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Introduction

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 guiet 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!



Reading Log

Date	Title	Page	Comments



Diary

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	



The Chocolate Factory

The Chocolate Factory

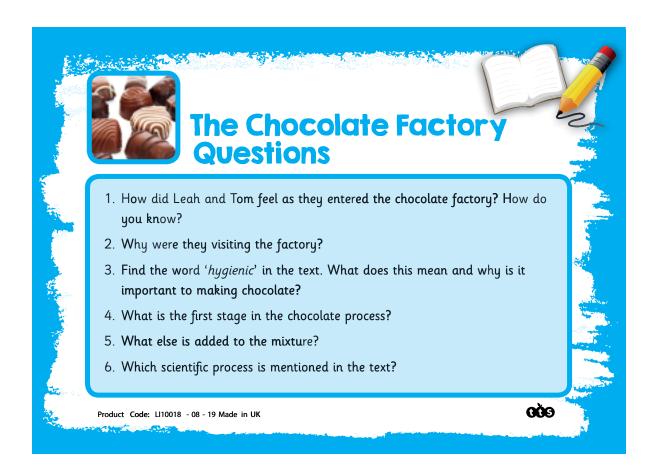
"How lucky are we?" asked Tom as he and Leah entered the chocolate factory "I know!" replied Leah. "I can't wait to get to the tasting part!"

Tom and Leah had won a prize in their school fair raffle, which was to visit the local chocolate factory. After putting on hairnets, to keep the chocolate hygienic, they were shown how the chocolate starts as cacao beans. The beans were roasted in ovens to bring out the flavour and the colour. Then the beans were processed to remove the shell and make the cocoa powder and the cocoa

Leah and Tom watched in amazement as these were mixed together with the sugar, vanilla and milk. The melted chocolate was then put into moulds, to solidify into bars and chocolates. Then the tasting began. "Hmm, delicious!" said Leah happily. "Definitely worth the wait!"



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Draw your ideal chocolate and label with ingredients

Learn to Fingerspell

What is fingerspelling?

Fingerspelling is a way of spelling words using hand movements and is a part of learning sign language. Each letter of the alphabet has a different sign. British Sign Language (BSL) uses a two-handed version, whereas others, such as American Sign Language (ASL) use only one.



Why should we learn it?

It would be wonderful if all children were taught to fingerspell. Firstly, it can be picked up very quickly and is great fun! Everyone loves the idea of secret codes and this is like learning a code. The vowels, for example, are indicated by pointing to each finger in turn, starting with the thumb -a, e, i, o, u.

Secondly, it is a new and different way to learn the alphabet and practise spelling. Children will have better understanding of the fact that words are made up of vowels and consonants.

Last, but not least, children will be able to communicate in a small way with a deaf or hearing impaired person and would better appreciate the communication difficulties they face.

Fingerspelling is only a part of learning sign language, but getting children to try it might encourage them to want to know more.

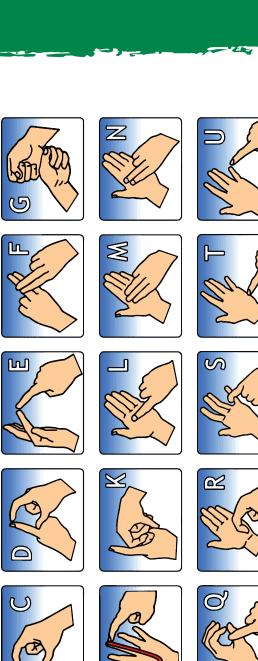
Questions:

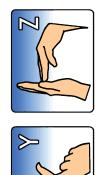
1. What is fingerspelling?
2. What does the acronym BSL stand for?
3. Name the 5 vowels in the English language.
4. What are the final 5 consonants in the alphabet?
5. Look carefully at the fingerspelling alphabet opposite. First, practise signing your name then try other words and perhaps a whole sentence.



BRITISH SIGN LANGUAGE - FINGERSPELLING

eq





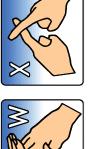






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british-sign.co.uk



The Burning of the Rice Fields

Once there was an old man who lived high up on a mountain far away in Japan. All around his little house the ground was flat and the soil was good. Here were the rice fields belonging to all the people who lived in the village at the foot of the mountain. Beyond the village was the blue sea, so close that there was no room for anything but houses.

The old man lived with his grandson, Yone. The child loved the rice fields and he often helped his grandfather to watch over them because he knew that all the good food for the villagers came from there.

One day, the grandfather was standing on his own looking down at the village and the people going about their business. He was thinking how beautiful the scene was when something caught his eye far out to sea. It was as though a huge cloud was rising and as if the sea itself was lifting into the sky. The old man put his hands to his eyes and looked again as hard as he could. Then he turned and ran to the house shouting, "Grandson, grandson! Come quickly! Bring a burning stick from the fireplace!"

Yone could not imagine why his Grandfather wanted the fire, but he always did as he was told without question, so he quickly and carefully got the burning wood.

The old man grabbed the fiery wand and ran to the rice fields. Yone ran after him and was horrified to see his grandfather setting light to the dry rice in the fields. He thrust the torch in again and again as the stalks turned red, orange and yellow.

"Grandfather! What are you doing?" screamed Yone, thinking his grandfather must have lost his mind.

Very soon, the field was completely ablaze; the fire spread guickly and black smoke began to creep up the mountain side. It rose thick and dark and in no time the people in the village below saw it and knew that their precious rice fields were on fire. As quickly as their legs could carry them, they ran. Not one person stayed behind.

When they came closer, and could see that they were too late to save any of it, they cried and wailed, "Who could have done this? How could it happen?"

"I did it," said the old man.

"It's true," sobbed his grandson, "My grandfather started the fire."

The villagers gathered angrily around the old man, "Why?" they screamed, "Why?"

He turned and pointed to the sea. "Look."

They all turned to look. There, where the sea had been so beautiful, still and calm, a gigantic wall of water as tall as the sky was rolling in. The people were so aghast at the terrifying sight they could not even scream.

The wall of water fell on the village and destroyed every hose and building. The sound was awful. Wave after wave battered and covered the place where the village had been until it was all under the sea.

Disastrous as this was, every last person was safe.

When they realised what the old man had done, they thanked him and honoured him for his quick thinking which had saved them all from the tidal wave.



Answer the following questions:

- 1. Where is this story set?
- 2. Why did Yone not ask his Grandfather why he wanted a burning stick?
- 3. What was the danger coming from the sea?
- 4. Does the story have a message? What do you think it is?
- 5. The Burning of the Rice Fields is a re-telling of a traditional tale. Name 3 other traditional tales.

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Write a scintillating story!

His torso was covered in debris as he tried to...

I'm an old man marooned on a desert island where my powers are useless...

Once upon a time in the land of 'Never Forget' lived...

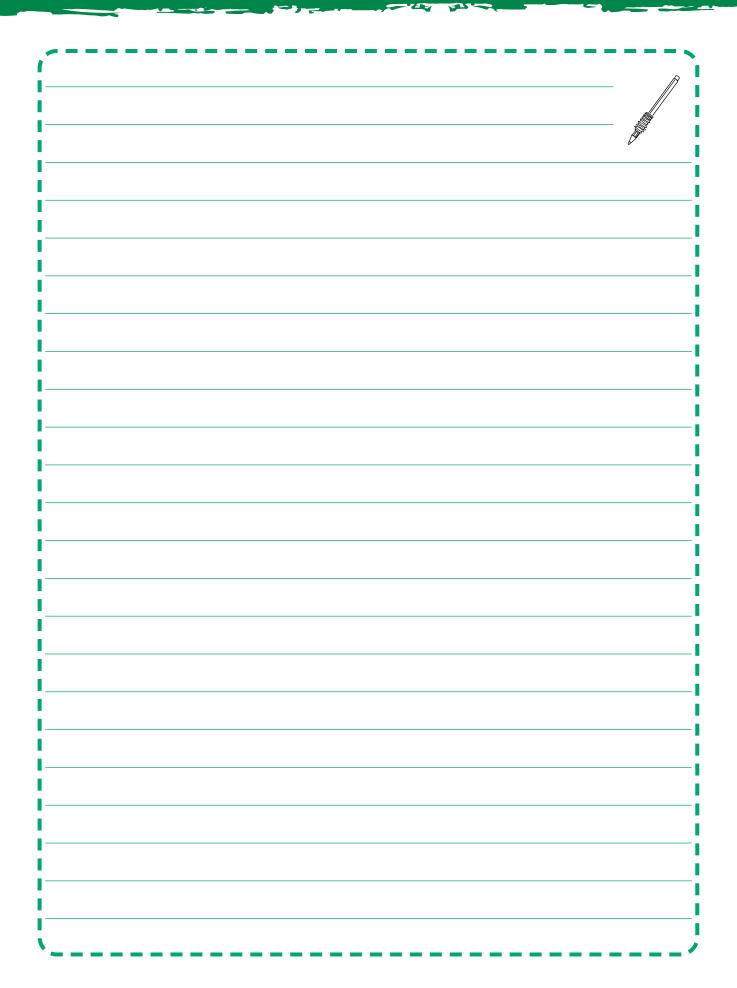
The water thundered through my ears as I tumbled through the waves...

Trudging through the desert sands I had an illusion...

It was a lovely moonlit night...

Choose any one of the story starters above and let your imagination run wild! Take time to think about your ideas – you might want to jot down a plan or talk it through with someone. When you are ready, write your story on the next pages.



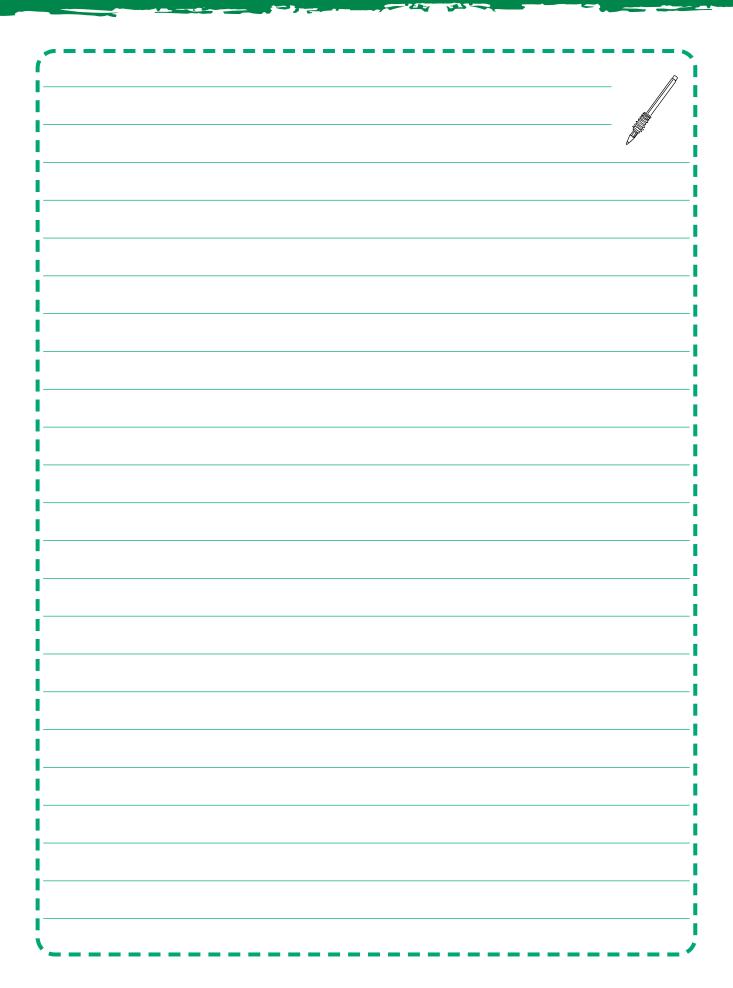




Write a scintillating story!

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The Revival of Crumbledown School

Truth to tell in years gone by, Crumbledown School, no word of a lie, Was an awful place, Full of woe, Where no sane child would want to go. Morale was low, detentions high, Hard to say exactly why... Years had passed With no respite, It kept the head awake at night.

Mr Watkin did whatever he could. But nothing he tried seemed to do much good. Pupils walked with shoulders down, Teachers dull. Their clothes all brown Until one day a girl arrived -9 years old and In Year 5 -Her name was Sue and she had a dream, Of starting up a football team.

The PE teacher was sadly lacking, Shrugged his shoulders and Sent her packing "It's a daft idea by any token, And anyway, my whistle's broken." Undeterred, Sue went away, And made a plan that very day, A buzz began Around the school, A football team might be quite cool! A squad was formed that self-same week, So Mr Watkin took a peek, To call them 'chaotic' Would be understating, Even 'a shambles' would be overrating. They lost every game, not just by a few



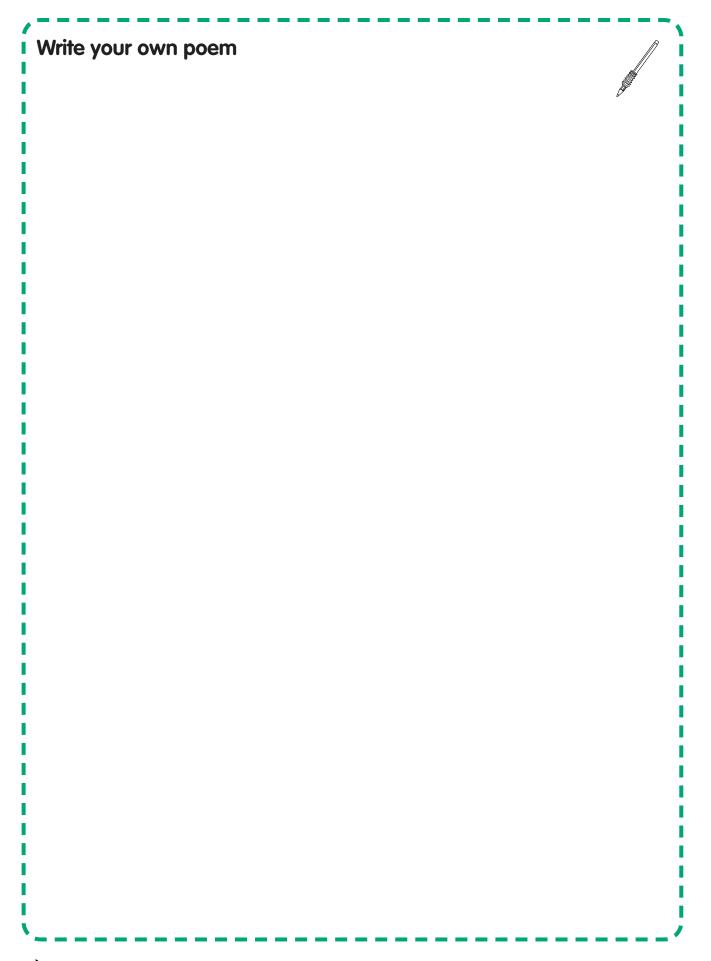
(I believe the last score was 30 to 2) That being said, They never gave up; Sue was determined to lift the league cup.

Then an odd thought occurred, worth supposition, That important as training Might be their nutrition... Carbohydrates and protein – they were the key! She would plan their whole diet, as strict as could be. So she banned crisps and pop, "Be gone chocs and sweets", And made special veg smoothies With cabbage and beets, And a secret ingredient which nobody knew And Sue won't divulge, not even to you!

The sensational smoothies made the team more resilient, And not only that -They were actually brilliant! They won every game, getting better each day And nothing it seemed would stand in their way. The children were thrilled by their new reputation And Sue's special smoothies Were quite the sensation! The school was transformed from where boredom was rife To a place full of energy, vigour and life!

This tale has a moral, you must understand That health and nutrition Work best hand in hand. So please don't ignore what good it can do To eat 5 a day and get exercise too. Cut your sugar right down, be the best you can be, You'll feel so much better, just try it, and see! And as for Sue's smoothies. The word got about Now it's rumoured that England are trying them out!

Questions about the poem
1. What is the name of the head teacher?
2. Line four uses the word 'woe'. Think of a synonym for this word
3. How old is Sue?
4. What adjectives are used to describe the football team? Can you think of two others that could have been used?
5. What is your favourite part of the poem and why?
6. Crumbledown School was much improved by having a football team. What do you think would make your school a better place to be?
7. Write a short poem about your school and what you like about it. It doesn't have to rhyme. It could even be an acrostic poem using your school's name, e.g.
S T
M A R
K S





Tongue Twisters





Ten tiny trains toot ten times Tongue Twisters

She sells seashells on the sea shore Tongue Twisters

Purple paper people, purple paper people, purple paper people... **Tongue Twisters**

Bubble bobble, bubble, bobble, bubble bobble... Tongue Twisters



Read each of the tongue twisters out loud. Say them quickly four or five times. Which one is easiest? Which is the trickiest?



	What do you notice about how the tongue twisters are written? Can you think of a good tongue twister of your own? Make it really hard to say.
· 	



William Shakespeare

William Shakespeare

One of the most well-known English writers is William Shakespeare. He lived in the 16th and 17th Century and many of his plays are still performed today.

William Shakespeare was born at his home in Stratford Upon Avon. We do not know his exact birth date but it is usually said to be 23rd April 1564 because we know that he was baptised on 26th April 1564. He was the third child of John Shakespeare and Mary Arden. His father was a leather merchant and his mother's family owned land nearby. We do not know exactly where or if he went to school but it is likely that he went to the King's New School in Stratford to learn reading, writing and the classics.

On 28th November 1582, William married Anne Hathaway. William was just 18 years old at the time. They had a daughter and later they had twins. After this, little is known about the next seven years of Shakespeare's life. These are called the 'lost years'.

By 1592, William Shakespeare was living in London and working as an actor and playwright. By 1597, 15 of his 37 plays had been published.

Many people believe that William died on his birthday, 23rd April 1616 but we don't know this for certain.

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William Shakespeare Questions

- 1. Where and when was William Shakespeare born?
- 2. Who were his parents and what did they do for a living?
- 3. What is known about his schooling?
- 4. What have been called the lost years? What do you think that Shakespeare might have been doing in this time?
- 5. What did Shakespeare do in London?
- 6. What mysteries surround the life of Shakespeare? What do you think about these uncertainties?

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What else do you know about Shakespeare? What plays did he write?

Find out more information and make a fact sheet or a presentation about him to share with your class.

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6	 	



The Aliens Have Landed

Do you believe aliens exist? What would happen if they landed on Earth?

Read the poem below inspired by the book 'Aliens Love Underpants' by Claire Freedman and Ben Cort.



The Aliens Have Landed



The aliens have landed Everyone beware! I saw their spaceship in the field The one just over there.

They jumped out very quickly In groups of three and four There must have been a hundred of them Maybe even more!

I wonder why they've chosen Earth And where they're going now? I hope they're feeling friendly But they seemed upset somehow.

They shivered as they moved along And very strange but true... Their **bodi**es were a shade of green, Their feet a deepest blue.

I heard a brrrr and chattering, A strangely chilly sound, Could it be the Earth's too cold For them to hang around?

But wait, they're back already And what is this I see?

Their feet no longer deepest blue, But stripy like a bee... And patterned red with fluffy stars, All kinds of different shades, They're wearing socks and marching fast Like **soldie**rs on parade.

So many socks are passing by, They're wearing 3 pairs each, Yellow, purple, indigo, Turquoise, pink and peach.

There's long and short ones, old and new And some with toes built in, Some are mighty woolly And some are wearing thin.

I wonder where they got them Did they buy them from a shop? Or steal from people's houses I wouldn't tell them "stop"!

They're heading back now into space I suppose it's a relief What if they'd stayed and we found out They all had smelly feet!

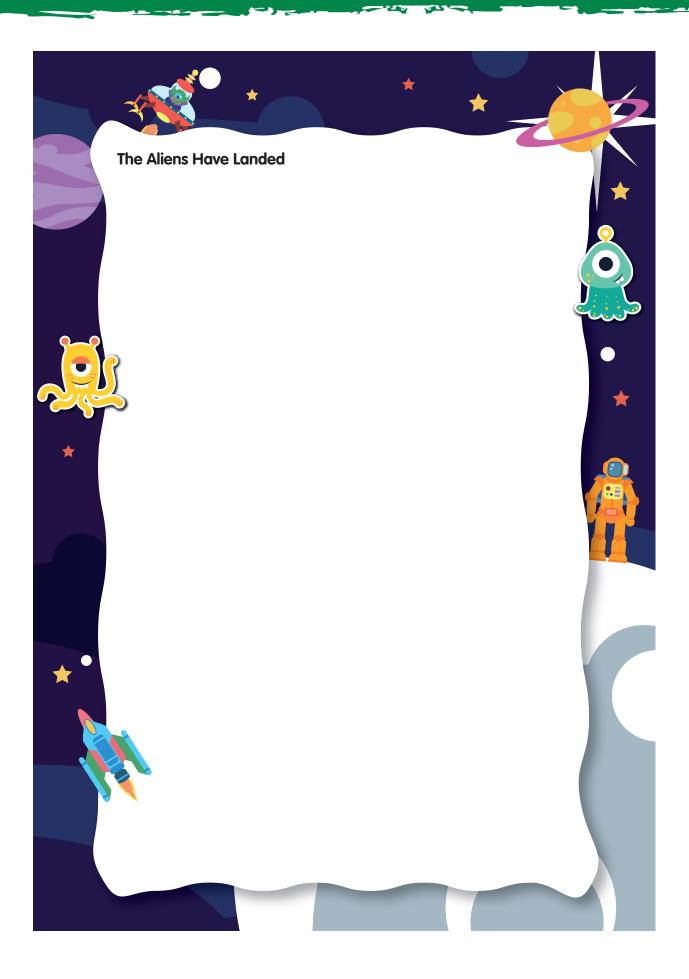


The author has changed the theme so the aliens love socks rather than underpants.

On the next page, write your own short story about aliens using the same title as the poem -'The Aliens have Landed'.

You might think of something else the aliens are obsessed by....perhaps hats, chocolate or cheese!







Hundred Square

Let's get familiar with the 100 square! Try practising some of these activities every day.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
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

100 square games and activities

- Pick a number to start from and count in 1's, 2's, 5's and 10's.
- Make it fun and count in funny voices can you count like a robot or with a very high voice?
- Cover up several numbers on the 100 square. Can you work out which numbers are missing?
- Find all the numbers whose digits add up to 15. Then pick another total.
- Pick two numbers. Find the difference. Find the total.



Can you fill in the missing numbers?

2	3		
	13	14	
22		24	

34		36	37
44	45		47
		56	57

	69	70
78		
	89	90

41		43
51		53
	62	

6		
16	17	18
		28

	22	23	
31			34
41		43	44

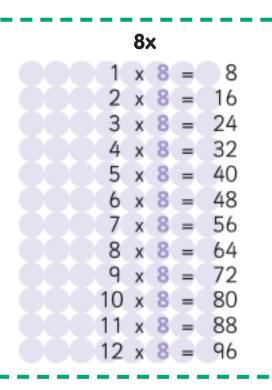
74	75		77	78
84		86		88
	95			98

Let's Multiply!

It can help us in lots of areas of maths if we can quickly recall our multiplication facts.

Let's get practising our 3x, 4x, 6x and 8x table!

3x Χ 6 q Х 12 Х 15 18 21 Х 24 Х 27 10 30 33 Х 36



Learning Tips



- March like a soldier and chant the multiplication tables e.g. 1x3 = 3, 2x3 = 6.
- Play multiplication ping pong with one person batting the question and the other batting back the answer.

Quick Questions



Now try making your own 'quick 10' and test yourself or someone else!



Try practising your times tables every day!

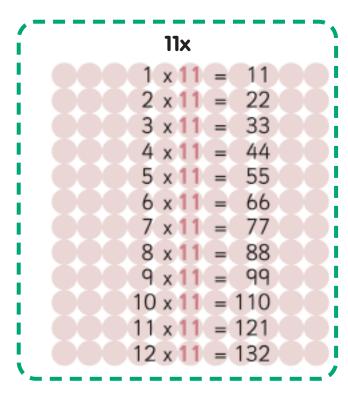
Let's Multiply Some More!

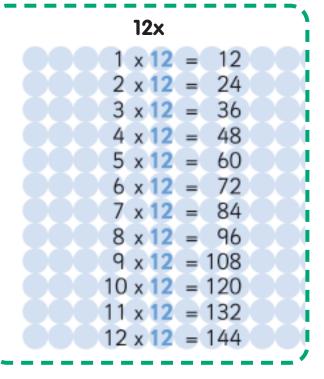
It can help us in lots of areas of maths if we can quickly recall our multiplication facts.

Let's get practising our 7x, 9x, 11x and 12x table!

000010x(7)	=	7
2 x 7	=	14
3 x 7	=	21
4 x 7	=	28
5 x 7	=	35
6 x 7	=	42
0007x7	=	49
8 x 7	=	56
9 x 7	=	63
00010 x 7	=	70
00011x7	=	77
12 x 7	=	84

	9x			
1	х	9	=	9
2	Х	9	=	18
3	Х	9	=	27
4	Х	9	=	36
5	Х	9	=	45
6	Х	9	=	54
7	Х	9	=	63
8	Х	9	=	72
9	Х	9	=	81
10	Х	9	=	90
11	Х	9	=	99
12	Х	9	=	108
	_			





Learning Tips



- March like a soldier and chant the multiplication tables e.g. 1x9 = 9, 2x9 = 18.
- Play multiplication ping pong with one person batting the question and the other batting back the answer.

Quick Questions



Now try making your own 'quick 10' and test yourself or someone else!



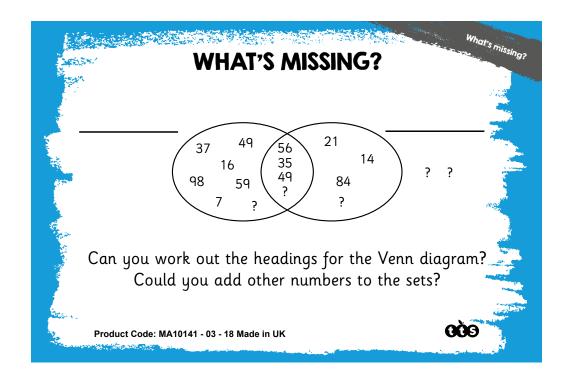
Try practising your times tables every day!

What's Missing?

Blue-Bot has been cheeky and stolen lots of numbers and operations. Become a maths detective and see if you can solve these problems and fill in the missing gaps.



	WHAT'S MISSING?
A STATE OF THE STA	a) 58, 71, 84,,, 136,
	b) 140, 131, 122,,, 86,
	Explain what is happening and find the missing numbers
Allison .	Product Code: MA10142 - 03 - 18 Made in UK



What's missing?



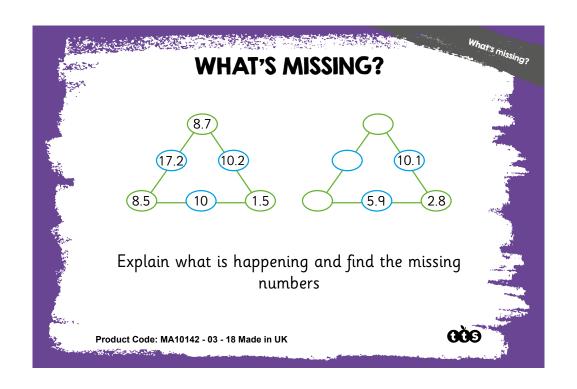
WHAT'S MISSING?

50__12__18 = 44 100__50__3 = 150 50 10 7 = 12 $24 \quad 3 \quad 8 = 64$ 12 3 6 = 6 $7 \quad 3 \quad 28 = 49$

Find the correct operation signs to balance the equations, and add brackets when necessary

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Dip & Pick

Have a go at our Dip & Pick problems...

- 1. 272 people attend a school brass band competition. There are 223 children and 16 teachers, the rest are parents. How many parents are there?
- 2. 286 children enter the brass band competition. There are 27 teachers who accompany them and 19 parents. How many people visit the museum altogether?
- 3. 272 people attend a school brass band competition. There are 223 children and 16 teachers, the rest are parents. One third of the parents are dads. How many dads are there?



- 1. Adult tickets on the front row at a pop concert cost £45.75. On the second to the tenth rows tickets cost £30.50. At the back they cost £15.25. Sita buys one adult ticket in each section. How much will it cost her?
- 2. Sita spends £137.25 on 3 tickets. How much did each ticket cost? Where in the concert hall would the seats be found?
- 3. Adam spends £91.50 on tickets for the Pop concert. What combination of tickets could he buy? Find all the possibilities.

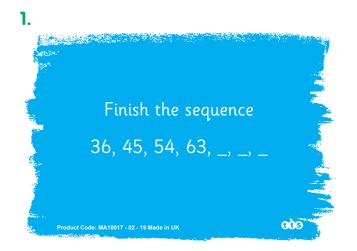


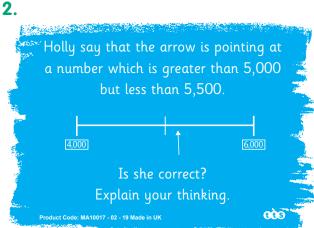
Number and Place Value

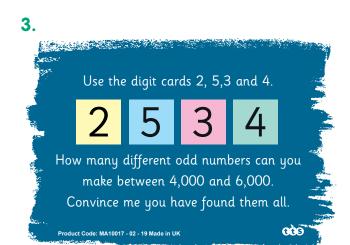
Bee-Bot has been struggling with his maths.

Put your maths hats on and see if you can help him to solve these questions.

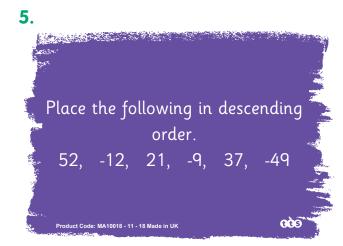


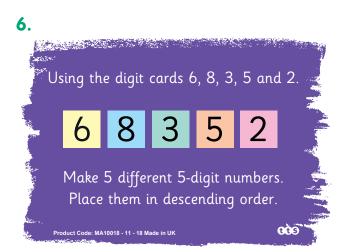




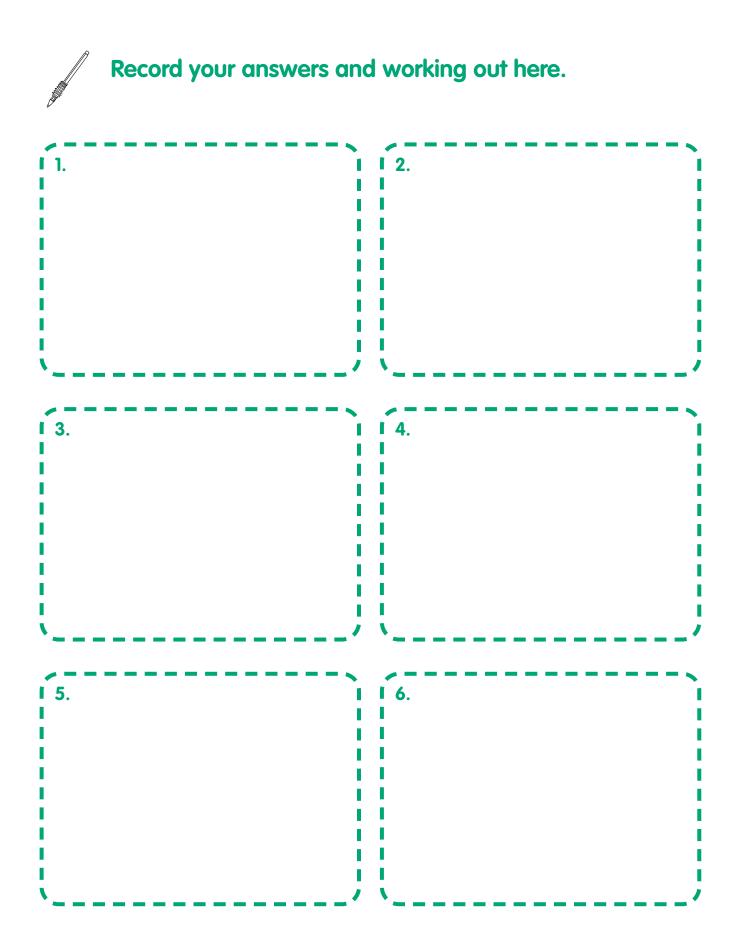








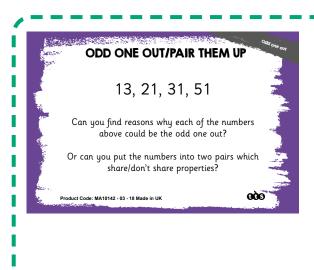


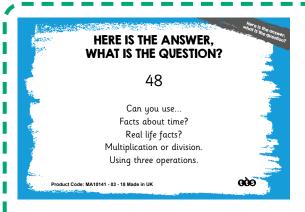




Reasoning

Test your knowledge and combine your mathematical skills to help solve these reasoning problems.







CORRECT ANSWER

Find the correct answers for answer of 60

Which of these questions below have an answer of 60?

Half of 120, double 30, 15 + 15 + 15 + 15, 84 - 22 - 4 1/4 of 280, $600 \div 20$, $5 \times 10 + 10$, $8 \times 8 - 2$ $150 \div 2 - 20$, 18 + 14 + 12 + 16, 1/3 of 150, Double 15 + double 12 + double 3

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CÓS

GUESS MY NUMBER/ZONING IN

My number is

A 2 digit number An even number of tens A multiple of 6 One digit is double the other digit Divisible by 7 1 less than a multiple of 5

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Problem Solving

You are a Maths Superstar!

Time to put your superhero cape on and apply your learning to solve these tricky problems!



NUMBER & PLACE VALUE

I think of a four digit number.

When rounded to the nearest 1000 my number rounds to 6000.

When rounded to the nearest 100 my number rounds to 6300.

When rounded to the nearest 10 my number rounds to 6350.

What could my number be? Find all possibilities.

OBS

ADDITION & SUBTRACTION

Using each of the digits 2, 7, 4, 5, 1, 3, can you make an addition calculation with the answer 400?

FRACTIONS

There are 30 children in a class.

 $\frac{2}{5}$ of them are girls.

How many boys are in the class?

MEASURES - MONEY

Kerry bought 3 presents. The cheapest present cost £2.80, the most expensive present cost twice as much and the final present was exactly halfway between the prices of the other two presents.

How much did each present cost?

How much did she spend altogether?



More Problem Solving

Blue-Bot needs some help to solve these tricky problems ...



1

ADDITION & SUBTRACTION



Tim says that the number that lies halfway between 1.42 and 2.34 is 2.08 because 0.42 - 0.34 = 0.08.

Is he correct?

Explain your thinking.

Product Code: MA00476 - 11 - 18 Made in UK

009

2.

MULTIPLICATION & DIVISION

Josie and Bill both think of a number less than 100. Josie's number is a multiple of 4 and a multiple of 6. Bill's number is a multiple of 3 and a multiple of 5.

Is it possible for them to be thinking of the same number?

If so, what could that number be?

Product Code: MA00476 - 11 - 18 Made in UK

003

3.

FRACTIONS / DECIMALS / PERCENTAGES

Put these decimal fractions in order

0.36, 0.306, 0.036, 3.06, 3.6

Which decimal fraction is in the middle?

Product Code: MA00476 - 11 - 18 Made in UK

is.

003

4.

FRACTIONS / DECIMALS / PERCENTAGES



Would you rather have $\frac{3}{5}$ of £10 or 70% of £10?

Explain your thinking.

Product Code: MA00476 - 11 - 18 Made in UK

000

5.

MEASURES - MONEY

Joel emptied his moneybox.

He had twenty 50p coins, thirty 20p coins and sixty 10p coins.

How much money did he have altogether?

Product Code: MA00476 - 11 - 18 Made in UK

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6.

MEASURES - MONEY

Shoppers earn one voucher for every £15 they spend in the shop. I spend £68 on my shopping.

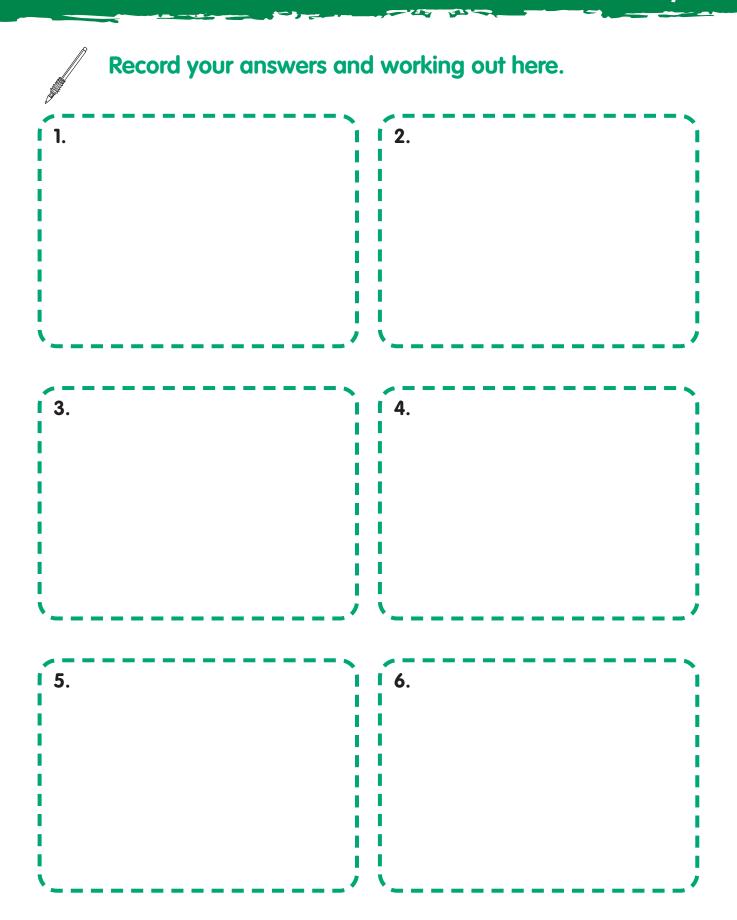
How many vouchers do I get?

I need ten vouchers to get a free gift.

How much more money do I need to spend?

Product Code: MA00476 - 11 - 18 Made in UK

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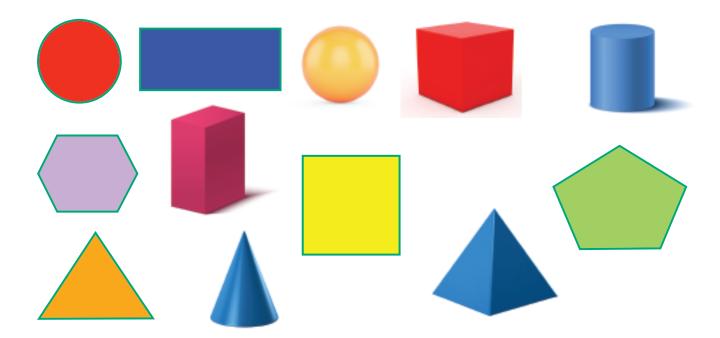


Shape Hunt!



Take a look at the 2D and 3D shapes below and discuss:

- What are the names of these shapes?
- Can you name the properties of each shape? (faces, vertices, edges)





What can you find?

- Go on a shape hunt around your home.
- Draw or stick pictures of the shapes that you find.



Draw your own picture using 2D and 3D shapes



What shapes have you used in your picture?



Mini Lava Lamps

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
- Cooking oil
- 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 3/4 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
- 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 (CO₂) gas. These CO₂ 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



Step 1	Step 2
	Step 4
Results – What happen	d? What have you learnt from this experiment?



Sailing Boats



ACTIVITY 1 | SAILING BOAT



STEM Learning Objectives:

Science:

Explore resistance in water by making and testing a boat.

Technology:

Use a range of tools, equipment, materials and components.

Engineering:

Understand the forces acting on a sailing boat.

Maths:

Measuring and marking out.

WHAT YOU NEED:

Materials:

- Polystyrene foam pizza disc
- A4 coloured card
- Plastic milk bottle lid
- Wooden skewer Decorations



Tools:

- Low melt glue gun
- Ruler
- Felt tip pens
- Large scissors Lump of poster tack
- Hole punch



Can you spot any hazards? How can you reduce the risks?

WHAT YOU DO:

- 1. Use the felt tip and ruler to draw a boat shape on your pizza disc. Make it as long as the disc and quite wide to help prevent the boat capsizing. Cut out the boat base.
- 2. Place the poster tack on the table and press a bottle lid onto it with the open side downwards. Press down with the pencil to make a small hole in the middle. Don't make the hole too big as it needs to be a tight fit on the skewer.
- 3. Take out the poster tack and glue the lid down towards the front of the boat base. Push the pointed end of the skewer down through the hole in the lid and into the base.
- 4. Cut the sheet of coloured card so that it is shorter than the skewer, and trim it to your preferred shape. You can decorate it with a felt tip pen. Punch a hole in the middle of the top and bottom, then slide the sail onto the skewer.
- 5. Place the boat in the water tray and blow into the sail to make it move across the water. You can customise your boat by adding a sailor, flag, decorations etc. You could try to help it move faster, for example by changing the shape of the base to make it more streamlined.











STEM Explanation:

Gravity acts downwards on the boat, pulling it down onto the water.

The boat base is made from polystyrene foam pizza disc; this contains lots of little air pockets, making it buoyant so that it doesn't sink

When you blow into the sail the boat moves across the water.

The resistance of the water (drag) slows the boat down.

If you make the boat more streamlined (e.g. by making the front pointed and rounding off the corners) this reduces the drag so the boat can go faster.



Duran and appetate very calling heat house	
Draw and annotate your sailing boat here:	
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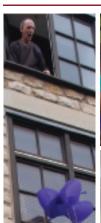


Egg Parachutes



ACTIVITY 5 | EGG PARACHUTE











STEM Learning Objectives:

Science:

Explore falling objects and the effects of air resistance.

Technology: Engage in an iterative

process of designing and making.

Engineering:

Design, make, test and improve a product.

Maths:

Measure time; compare duration of events.

Can you spot any hazards? How can you reduce the risks?

WHAT YOU NEED:

Materials:

- Large piece of thin material, e.g. broken umbrella with the spokes removed, bin bag, part of an old lightweight raincoat
- Plenty of packaging material, e.g. bubble wrap, packaging foam, cotton wool, egg box, yogurt pot,
- Thin string
- A hard boiled egg
- A raw egg



Tools:

- Scissors
- Transparent sticky tape
- Stopwatch





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:

- 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 the 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

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.



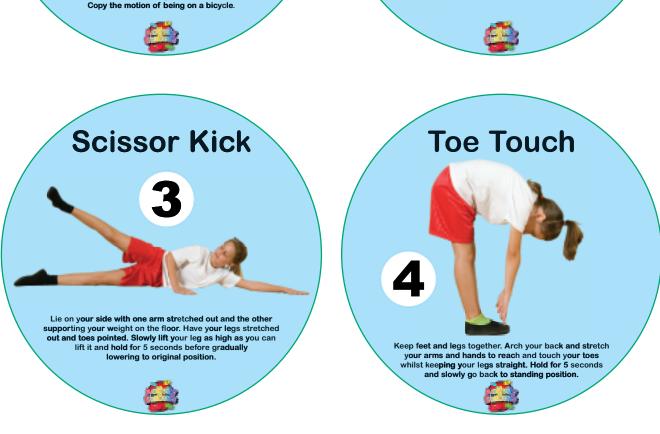
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Draw and annotate your parachute here:	
Draw and annotate year paragraphs.	
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Explain how you improved or refined your design:	
	J



Core Movements

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





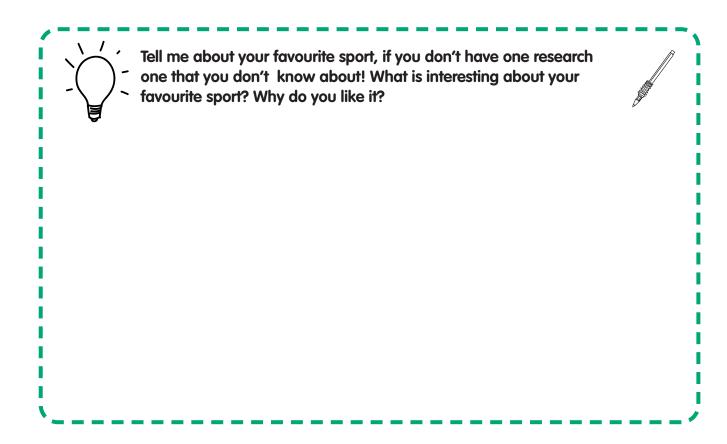
Squat Thrust Squat Thrust Put your hands on the floor, shoulder width apart. Thrust your legs out behind you and in one movement bring both legs back into a tuck position, bending the knees into the chest. Repeat.

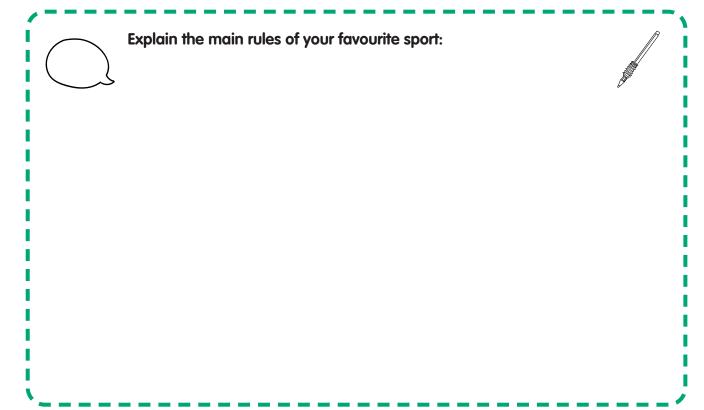


Day	Number of Reps	Signed

Your Favourite Sport

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

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.



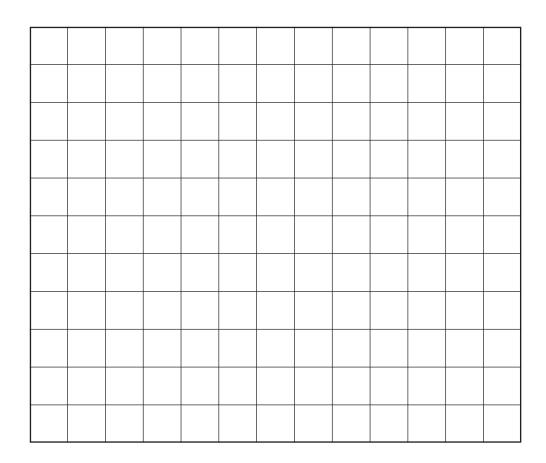


Video Game Design

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.



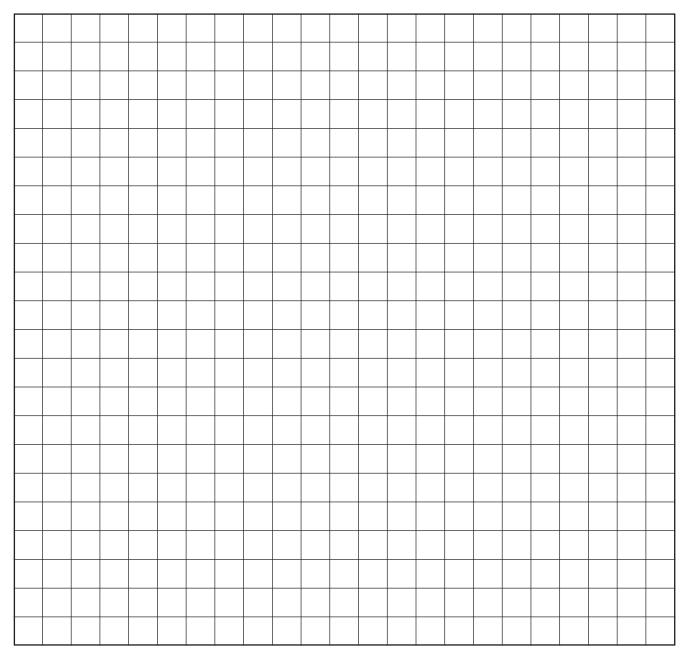




Video Game Design

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.







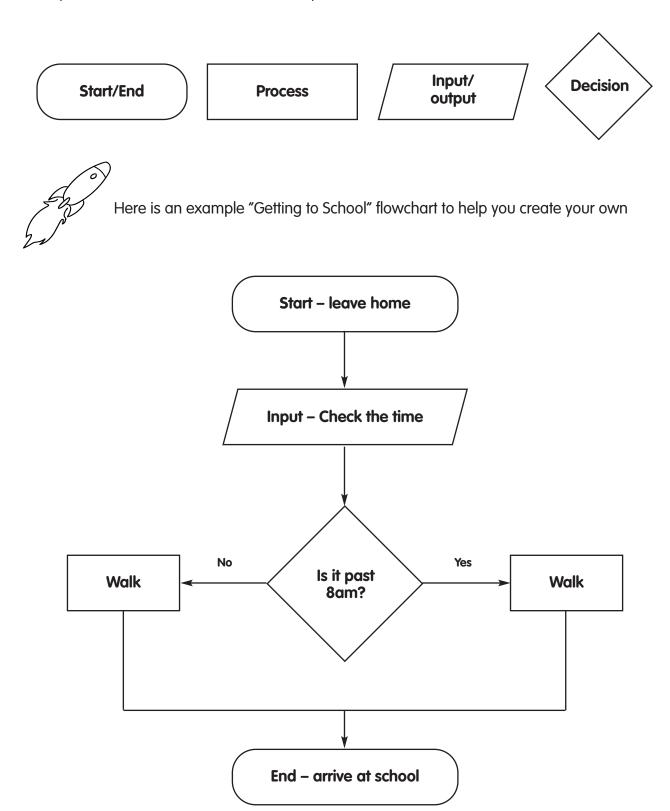
Inputs and Outputs What will the input device be for your game? Draw your preferred device and label it to show how the user will input data.

List the outputs your game will make – think carefully!



Video Game Design

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.







Our World - Night and Day

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.

Earth Tokyo 20:00 (+8 hours) December 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. S 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. London Midday 12:00 New York 07:00 _5 hours) Light rays Hours of daylight Los Angeles 04:00 -8 hours All in a day The Earth spins on its axis every 24 hours. Places which face towards the Sun get daylight. Places which face away from the sun get night. Night and day June z Earth

04 GOO Teaching Atlas

GOO Teaching Atlas 05

2 Why is it daytime on one side of the Earth when it's night time on the other?

1 Why does it get dark?

(?) Questions

1 Make a table comparing differences between night and day where you live: for example, think about what people and animals do.

Challenges

Write a short diary of your day and say what the time is.

Work out what time it is in New York when you start and finish school.

Key words

AxisEarthOrbitSun

(2) Challenges

1 Make a table comparing differences between right 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 you start and finish school.





- 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?

Continents, Countries and Oceans

GOO Teaching Atlas Pacific Ocean **Disputed borders** Some borders are agreed with everyone in the international community. Some borders, like that between Israel and Palestine, are argued over for many years. Ocean Indian ANTARCTICA Ocean 4000 2000 3000 Southern 1000 Atlantic A border control is where the movement of people, animals and goods in and out of a country can be monitored. People arriving from another country usually have to show their passport to get in or out. NORTH Country boundary Continent Ocean Key With no road, only forest and marshland, the 100-kilometre-wide Darién Gap, between the countries of Panama and Colombia, makes travel hard for people and goods. **Border control UK** The Darién Gap appeared that you can call your own! Give this new country a name, design a flag and draw a map of it to show its places and features. Match each continent shown on a globe with those shown on the Which continent do we map and say what you What would happen if and have a section for each continent, where the world didn't have any borders? you can add some important facts. Challenges Design a passport 3 A new island has **ල**ඵල Teaching Atlas Questions **Key words** International live on? Continent can see. Country Border 08 %gogy

Work through the questions and challenges.

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

Continents

World -

	I. Find and list the 5 oceans:				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?		
\	(?) Questions 1 Which continent do we live on?	What would happen if the world didn't have any borders?	_						
	(2) Qui	2 What v the wo any bo		 					

What a Wonderful World

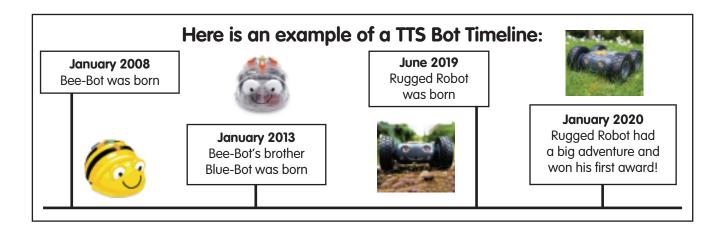
Create an A to Z of words all linked to our wonderful world! Why not illustrate your A to Z too!
A
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My Family Timeline

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.



Historical Timelines

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:

- 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.

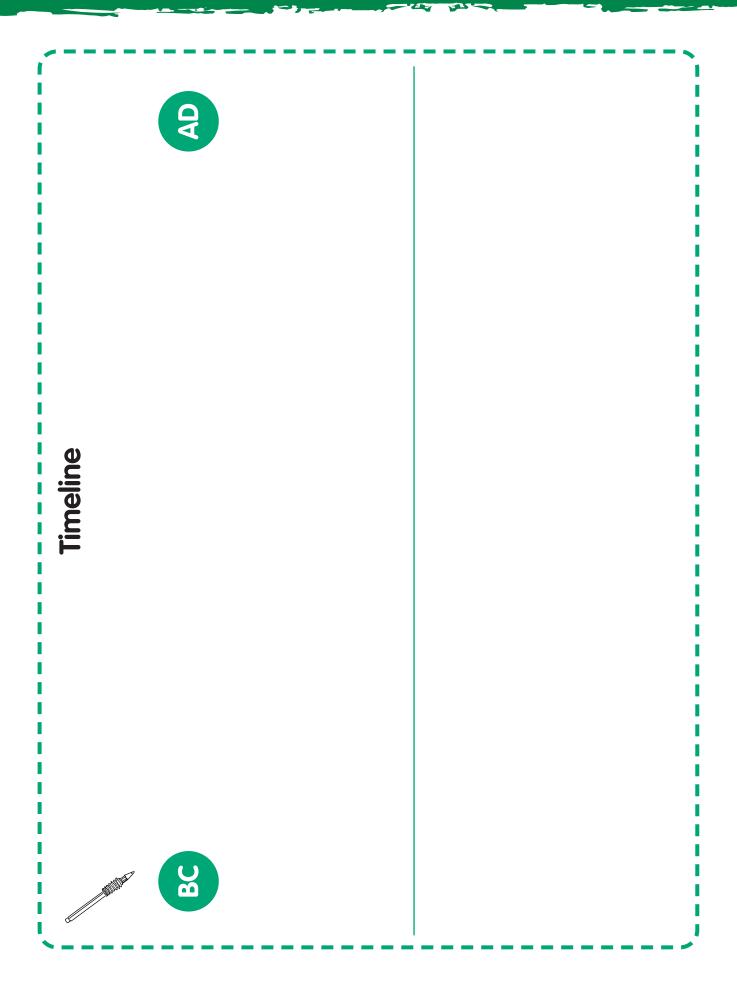
Remember,

- AD is AFTER Jesus was born.
- 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?







Artefacts

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 I artefacts. Answer the questions and see I 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?	
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?



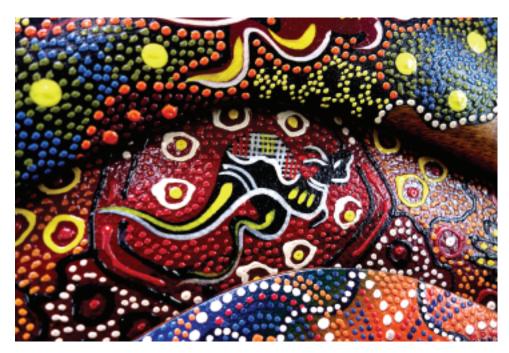




Aboriginal Art

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?









Materials

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:



No. of wooden items:



No. of metal items:



No. of cardboard items:



No. of fabric items:



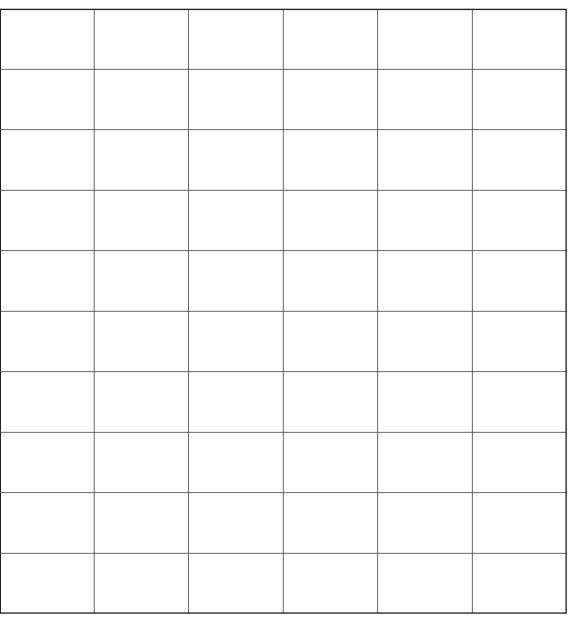
No. of glass items:



No. of plastic items:



Title of your graph:



Which material is there most of in your home?

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?



No bake recipes

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 tbs cocoa (sifted) ¹/₂ cup milk 1/2 cup Nutella (Or any other chocolate spread) 1 tbs vanilla extract 2¹/₂ cups rolled oats 2¹/₂ 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.



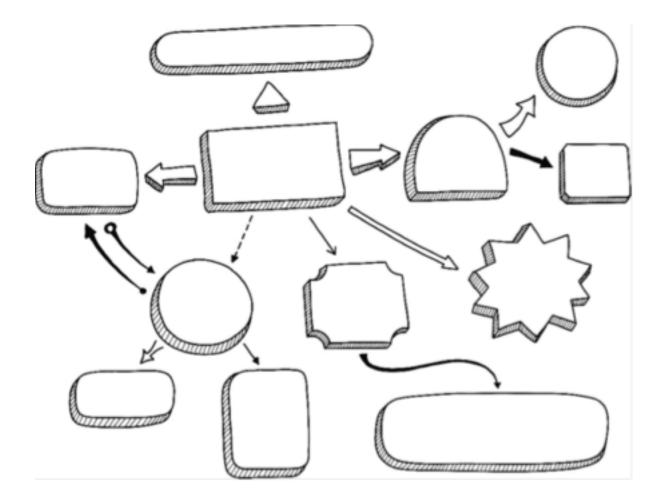
In the space below design a packaging for your sweet treat as if it were to be sold in the supermarket. What material would the packaging be made of? In what shape? What would your product be called? Who would your target audience be? Label your packaging with all these details.





Write a song about your town

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.





B



Write a song about your town

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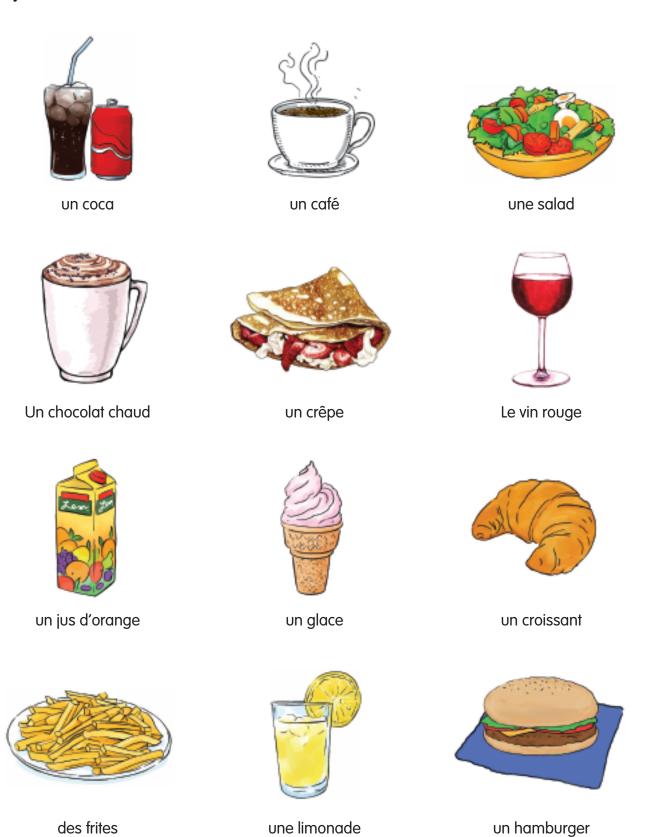


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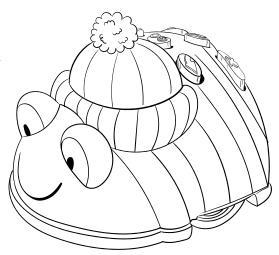


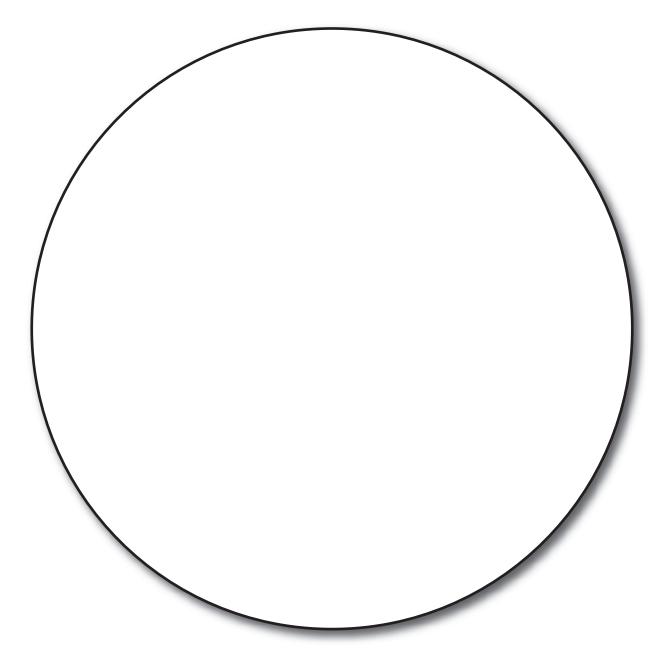
Blue-Bot est en vacances au ski

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.

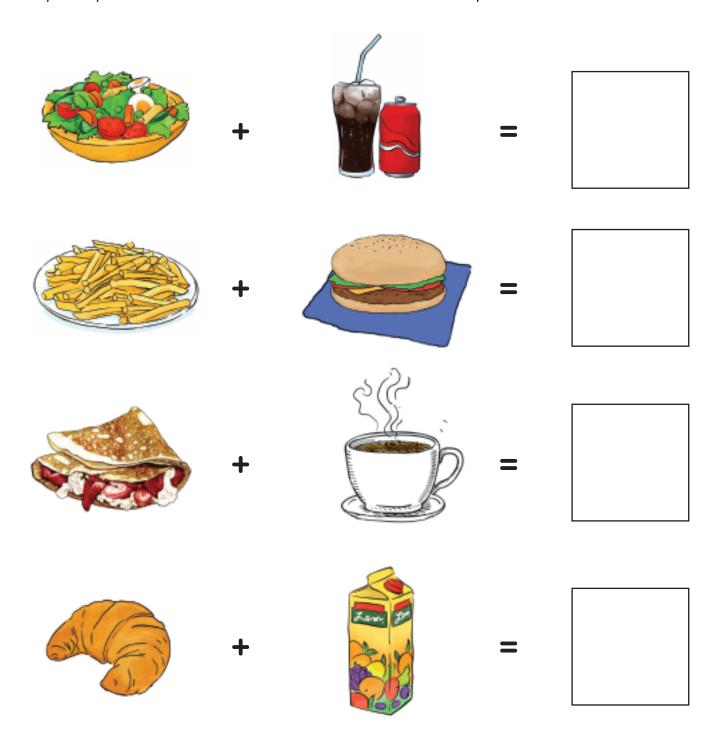






Blue-Bot est en vacances au ski

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.



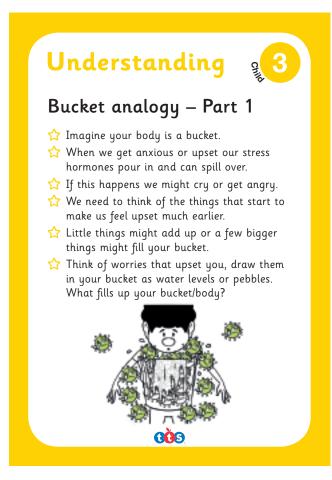
Le Menu Petit déjeuner **Plat Principal Dessert**

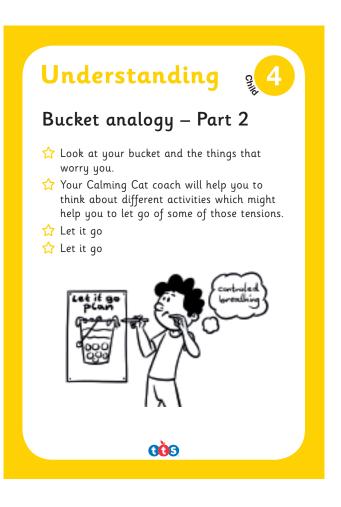
Mindfulness

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.









Skills



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 vourself 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.



Skills



Lion's roar

- Tmagine you are a lion looking for the rest of your pride.
- 🖒 Get the roar to come from the pit of your stomach as you have a long distance to cover.
- 🏠 Take a deep breath in, this will make your roar more powerful.
- Don't roar just from your throat, this might signal you are weak, make a big, strong sound.



Skills



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 difficulties lying for 10 seconds remind them to keep still and praise them for staying as still as they have.

GÖS

Skills



Sleeping lions

- 🟠 Lie still on the floor.
- ☆ Don't move or you are out.
- ** Keep very still.
- ☆ How long can you stay still for?



Skills



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?



Skills



Nature's beauty

- 🖈 Take a deep breath in and out.
- Tmagine 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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Fun



Let's have FUN!

Preparation:

- Know that as stress hormones go up, our feel-good 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.



Fun



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.
- ☆ Let's have FUN!





Resources

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
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

Resources

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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