drop it out of an upstairs window onto hard ground (e.g. concrete). Time the descent of the egg and then check whether it has broken.

Modify and improve your design as required; for example you could make a larger parachute to slow the egg down more (time the descent to see if this has increased). You could change the number of strings or re-position them to improve your parachute, and/or use more packaging underneath the egg.

Once you are happy with your design, place the raw egg in the package instead of the hard boiled egg. Once it has descended, check whether the raw egg has broken.





#### **STEM Explanation:**

The egg and parachute are pulled downwards by gravity.

As they move down the air pushes against them.

The parachute is relatively large; the air resistance gives rise to an upward pull, slowing down the descent of the egg.

The egg must be packaged well to absorb and cushion the impact when it hits the ground.

To prevent the egg from breaking, you can try increasing the air resistance cushioning the egg better, or both

Draw and annotate your parachute here:
What was the result of your first test?
Explain how you improved or refined your design:



Work through these stretching activities every day and fill in your fitness log. Ask your Parent or Guardian to sign off your activity.





# **Squat Thrust**

5

Put your hands on the floor, shoulder width apart. Thrust your legs out behind you and in one movement bring both legs back into a tuck position, bending the knees into the chest. Repeat.

# Sit and Reach

6

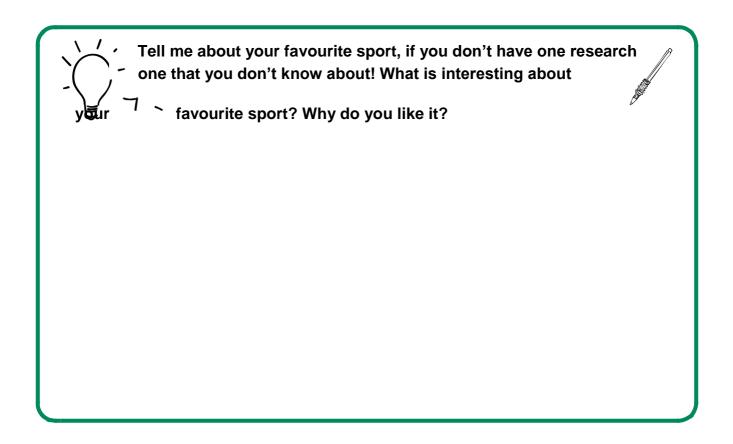
Sit on the floor with your back upright and legs out straight.

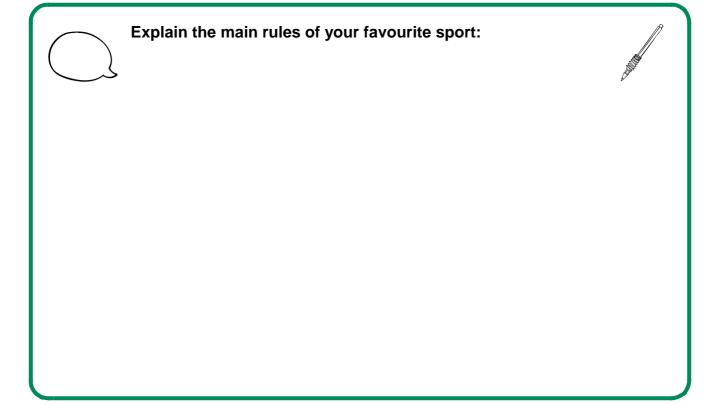
Gradually bend your back, stretching your arms and hands out to reach your toes. Hold for 5 seconds and slowly go back to starting position.

Day	Number of Reps	Signed



Do you play a sport for school? Or as part of a club outside of a school? Do you watch a sport on TV or live sporting events? What is your favourite sport?





Draw a picture to show me your favourite sport:	
Who do you admire that plays this sport? Can you tell me something about them? Why do you admire them?	



The Olympics began in Ancient Greece and ran every four years from 776BC to at least 393AD. The modern Olympic Games also began in Greece in 1896, taking place in Athens.

Over 200 nations now compete in the Summer and Winter Olympic Games which are held every four years.

The Paralympic games are also held every 4 years in the same year as the Summer Olympics and have done since 1960.

The five interlocking rings in blue, yellow. Black, green and white are known as the Olympic rings and was created in 1913.

The rings represent all the colours of the flags in the world.







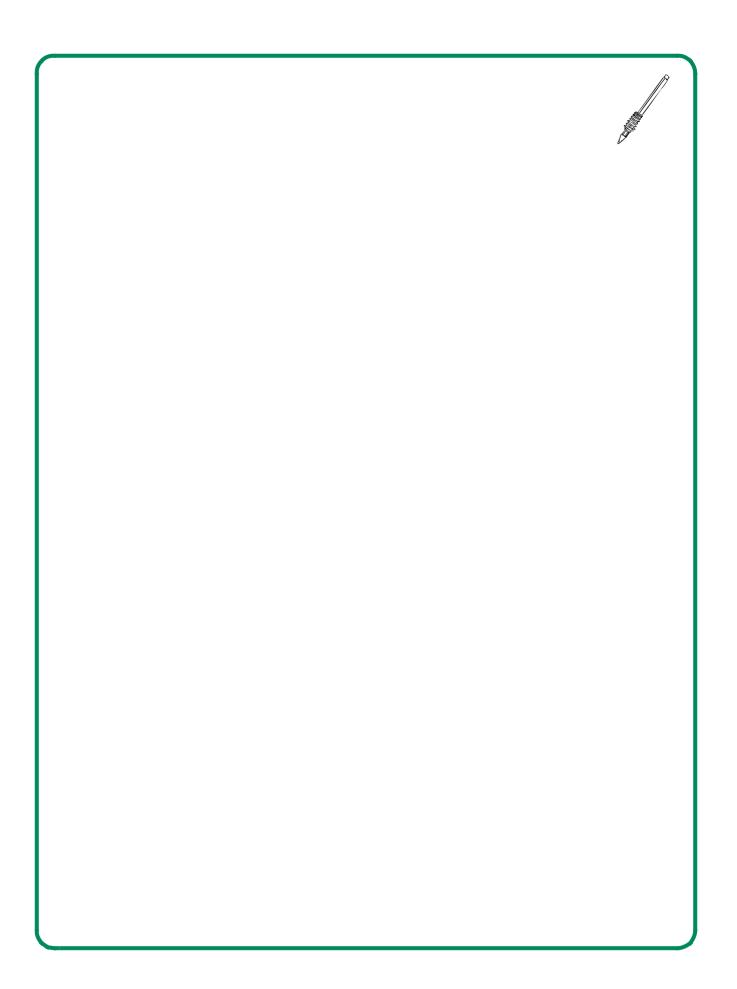
# **Activity**

Imagine that you are a sports journalist for your local paper and have been asked to report on an amazing day at the Olympic Games.

Luckily you have a time machine so you can travel to **any** Winter, Summer or Paralympic Games in either the past or the future.

Write up your article in the box provided – remember to lay it out in a newspaper article format.



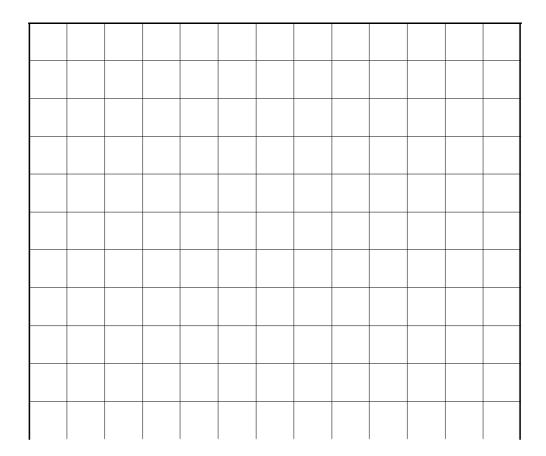




You have been asked to design a brand new online game suitable for boys and girls aged 7 – 11. The game should have a retro theme like the video games of the 1980's and 1990's.



Your first task is to design the Protagonist of your game. As the game will follow a retro theme the hero should be designed in pixels.



Pixels are the tiny dots of coloured light that make up images when displayed on a screen, like a computer monitor.

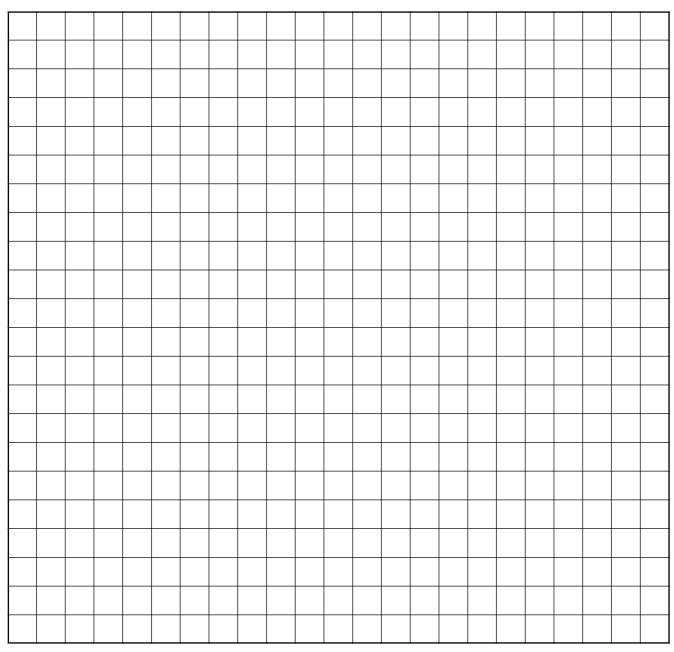


Explain the key elements of the game; what is its name? Where is it set? What is the aim? How do you win/lose?



Design your level that the user will see when the game starts – remember to think about your target audience and what will appeal to them when creating your design.





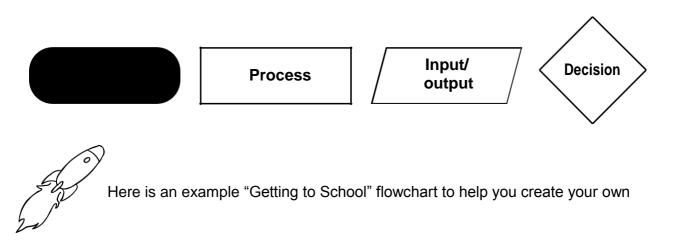


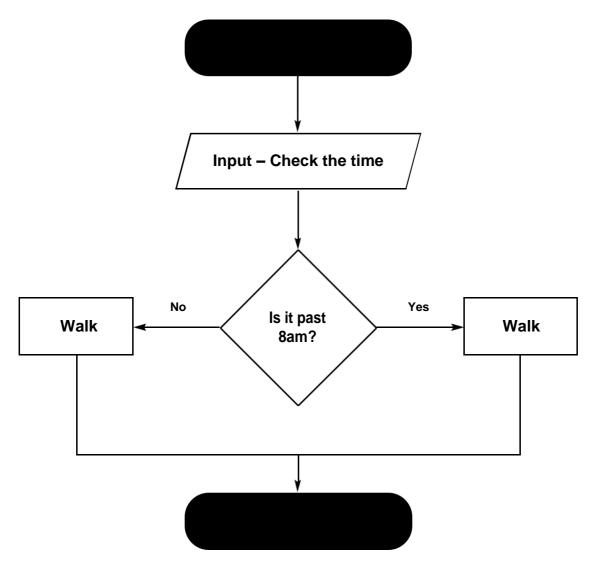
Inputs and Outputs
What will the input device be for your game? Draw your preferred device and label it to show how the user will input data.

List the outputs your game will make – think carefully!



Explain how the point system will work which causes you to win or lose the level. Use the flow chart symbols to create a flowchart which explains how the score is calculated.





Design your flowchart here (tip: work in pencil or work it out on scrap paper first)



# Our world — Night and day

Our planet Earth takes a year to orbit the Sun. As it does this, it spins on its axis once every 24 hours, giving us night and day.

#### Questions

- 1 Why does it get dark?
- 2 Why is it daytime on one side of the Earth when it's night time on the other?

#### Challenges

- 1 Make a table comparing differences between night and day where you live: for example, think about what people and animals do.
- 2 Write a short diary of your day and say what the time is.
- 3. Work out what time it is in New York when \text{VXVWDUWDQGiQLVK school.}

#### **Key words**

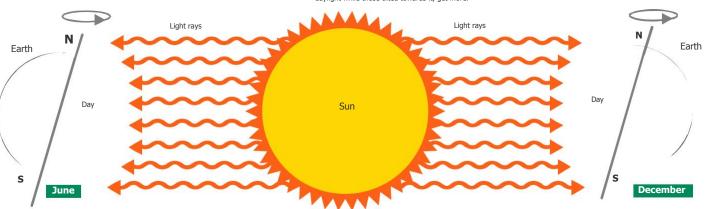
- Axis
- Earth
- Orbit
- Sun

#### Night and day

The Earth spins on its axis every 24 hours. Places which face towards the Sunget daylight. Places which face away from the sun get night.

#### Hours of daylight

As the Earth makes its yearly orbit, places tilted away from the Sun get less hours of daylight while those tilted towards it, get more.





#### All in a day

When you're going to bed someone else is just starting their day! These clocks show the time in different parts of the world when it is midday in London, U.K.



Los Angeles 04:00 ( -8 hours)



New York 07:00 ( -5 hours )



London Midday 12:00



Tokyo 20:00 (+8 hours)









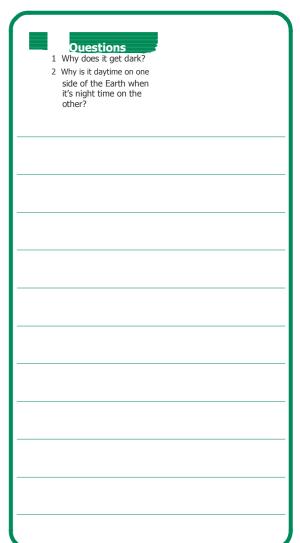
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## Challenges

- 1 Make a table comparing differences between night and day where you live: for example, think about what people and animals do.
- 2 Write a short diary of your day and say what the time is.
- 3. Work out what time it is in New York when \RXV\WDI\WDQG\QL\VK school.



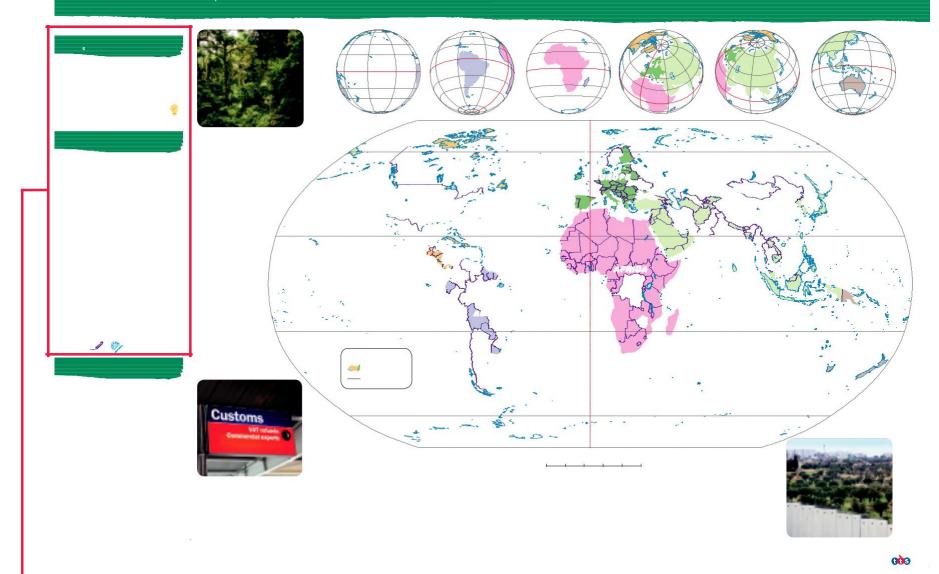






# **World** – Continents

A continent is a huge expanse of land. The world is divided up into seven continents. Continents are divided up into countries.







#### Questions

- 1 Which continent do we live on?
- 2 What would happen if the world didn't have any borders?

	1.	Find	and	list	the	5	oceans:
--	----	------	-----	------	-----	---	---------

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2. Find the equator. List the countries that sit on the equator:


- 3. Find the country that you live in. Which countries and oceans border your country?
  - .....







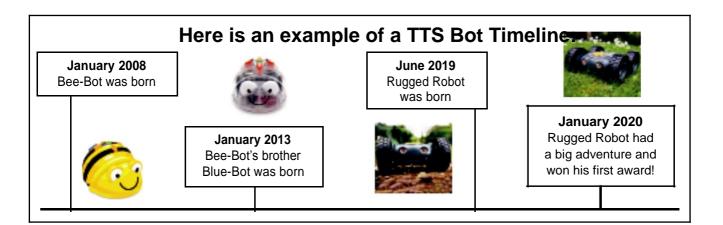
Create an A to Z of words all linked to our wonderful world! Why not illustrate your A to Z too!
<b>A</b>
B
<b>C</b>
D
E
F
G
H
J
K
L
L



M	
<b>N</b>	
O	
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Q	
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S	
T	
U	
V	
<b>W</b>	
X	
Υ	
<b>Z</b>	



A timeline is a listing of events in **chronological order.** This means that the events are shown in the order that they happened.



Interview family members to find out key events that have happened in your family, for example births, marriages or first days at school. Write down all of these events and don't forget to record the date!



Create your Family Timeline showing all the key events in chronological order.Draw pictures for each of your key events and remember to include dates.



There are so many changes in history that influence our lives today. Timelines help us to put these events in chronological order.

Complete these tasks to create your own historical timeline:

- I Cut out the historical periods on page 101.
- Stick them in chronological order on your timeline.
- Research and record at least one key fact about each time period.
- Illustrate your timeline.

### **Extra Task:**

Are there any other historical periods or events you can add to your timeline?

# Top Tip:

Look at whether the date says AD or BC.

Remember,

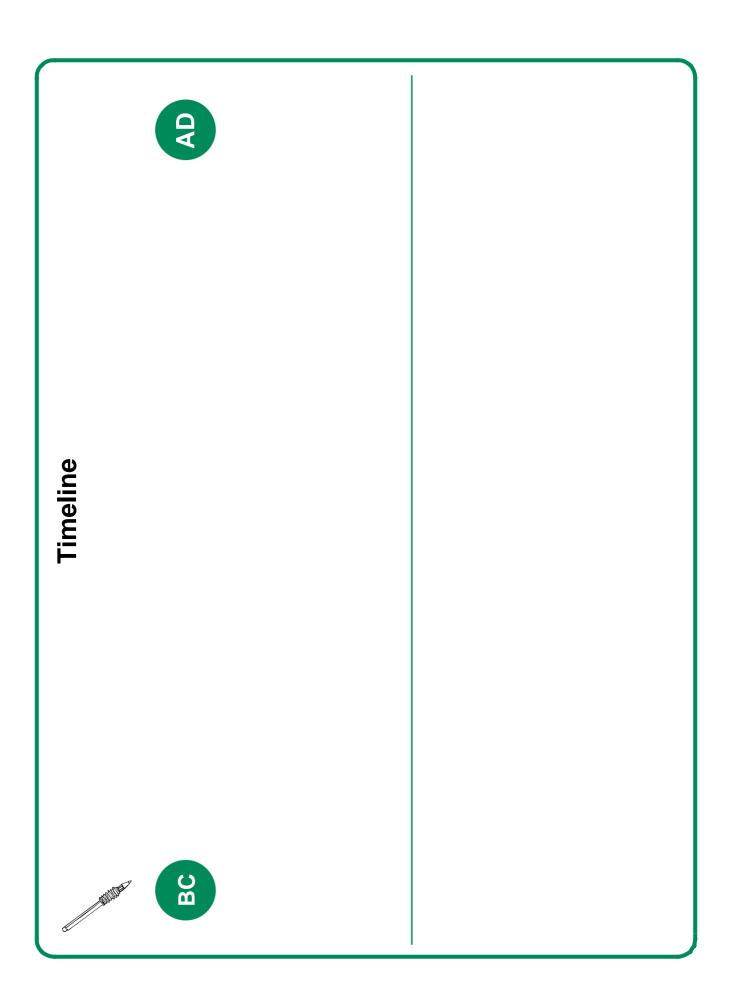
I AD is AFTER Jesus was born.

I BC was BEFORE Jesus was born.

You may find that different sources give slightly different dates for some time periods.

Why do you think this might be?







We can learn a lot about the past by looking at artefacts. Historians look closely at artefacts and ask and answer questions to try and discover what it tells us about the past.

Become a Historian and look at these artefacts. Answer the questions and see what you discover about the past.



What do you think it is and why?	
Who might have used it? Why do you think this?	

What do you this is and why?	
What do you think these artefacts are and why?	
What do you think these artefacts are and why?	
What do you think these artefacts are and why?	
What do you think these artefacts are and why?	
Who might have used them? Why do you think this	
Who might have used them? Why do you think this	
Who might have used them? Why do you think this	







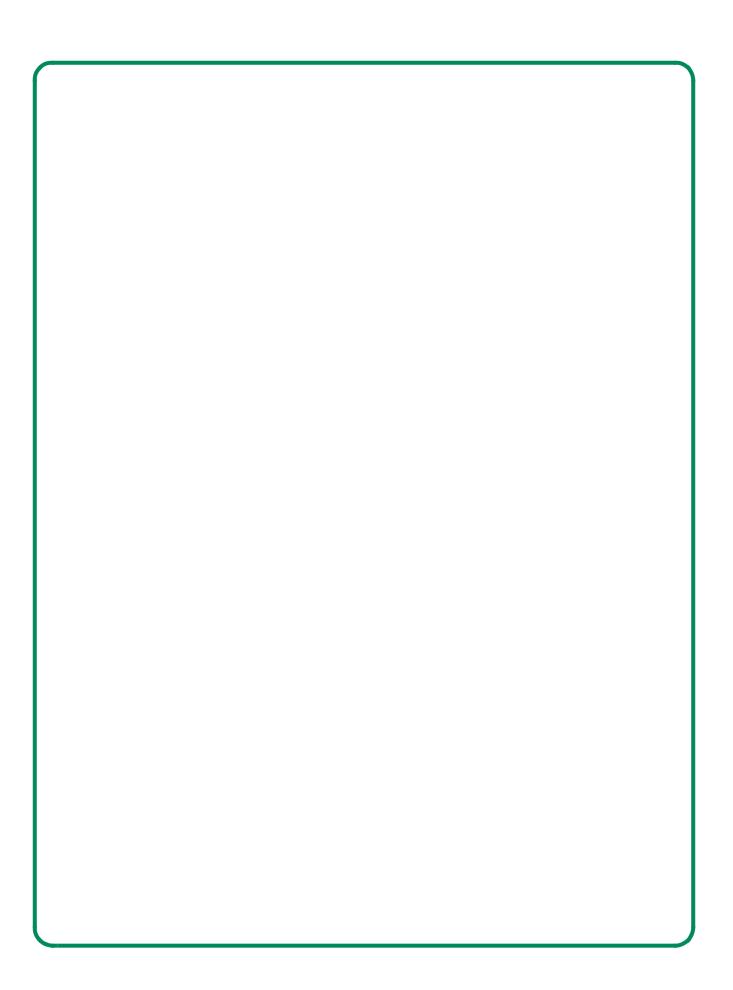
The Mona Lisa (La Joconde) is a very famous painting by the Italian artist Leonardo da Vinci. It is thought to have been painted between 1503 and 1506.

It has been on display at the Louvre Museum in Paris since 1797.

The Mona Lisa is one of the most valuable paintings in the world. It holds the Guiness World Record for the highest insurance valuation in history!

On the page opposite can you draw a self-portrait of yourself in the style of the Mona Lisa?



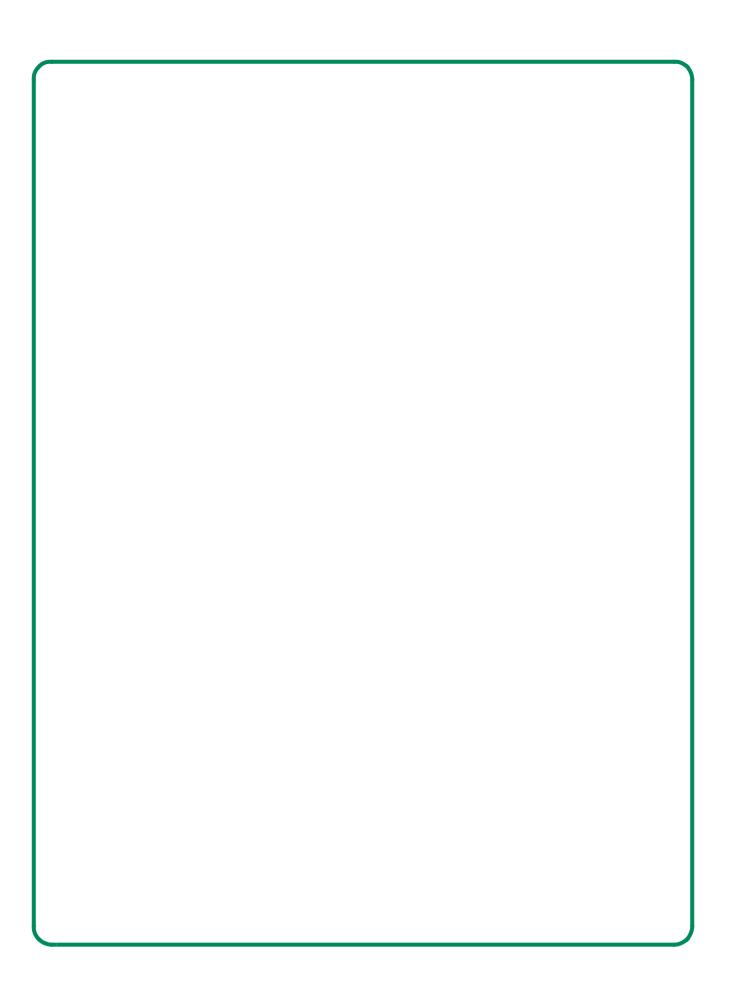




Research Aboriginal art to discover how images can be created using dots and textures. Which other artists used this technique? Can you create your own Aboriginal art in the box opposite?

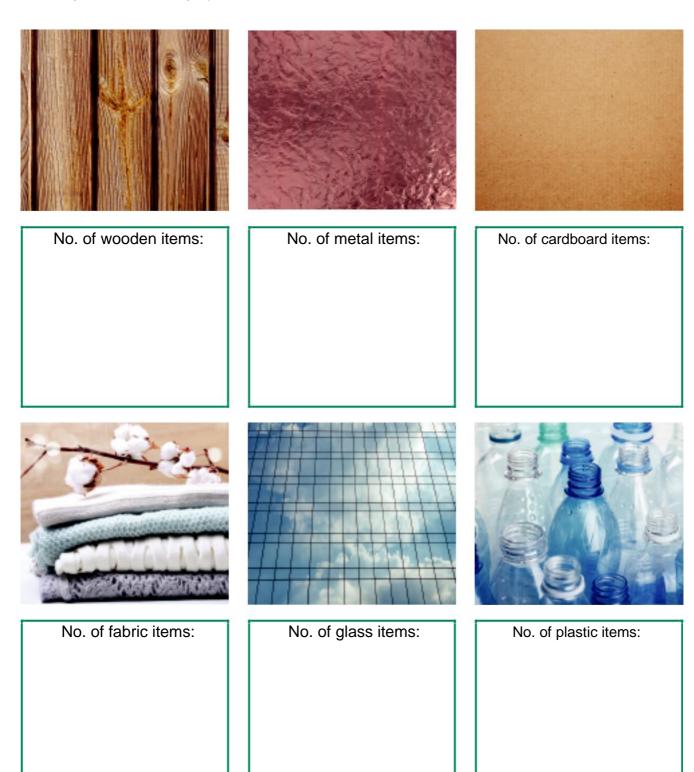








The items in our house are made from different materials! Can you go on a material hunt around your house? Tally up in the boxes below the amount of items made of each material:



# Title of your graph:



Plot your findings on the graph - remember to label your Y axis and add a title. How could you plot your results if your tally exceeds ten per material?



Materials D&T Activity 1 83

With the help of an adult have a go at one (or both!) of these delicious no bake recipes at home.



120 g butter 2 cups caster sugar 2 tbş cocoa (sifted) /2 cup milk /2 cup Nutella (Or any other chocolate spread) 1 tbs vanilla extract '/2 cups rolled oats 2 / 2 cups Rice crispies sprinkles

- 1. Line a backing tray with baking paper and set aside.
- 2. With an adults help: in a large saucepan melt the butter then add sugar, cocoa and milk. Whisk together and bring to the boil. Boil for one minute. Remove from heat.
- 3. Add the Nutella, vanilla, rolled oats and rice crispies to the pan and combine well.
- 4. Pour into slice pan and smooth flat with the back of a metal spoon. Scatter over your choice of sprinkles. (I used coated chocolate chips.)
- 5. Refrigerate until set. This will take about 3 hours. Cut into squares with a sharp knife.

15 digestive biscuits 15 marshmallows 15 glacé cherries, cut in half about 200ml condensed milk 100g desiccated coconut, to coat

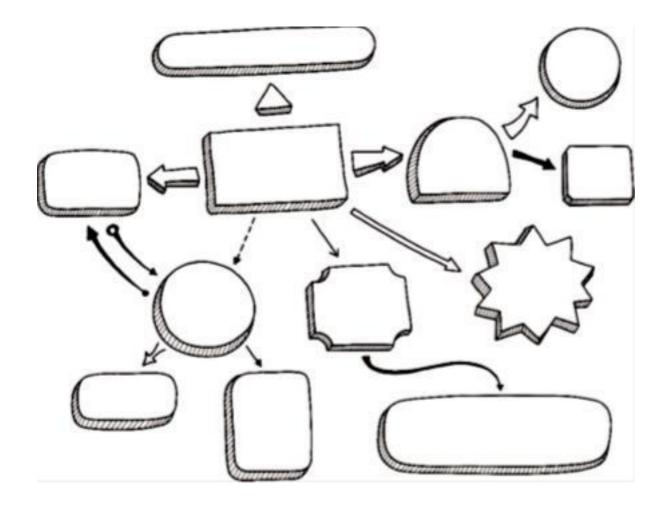
- 1. Crush the digestive biscuits in a food processor or in a plastic bag with a rolling pin, then put them in a large mixing bowl.
- 2. Chop each marshmallow into 4 pieces and add to the bowl with the cherries and 175ml condensed milk. Mix until the ingredients are well combined and you have a sticky mixture. If it's too dry, add a splash more condensed milk.
- 3. Sprinkle most of the coconut over a large piece of cling film (or foil). Tip the mixture onto the coconut and shape into a long sausage, about 30 x 5cm.
- 4. Sprinkle more coconut over the top of it and wrap the cling film tightly around, twisting the ends together.
- 5. Leave in the fridge to chill for 4-6 hrs, then cut into 15 slices and serve. Will keep in the fridge for up to 1 week wrapped in cling film.



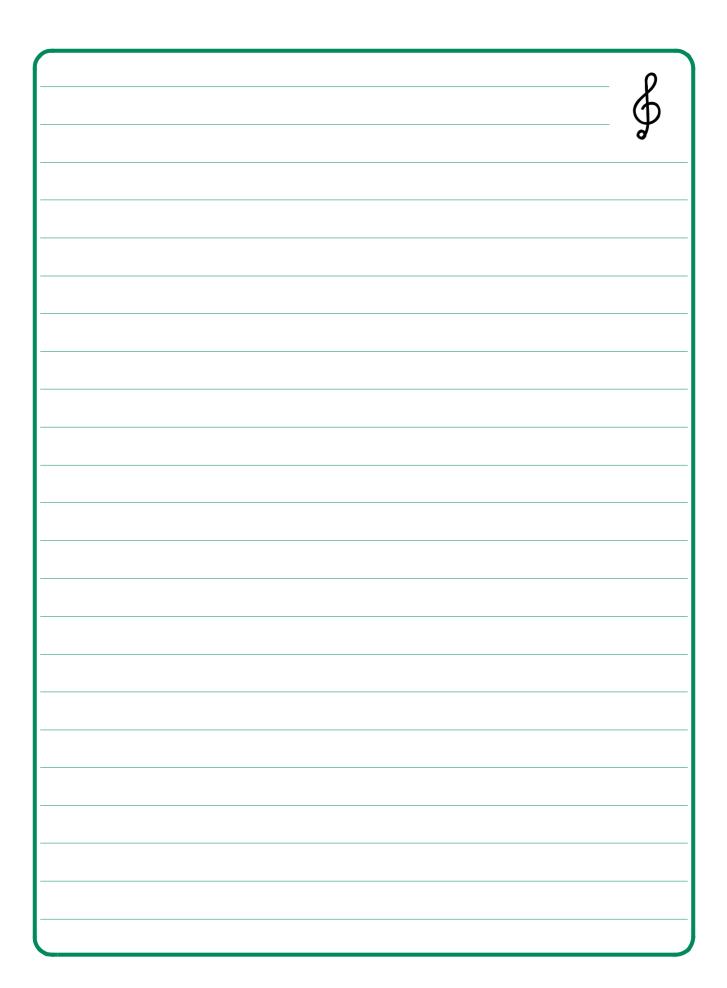
In the space below design a packaging for your sweet treat as if it were to be sold in the supermarket. What material would the packaging be made of? In what shape? What would your product be called? Who would your target audience be? Label your packaging with all these details.



You have been asked to write a song about your local area to encourage tourists to visit. Use the space below to list all the places, festivals, landmarks etc. that could feature in your song. Think about the instruments you could use in your song – it could be to the score of a popular existing song.



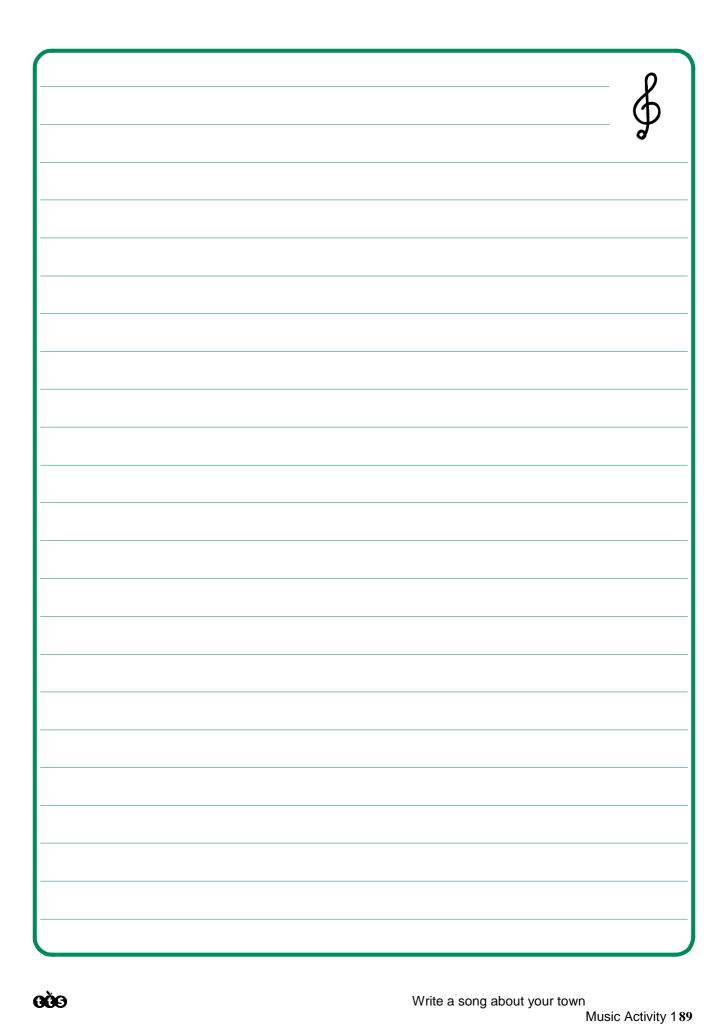






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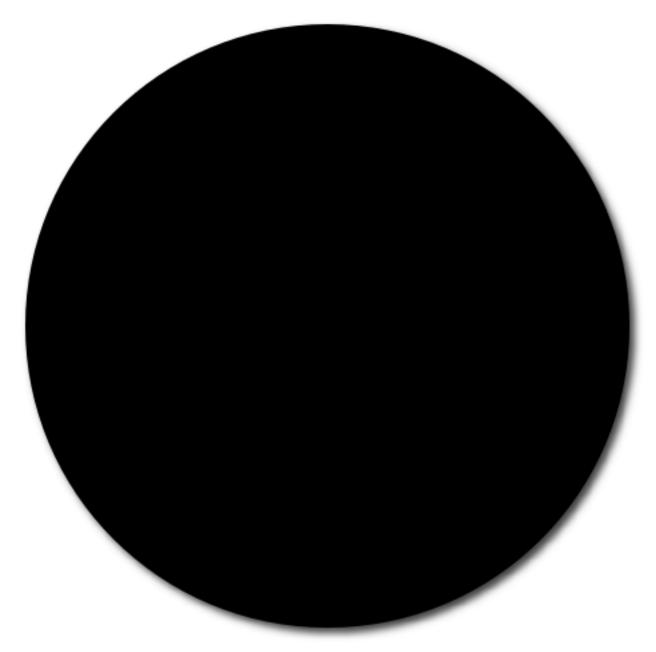
# **Key word list**





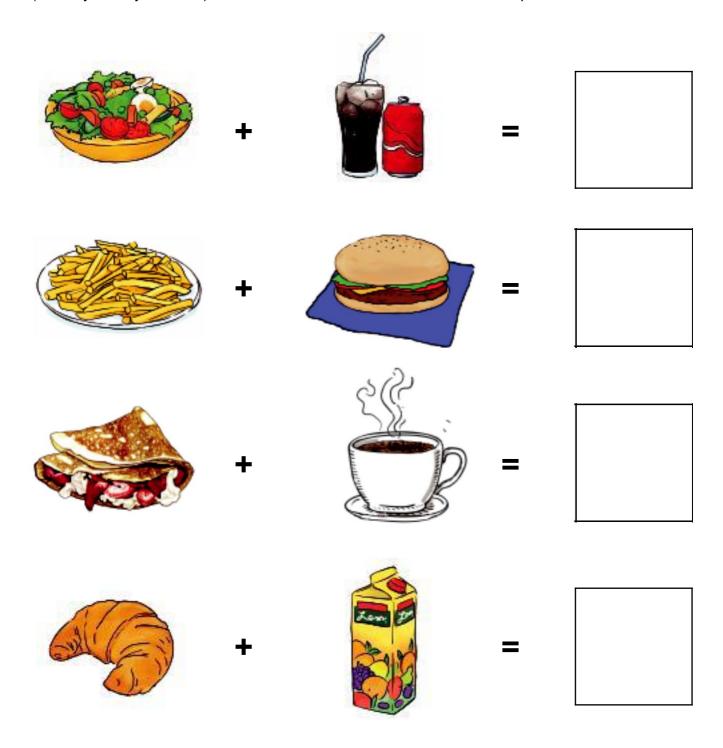
Blue-Bot is on holiday in the French Alps! He has been so busy having fun in the snow. He has been snowboarding, skiing and made a bonhomme de neige. Now it is time for dinner, he is very hungry! Draw Blue-Bots dinner and label it with the French words – these can be from the key words or researched yourself.







Design a menu for your own restaurant in the ski resort. Put the foods from the key word list (and any other you know!) in to the correct section of the menu and add prices in Euros.



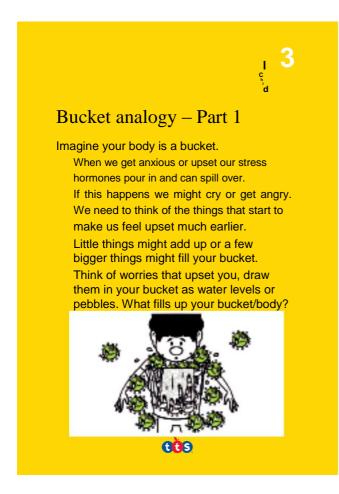
# Le Menu Petit déjeuner **Plat Principal Dessert**

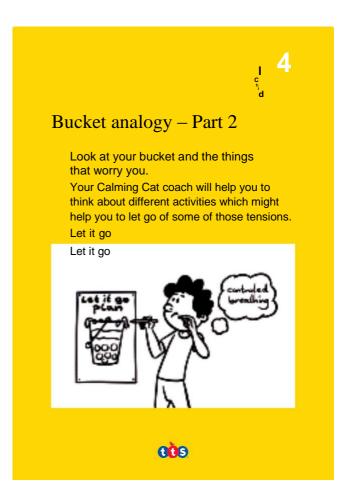


Below are some activities which can be completed at home together to promote mindful practice. Developed by Educational Psychologist, Paula Williams to help children understand their bodies reaction to feelings and how to manage them.

It is recommended that these activities are completed in a calm environment away from distractions. This is a perfect opportunity to bond with your child whist building coping strategies for anxiety and stress.

The coach cards are for the adult and the child cards are for the children.







Lion's roar

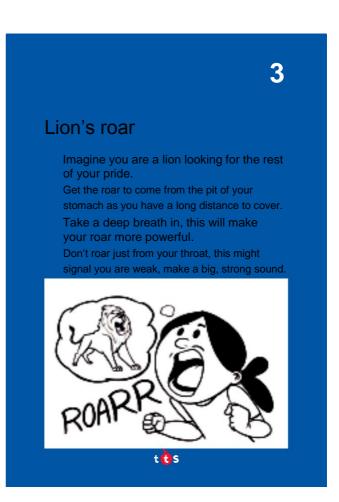
### **Preparation:**

- Tell the child you are going to roar like a lion. Look at the picture of the large lion and his open mouth.
- You need to signal to them by doing a loud deep roar.
- This might be an activity best carried out in an open area where you will not disturb others (the hall or a playground).

### Coaching aim:

Encourage the child to:

- Take a deep breath in and try and get the roar to come from the pit of their stomach.
- You are looking for controlled roaring which is deep and focused. You can position yourself several metres away. If the child does a weak roar take a step forward and act as though you are a predator sensing a weak animal. If it is a strong roar step backwards. As you move forward remind the child if they concentrate on a deep focussed roar they are more likely to move you away.



**Sleeping lions Preparation:** 

Find a quiet place where the child can lay down comfortably.

· Take a stop watch or timer.

### Coaching aim:

- · Encourage controlled breathing.
- Remind the child they have to stay as still as possible.
- Time how long they are able to stay still for.
  Practise for 2-3 times depending on the length of time the child is able to lie for.
- If they have dif culties lying for 10 seconds remind them to keep still and praise them for staying as still as they have.

tůs

Sleeping lions Lie still on the floor. Don't move or you are out. Keep very still. How long can you stay still for?



8

### Nature's beauty

### **Preparation:**

- Encourage the child to imagine a really blue sky –
  just see the colours in your mind. If the child can't
  do this show a picture of a deep blue sky and then
  tell them to close their eyes and see if they can
  make the same image in their head.
- Do the same for green grass, a yellow sun; orange spices.

### Coaching aim:

- Teach the child the wonders of our colourful environment; encourage them to notice colours as they go out to play. What effect do they have on their mood and feelings within their bodies?
- We are helping them to look for signs within their natural environment which will give them a sense of comfort and warmth.
- Make the connection that our surroundings affect our mood; but also, our brain images can also affect them – try picturing a cloudy dark sky and then walking out into the bright sunshine of a new day. How does your mind respond?



### Nature's beauty

Take a deep breath in and out.

Imagine a bright blue sky; what feeling does this give you?

How about being on green grass?

Look at the colours. Can you make them brighter in your mind? – the brighter the bigger the sensation!

What do you notice about how different colours make you feel?



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### Let's have FUN!

### **Preparation:**

- Know that as stress hormones go up, our feelgood hormones come down. That's right, adrenaline and cortisol are designed to help us react; oxytocin is there to calm us and helps us to have fun! (and be socially engaged).
- This means if we are feeling worried we are likely to stop doing things that make us feel good.
- Children who live with feelings of anxiety often engage in fewer fun activities as the anxiety grows.

### Coaching aim:

- Encourage as many fun and practical things as the child can do.
- · Keep adding activities over time.
- Make time to engage in these activities.
- Check how they feel after they have engaged in the activity.

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### Let's have FUN!

Think about all the things that make you smile; things you enjoy.

Draw/ write them out – we will keep adding to your list so that we have a very long list of things you can do.

This will help the adults to arrange some fun for you.



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51	52	53	54	55	56	57	58	59	60
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71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



# **Timeline**

(for pages 74 and 75)

**Anglo-Saxons** 

**AD 410 - AD 1066** 

World War 2

AD 1939 - AD 1945

**Roman Britain** 

55 BC - AD 410

Vikings

AD 789 - AD 1066

Iron Age

800 BC - AD 43

Bronze Age

3000 BC - 1500 BC

**Victorians** 

**AD 1837 - AD 1901** 

Tudors

AD 1485 - AD 1603

Stone Age

12,000 BC - 2500 BC



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