5-7 yrs

MY ACTIVITY BOOK

A curriculum-focused independent learning resource

Draw a picture of yourself!

This book belongs to:

Class:

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TTS Limited

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Contents

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 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!

Reading Log

Date	Title	Page	Comments

Diary

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

The Things I Like

My name is Sam.
I like to ride on my bike because I like to go very fast.
I like to swim in the sea. It feels very cold.
Sometimes, I like to run very fast. I love to feel the wind on my face.
I also like to read books and play games on my computer.
What about the food that I like? My favourite food is chicken and rice. I like to eat fruit and chocolate.
What do I like to drink? My favourite drink is apple juice and water.
What do you like to do?

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Now you have a go

The Things I Like

This is me!

The Things I Like Questions

1. What is the name of this boy?
2. Why does he like to ride his bike?
3. How does the sea feel?
4. What does he like to eat?
5. What are Sam's favourite drinks?

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1 .....

2 .....

3 .....

4 .....

5 .....

Tongue Twisters

Red lorry, yellow lorry

Tongue Twisters

Peter Piper picked a peck of pickled peppers

Tongue Twisters

Freshly fried flying fish

Tongue Twisters

Black bug's blood

Tongue Twisters

Greek grapes, Greek grapes, Greek grapes

Tongue Twisters

Crisp crusts crackle and crunch

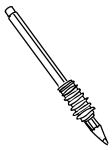
Tongue Twisters

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.

Tricky Words

Information for Grown Ups

Tricky words do not follow the usual phonic patterns so cannot be sounded out but need to be learned by sight.

If possible, read a version of 'The Three Billy Goat's Gruff' together. Tell children that Tricky Troll is the troll from this story. He is very grumpy and likes nothing better than to trick children by giving them words that are difficult to read and spell!

Play the Tricky Word dice game for 2 players

You will need:

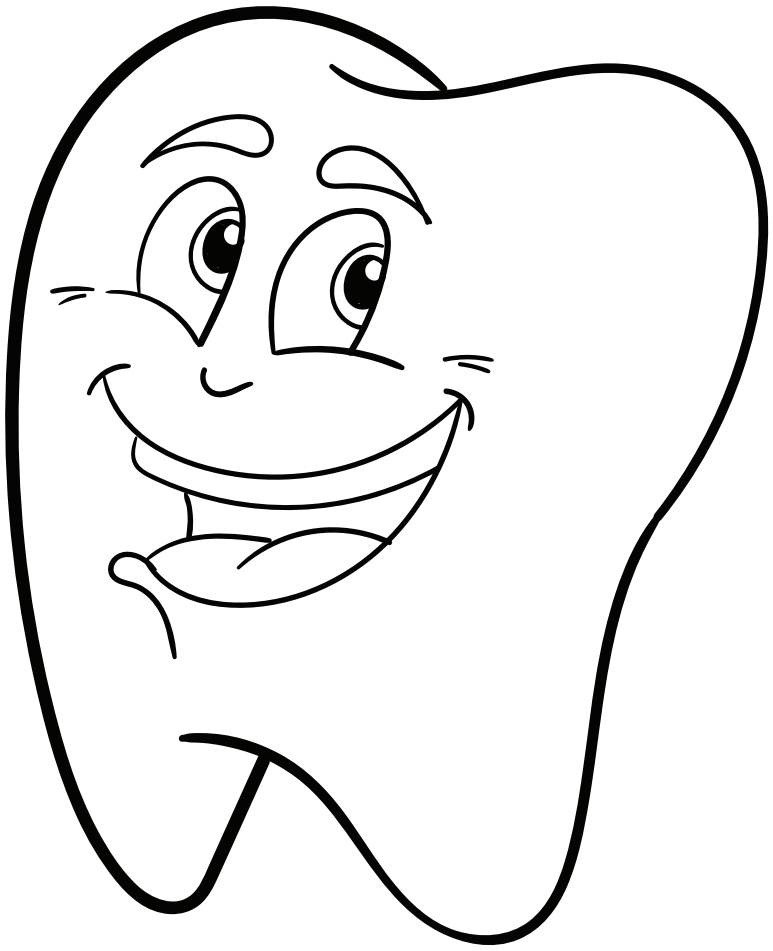
- A dice and counters (of 2 different colours)

How to play

- One at a time, each player roles the dice and chooses one of the words under that number.
- If they read and/or spell the word correctly, they may place a counter over it.
- If there are no words left under the number thrown, miss a go.
- The player with the most counters at the end is the winner.

I	no	go	the	to	into
he	she	we	me	be	you
are	her	was	all	they	my
said	have	like	so	do	some
come	little	one	were	there	what
when	out	Mrs	people	asked	could

Timmy the Tooth



I'm Timmy the Tooth
I'm shiny and white
I like you to brush me
Both morning and night
I'm very important
When you need to eat
I'm so good at biting
Potatoes and meat

When you eat an apple
I'll help you to chew
And when food is hard
Then I know what to do

But I have a weakness
For when you have treats
Like sugary snacks
And packets of sweets

The sugar attacks me
It causes decay
Holes start appearing
And I wear away

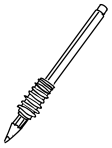
Sugar is hard on me
Makes me go bad
If you eat a lot of it
I will feel sad

Please limit your sugar
A little's enough
Then I can be healthy
And stay good and tough

Read the poem Timmy the Tooth. Can you read it out loud? Can you learn the first verse (or even more) off by heart?

Now try these questions!

1. What is the name of the tooth?
2. Why do you think the author chose that name? Can you think of another name that would have had the same effect?
3. How many verses does this poem have?
4. Find the word 'chew' in the 3rd verse. Which word rhymes with it in the poem? Can you think of any other words to rhyme with 'chew'?
5. What is the poem trying to persuade you to do? Does it work?



1 .....

2 .....

3 .....

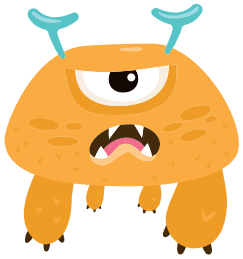
4 .....

5 .....

Acrostic Poetry

Acrostic poems are fun! The first letter in each line spells out a word. They do not have to rhyme, but the words should be carefully chosen for the best effect.

ALIEN



Awesome aliens have
Landed on Earth
Incredible but true
Everyone is flabbergasted
No one can see them but you!

SPACE

Starry
Perfect
Amazing
Constellations surrounding
Earth

Now try writing your own poems and add pictures too!

ALIEN

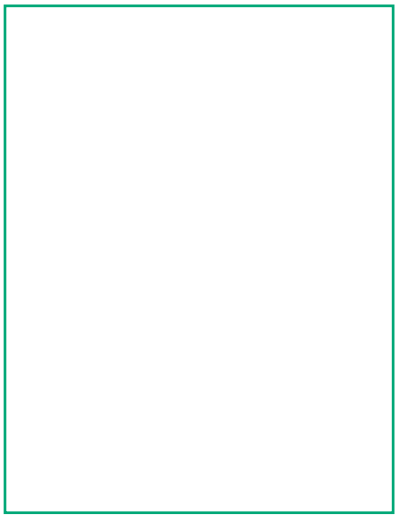
A.....

L.....

I.....

E.....

N.....



SPACE

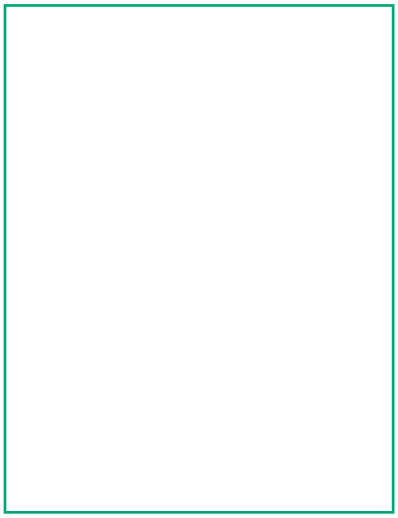
S.....

P.....

A.....

C.....

E.....



If you love learning about space, the following websites are out of this world!

https://spaceplace.nasa.gov/menu/play/ or

http://www.spacekids.co.uk/learn/

Space Stories

Read a book about space or aliens.

These books are SPACETASTIC! You might find them in the library but many are also available to listen to and watch online.

'Aliens Love Underpants' by Colin McNaughton

'Q Pootle 5' and **'Q Pootle 5 in Space'** by Nick Butterworth

'Beegu' by Alexis Deacon

'The Way Back Home' or **'How to Catch a Star'** by Oliver Jeffers.

'Goodnight Spaceman' by Michelle Robinson

'One Giant Leap: The Story of Neil Armstrong' by Don Brown

'Look Inside: Space' by Rob Lloyd Jones.

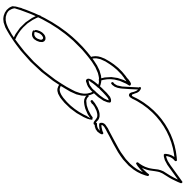
When you have been inspired, try writing a story of your own.

You might use one of these ideas to start you off…

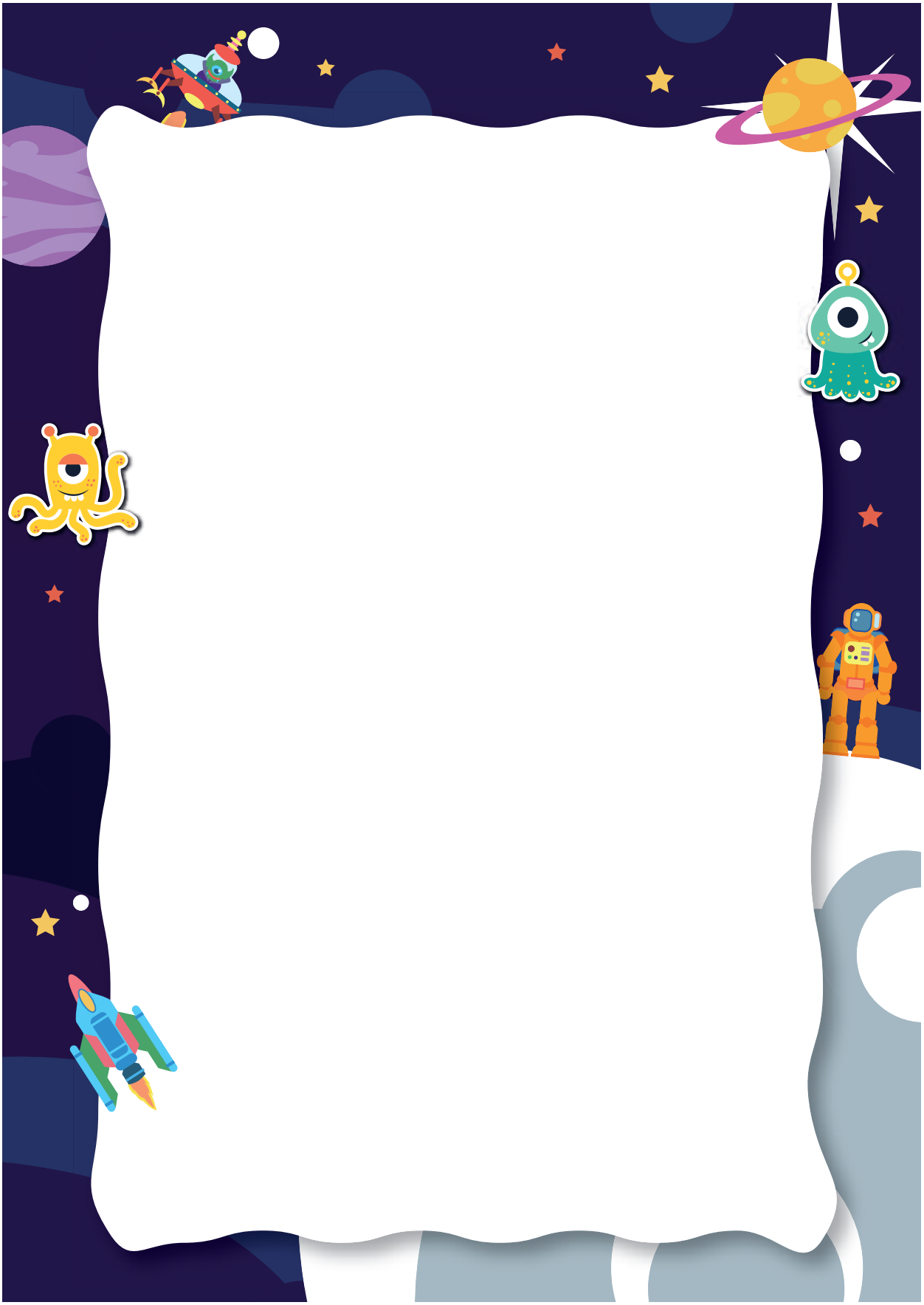
"Put the rubbish out!" yelled mum. I lifted the lid of the dustbin and a small, green creature looked up at me…

Last Monday I was on my way to school when I saw what looked like a space rocket at the side of the road. It was making a loud rumbling noise and smoke was coming from the bottom. "Quick, get in! We're blasting off in 10 seconds…

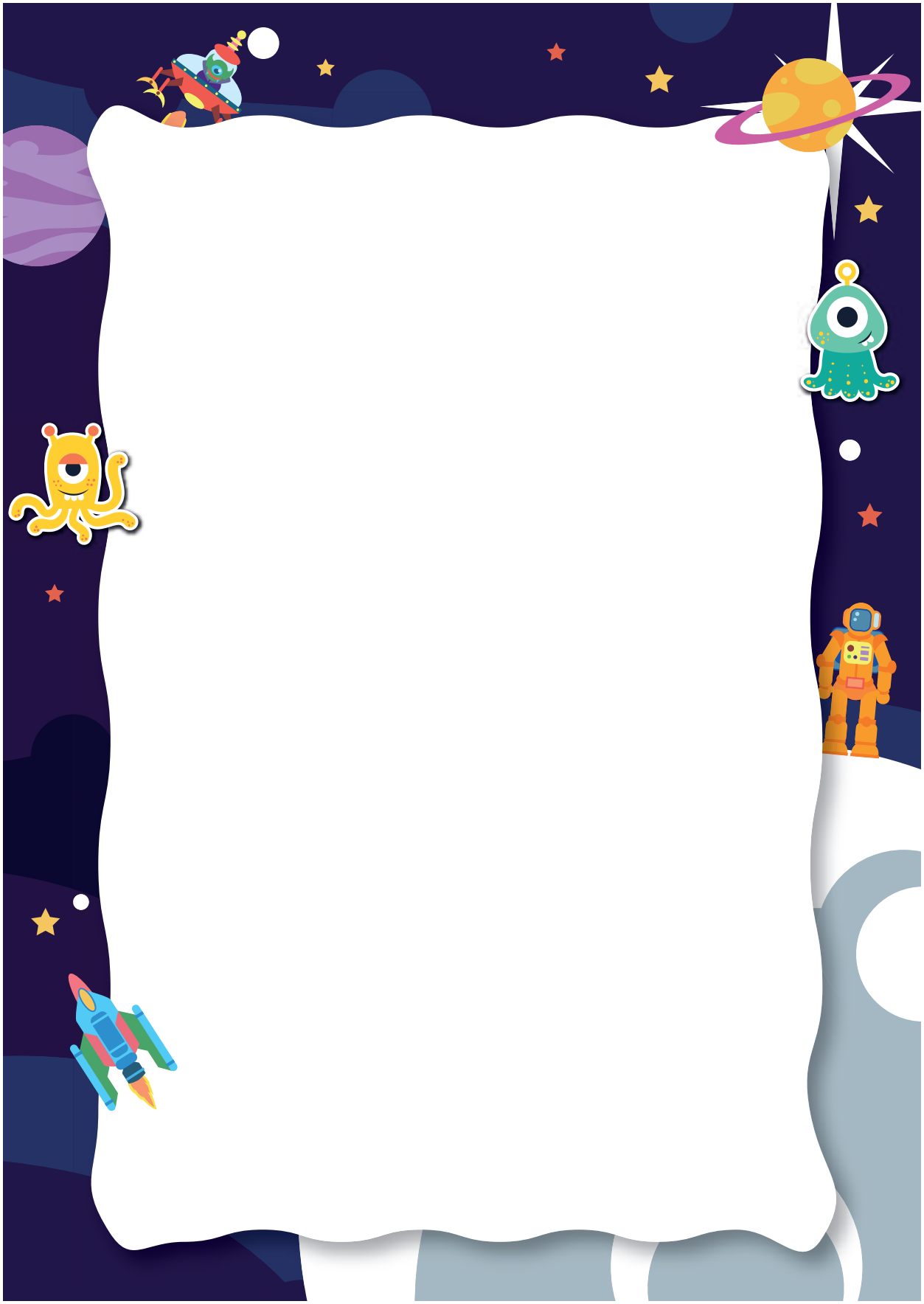
5, 4, 3, 2, 1… BLAST OFF!"



Use pages 19, 20 or 21 to write or draw your own story.



Space Stories



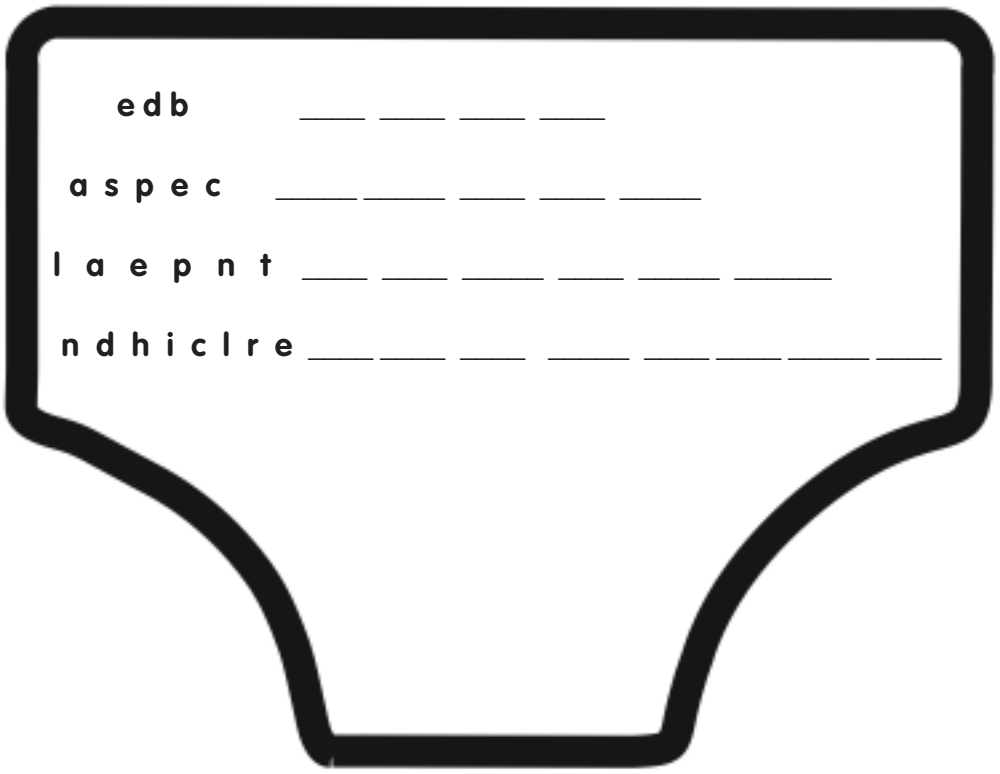
Word/story mat

strange
flying saucer
blast off
space
outer space
slimy
scaly
air
oxygen
scary
astronaut
space suit
sun
night
dark
Moon
alien
rocket
Mars
Earth
stars
planet
spaceship
human

Underpants Anagram Challenges

Those naughty aliens have been at it again, stealing underpants!

They have mixed up these 4 words. Can you work out what they should be?



Anagram Challenge

Find as many words as possible using letters from the word

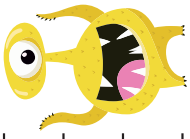
underpants

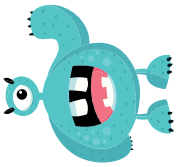
There are 100s of possible words, using from 1 to 8 letters. You may only use each letter once per word (except n which is there twice)

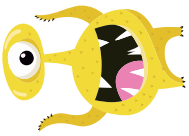
If it is helpful, cut out the pictures of underpants from the back of the book so that you can swap letters around to find more words.

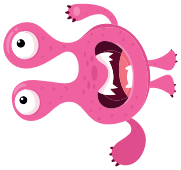
Make as many words as you can from the letters in

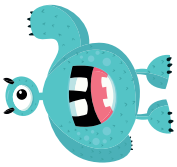
underpants











Learn to Fingerspell

Have you heard about 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.

Why should we learn it?

Firstly, it can be picked up very quickly and is great fun. It's a bit like learning a secret code.

Secondly, it is a new and different way to learn the alphabet and perhaps practise spelling.

Last, but not least, more people will be able to communicate in a small way with a deaf or hearing impaired person.

Try fingerspelling!

Begin by learning the vowels - a, e, i, o, u. They are shown by pointing to each finger in turn, starting with the thumb.

Next try finding the signs for your name.

Can you sign a whole sentence?

BRITISH SIGN LANGUAGE - **FINGERSPELLING**

LEARN BRITISH SIGN LANGUAGE ONLINE AT
WWW.BRITISH-SIGN.CO.UK

british-sign.co.uk

Letter from the 3 Bears

To the parents or guardians of Goldilocks,

We are writing because we think you should know about the naughty behaviour of your daughter, Goldilocks.

We live in the yellow cottage in the middle of the wood and today, we returned from our walk to find our house had been broken into.

As well as helping herself to our porridge, which had been left to cool down, Goldilocks had also broken one of our chairs! Baby Bear was most upset, because it was his own special chair and it now needs mending.

We are sure it was your daughter because we found her asleep in a bed upstairs. She woke up as we came into the room and rather than saying sorry, she just ran away without a word. Very rude!

We are sure you will agree that Goldilocks should be punished in some way. We would suggest that she is not allowed to play out for at least a week. She should certainly stay away from our cottage, unless she would like to apologise.

Yours faithfully,

The 3 Bears

1. Who is this letter from?
2. Why are they writing it?
3. What do you think they were most upset about?
4. How do they think Goldilocks should be punished?
5. Do you think Goldilocks should apologise?
6. Pretend you are Goldilocks. Write a note or card to say sorry to the bears.

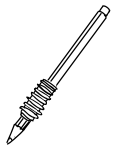
1 .....

2 .....

3 .....

4 .....

5 .....



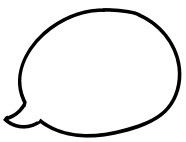
6. Note to the Bears…

Numbers

Try some number activities like these every day to help develop your number skills!

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

Counting Activity Ideas



- Start from 0 and count in 1's, 2's, 5's or 10's.
- 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. Can you count up to find the hidden numbers?

Oh dear! Bee-Bot has jumbled up these numbers.
Can you help to put them in order?

1.

33	6	39	21	67

2.

92	37	8	44	18

3.

50	4	23	99	51

You could try making some more of your own

Fill in the missing numbers.

1. 2, 4, _____ , 8, _____12.

2. 30, _____ , 50, _____ , _____ , 80.

3. 15, 20, _____, 30 _____ , _____, 45.

Now try making some of your own:

4. _____ , _____ , _____ , _____ , _____ .

5. _____ , _____ , _____ , _____ , _____ .

Number Bonds

Number Bonds are pairs of numbers that make up a given number.

Can you write down all the Number Bonds to 10?

Now a bit trickier...

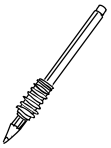
Can you write down all the Number Bonds to 20?

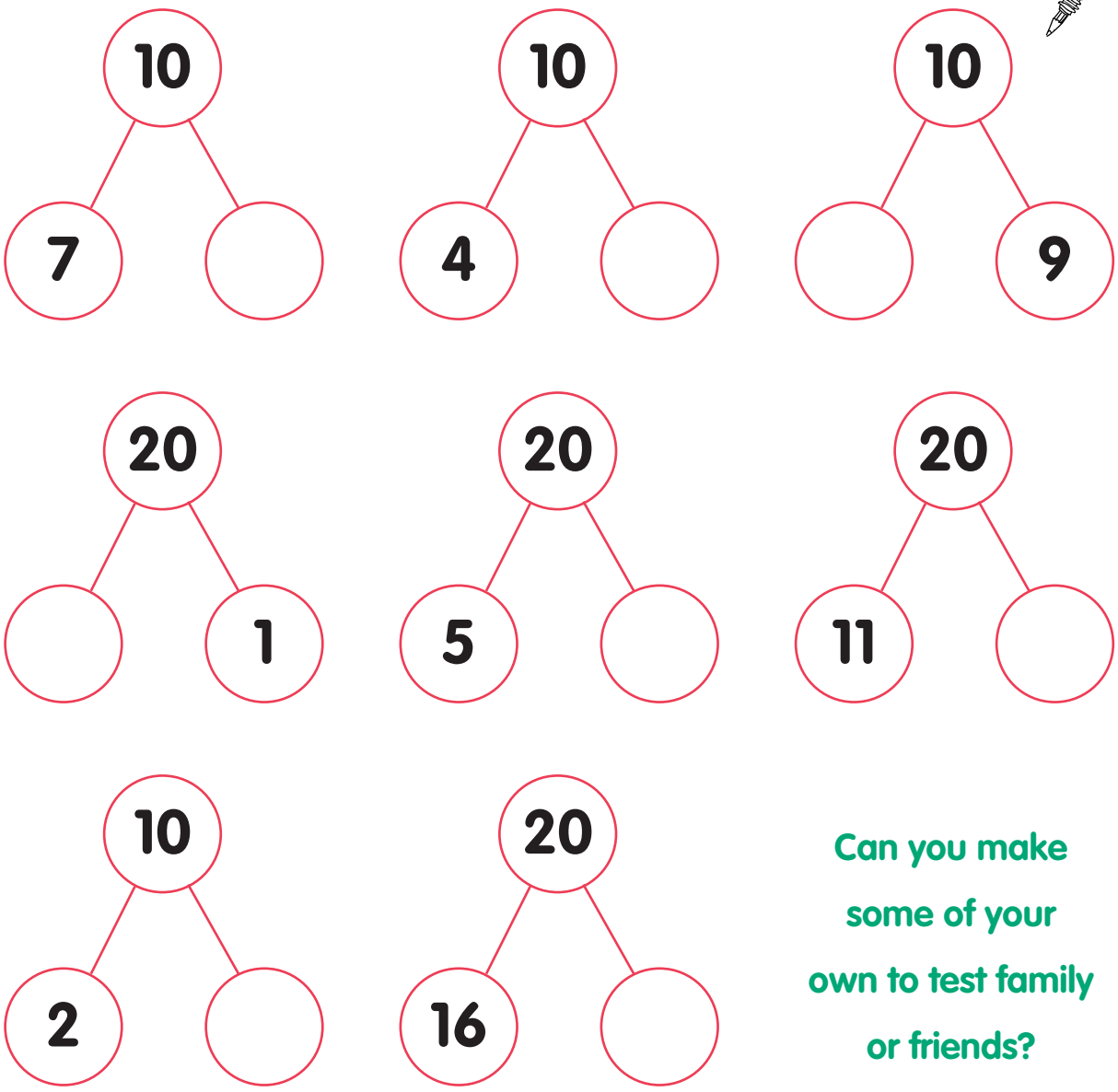
Tip: try counting out 20 objects and use them to help you.

Play 'Number Bond Ping Pong'

- Player A says a number to 10/20 (say it while pretending to swing your racket).
- Player B 'hits' back the number bond to 10/20
  E.g. Player A – 4" Player B – 6"
- Keep going until you 'miss a ball' and make a mistake, then swap over!

Can you fill in the circles with the correct Number Bond?





Can you make some of your own to test family or friends?

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 2x, 5x and 10x table!

2x

1	x	2	=	2
2	x	2	=	4
3	x	2	=	6
4	x	2	=	8
5	x	2	=	10
6	x	2	=	12
7	x	2	=	14
8	x	2	=	16
9	x	2	=	18
10	x	2	=	20
11	x	2	=	22
12	x	2	=	24

5x

1	x	5	=	5
2	x	5	=	10
3	x	5	=	15
4	x	5	=	20
5	x	5	=	25
6	x	5	=	30
7	x	5	=	35
8	x	5	=	40
9	x	5	=	45
10	x	5	=	50
11	x	5	=	55
12	x	5	=	60

10x

1	x	10	=	10
2	x	10	=	20
3	x	10	=	30
4	x	10	=	40
5	x	10	=	50
6	x	10	=	60
7	x	10	=	70
8	x	10	=	80
9	x	10	=	90
10	x	10	=	100
11	x	10	=	110
12	x	10	=	120

Learning Tips

- March like a soldier and chant the multiplication tables e.g. 1x5 = 5, 2x5 = 10…
- Play multiplication ping pong with one person batting the question and the other batting back the answer.

Quick Questions

1. 2 x 5 = ...

2. 5 x 10 = ...

3. 7 x 2 = ...

4. 6 x 10 = ...

5. 2 x 2 = ...

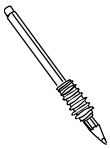
6. 3 x 2 = ...

7. 8 x 5 = ...

8. 1 x 10 = ...

9. 12 x 2 = ...

10. 4 x 5 = ...



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?

What's missing?

a) 11, 13, __, __, 19, 21, __

b) 83, 73, __, __, 43, 33, __

Explain what is happening and find the missing numbers

Can you see any patterns?

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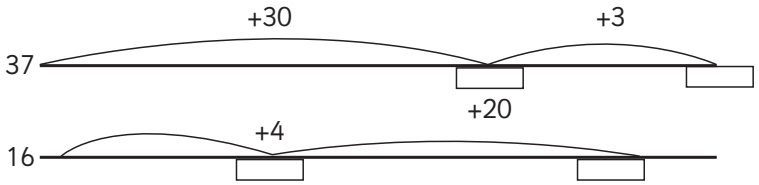
WHAT'S MISSING?

What's missing?



Can you fill in the missing numbers by counting on?

Could you put different numbers instead of 37 and 16 and still make it work?

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What's missing?

WHAT'S MISSING?

4__2 = 7 __ 1
15__5 = 3__7
7__5 = 10__2
10__4 = 8__2
3__2 = 4__2
10__2 = 19__1

Find the correct operation signs to balance the equations

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What's missing?

WHAT'S MISSING?

a) 28, 33, 38, __, __ 53, __

b) 1, 4, 7, __, __, 16, __

Explain what is happening and find the missing numbers

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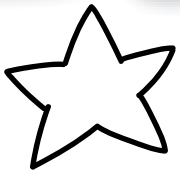
Dip & Pick

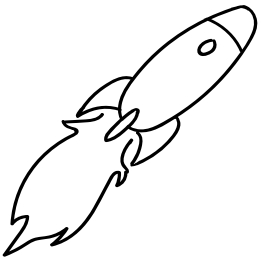
Sam has 4 marshmallows on his ice-cream. Jake has double the amount on this. How many marshmallows does Jake have on his ice-cream?

On Brad's ice-cream there are 14 marshmallows. He has double the amount that Jill has. How many marshmallows does Jill have on her ice-cream?

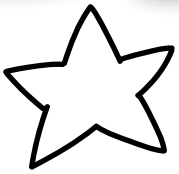


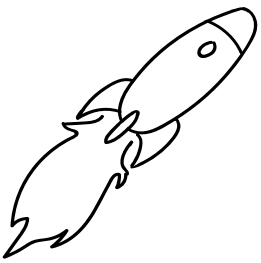
Sam has 6 marshmallows on his ice-cream. Jake has double the amount on his. How many marshmallows does Jake have on his ice-cream? Jake's dad gives him 8 more marshmallows. How many does Jake have now?

Sam has 4 marshmallows on his ice-cream. Jake has double the amount on his. Jake's dad gives him 8 more marshmallows. How many does Jake have?



There are 20 marshmallows in a shop. John buys 6 marshmallows. Olivia wants to buy double the amount that John has. Are there enough marshmallows? Explain how you know.





Bee-Bot has been struggling with his maths.

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

I am an odd number
less than 6.

What numbers could I be?

Product Code: MA10014 - 11 - 17 Made in UK

Chose two digit cards from below to make the number sentence correct.

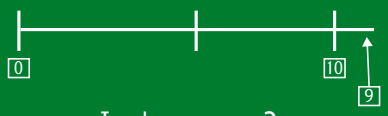
6	3	5	4

One less than [?] is [?]

Find three ways to do it.

Product Code: MA10014 - 11 - 17 Made in UK

Anna has placed the number 9 on the number line.

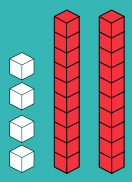


Is she correct?

Explain your thinking.

Product Code: MA10014 - 11 - 17 Made in UK

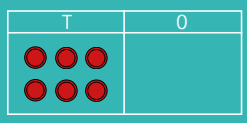
Chloe says she has 42.



Is she correct?
Explain your thinking.

Product Code: MA10016 - 11 - 17 Made in UK

Ben says the place value grid shows the number 6.



Is he correct?
Explain your thinking.

Product Code: MA10016 - 11 - 17 Made in UK

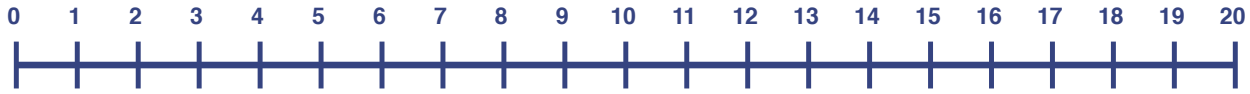
Use the digit cards 2, 6, 3 and 5.

2	6	3	5

Write all the two-digit numbers you can make, that are less than 50.
How do you know you have them all?
Convince me.

Product Code: MA10016 - 11 - 17 Made in UK

Record your answers and working out here.



1.

2.

3.

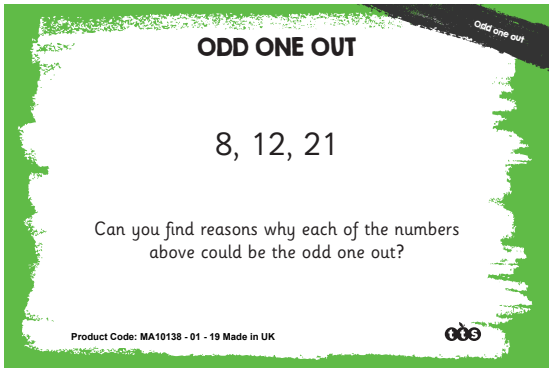
4.

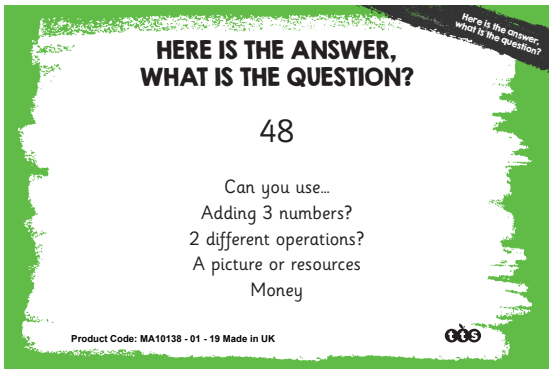
5.

6.

Reasoning

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





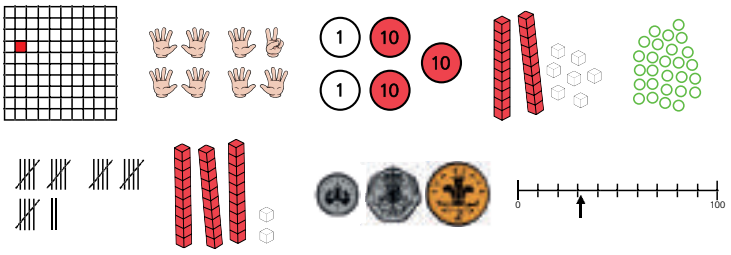
Silly or correct answer

CORRECT ANSWER

Find the correct answers for

Images of 32

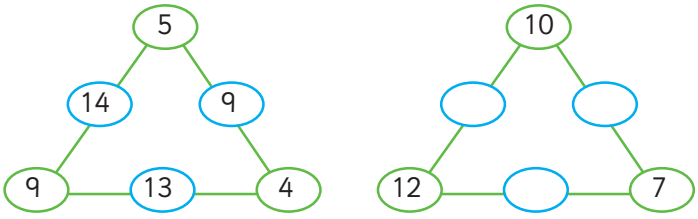
Which of these images below show the number 32?



Product Code: MA10138 - 01 - 19 Made in UK

What's missing?

WHAT'S MISSING?



Explain what is happening and find the missing numbers

Product Code: MA10138 - 01 - 19 Made in UK

Prove It!

You are a Maths Superstar!

Time to show off and 'prove' what you know and can do!

I can tell you the missing numbers in this number track.

10	15	20		30	35				55

PROVE IT!

Product Code: MA10034 - 02 - 18 Made in UK

True or false?
If I count in steps of 10 from 7, I will say the number 70 in my count.

PROVE IT!

Product Code: MA10034 - 02 - 18 Made in UK

I can show 46p using 10p and 1p coins.

PROVE IT!

Product Code: MA10034 - 02 - 18 Made in UK

True or false?
There are eleven different pairs of numbers with a total of 11.

PROVE IT!

Product Code: MA10034 - 02 - 18 Made in UK

Problem Solving

Have a go at these tricky problems!

1.

NUMBER & PLACE VALUE

TALK

Look at this set of numbers.

9, 3, 14, 18, 6

Which is the largest number?
Which is the smallest number?
Which number is one more than 13?
Which number is one less than 10?

Product Code: MA00468 - 11 - 18 Made in UK

2.

ADDITION & SUBTRACTION

Farmer Large has 5 sheep, 2 goats and 8 cows.

How many animals does he have altogether?

Product Code: MA00468 - 11 - 18 Made in UK

3.

MEASURES - MONEY

TALK

Ruth bought an ice-cream for 12 pence.

Which coins could she have used to pay for it?

Product Code: MA00468 - 11 - 18 Made in UK

4.

NUMBER & PLACE VALUE

TALK

Henry says that 64 can be partitioned into 50 + 14 but Lewis disagrees and says it can only be partitioned into 60 + 4.

What do you think?

Can you find a different way to partition 64?

Product Code: MA00469 - 11 - 18 Made in UK

5.

ADDITION & SUBTRACTION

Write four number sentences using the numbers

25, 9, 34

Product Code: MA00469 - 11 - 18 Made in UK

6.

MEASURES - MONEY

Sam finds 73p down the side of the sofa.

What is the highest number of coins Sam could have found?

What is the lowest number of coins Sam could have found?

Product Code: MA00469 - 11 - 18 Made in UK

Record your answers and working out here.

1.

2.

3.

4.

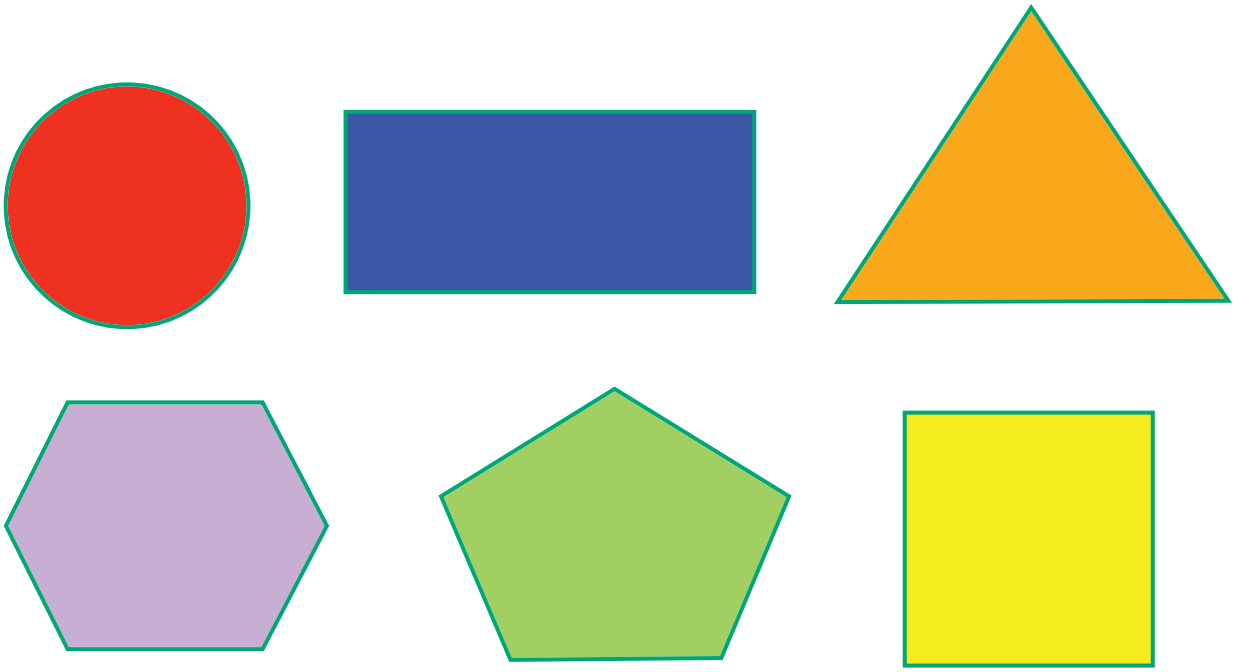
5.

6.

Shape Hunt!

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

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



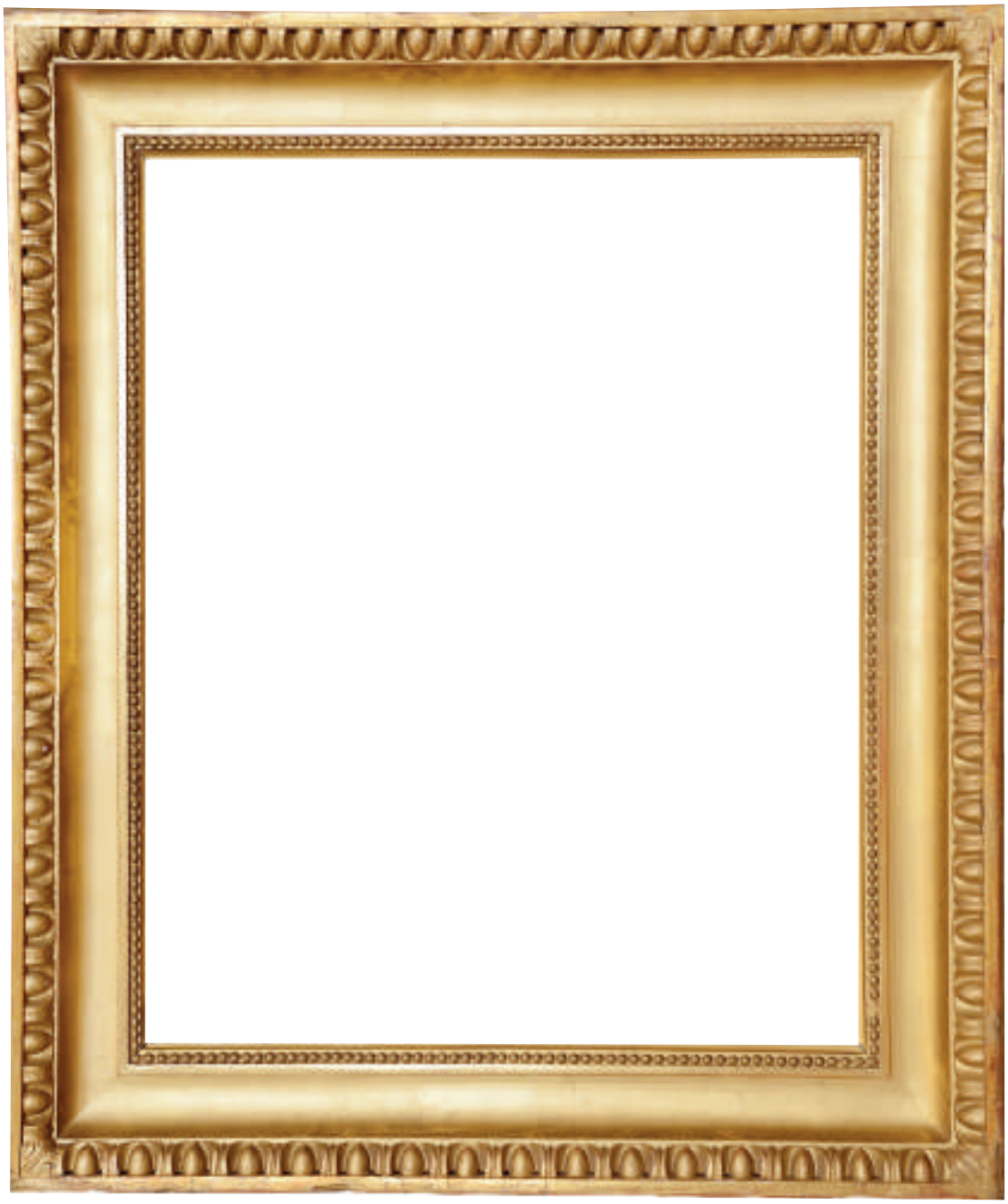
What can you find?

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

Here is one to get you started.

dining table top – rectangle

Draw your own picture using 2D shapes



What shapes have you used in your picture?

Kitchen Science: Raisin Bubble Boogie

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

This experiment is really easy to set up and will help children develop their understanding of floating and sinking, liquids and gases.

What you need

- A bottle or glass of clear fizzy drink (e.g. lemonade, tonic or soda water – freshly opened)
- A handful of raisins (4 or 5 will suffice)

What you do

This one couldn't be simpler: pour out a glass of fizzy drink and drop in the raisins.

Now watch the raisins dance!

What's happening?

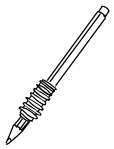
The raisins are initially too heavy to float, so they sink into the drink. The drink itself contains carbon dioxide (CO_2) gas, which has been forced into the drink at high pressure. When a bottle is opened, some of this gas escapes immediately (you hear the whoosh as it rushes to escape) but the rest remains in the liquid for quite a while. You may notice that bubbles form on the sides of the container first.

Tiny imperfections in the glass/plastic make ideal sites (known as 'nucleation sites') for bubbles of gas to form. Dropping anything else into the drink will provide more of these sites, so more bubbles are produced. Raisins have a pitted surface, which makes them ideal for the formation of gas bubbles. When the raisins reach the bottom, bubbles of CO_2 form and attach themselves to the raisins. These act like floats for the raisins and together they rise to the surface. Here, the gas bubbles burst into the air, leaving the raisins without their floats to sink again.

The process repeats and the raisins dance up and down! This will continue only whilst the drink is still fizzy – as more bubbles burst at the surface, fewer remain in the drink, until eventually it will become 'flat'.

Encourage your children to try other small food items to see which ones float, sink or dance. Broken pieces of spaghetti, numerous other pasta shapes, lentils, uncooked popcorn and some berries will also dance. Look at the surface of each item and try to predict which will work well.

Draw your experiment and label what happened!



STEM Activity

ACTIVITY 1 | SAILING BOAT

KS1/2

STEM Learning Objectives:

Science:
Explore resistance in water by making and testing a boat.

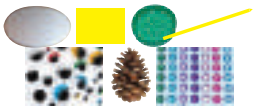
Technology:
Use a range of tools, equipment, materials and components.

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
- Pencil
- Hole punch
- Water tray

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

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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.

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Draw and annotate your sailing boat here:

Explain two improvements you could make to your boat:

STEM Activity

ACTIVITY 5 | EGG PARACHUTE

KS1/2

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, foam cup
- Thin string
- A hard boiled egg
- A raw egg

Tools:
- Scissors
- Transparent sticky tape
- Stopwatch

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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 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 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.

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Draw and annotate your parachute here:

What was the result of your first test?

Explain how you improved or refined your design:

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.

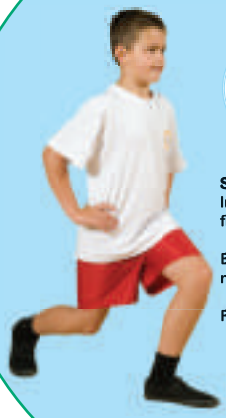
Bicycle Kick

1

Lay flat on your back with your arms and hands straight and touching the floor.
Copy the motion of being on a bicycle.

Lunging

2



Stand with your legs together and then lunge forward until one leg is right out in front of you.

Bend your knee and flex your hip so your rear leg is almost in contact with the floor.

Finally, return to your starting position.

Scissor Kick

3

Lie on your side with one arm stretched out and the other supporting your weight on the floor. Have your legs stretched out and toes pointed. Slowly lift your leg as high as you can lift it and hold for 5 seconds before gradually lowering to original position.

Toe Touch

4

Keep feet and legs together. Arch your back and stretch your arms and hands to reach and touch your toes whilst keeping your legs straight. Hold for 5 seconds and slowly go back to standing position.

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?

Tell me about your favourite sport, if you don't have one research one that you don't know about! What is interesting about your favourite sport? Why do you like it?

Explain the main rules of 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.

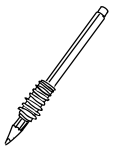
The rings represent all the colours of the flags in the world.

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.



Bee-Bot at the Zoo

Bee-Bot is having a lovely day at the Zoo! It is so hot that he has had to stop for an ice cream! But Oh-no! Bee-Bot has lost his map of the Zoo! Can you help him find his way around the animals? Start every activity at the ice cream van and draw the arrows in sequence to build your algorithm.

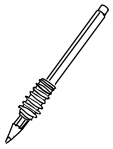
Forwards

Backwards

Left Turn

Right Turn

Go



Visit the Lions

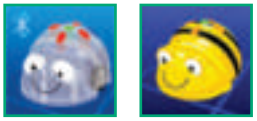
Visit the Pandas

Visit the Tigers and then the Meerkats

Visit the Polar bears and then the Penguins

Use the cut-out Bee-Bot from the back of the book to help you.

For more computer science activities check out the Bee-Bot and Blue-Bot App



Information Technology all around us!

Information technology is all around us in our everyday lives!

It's in our pockets….

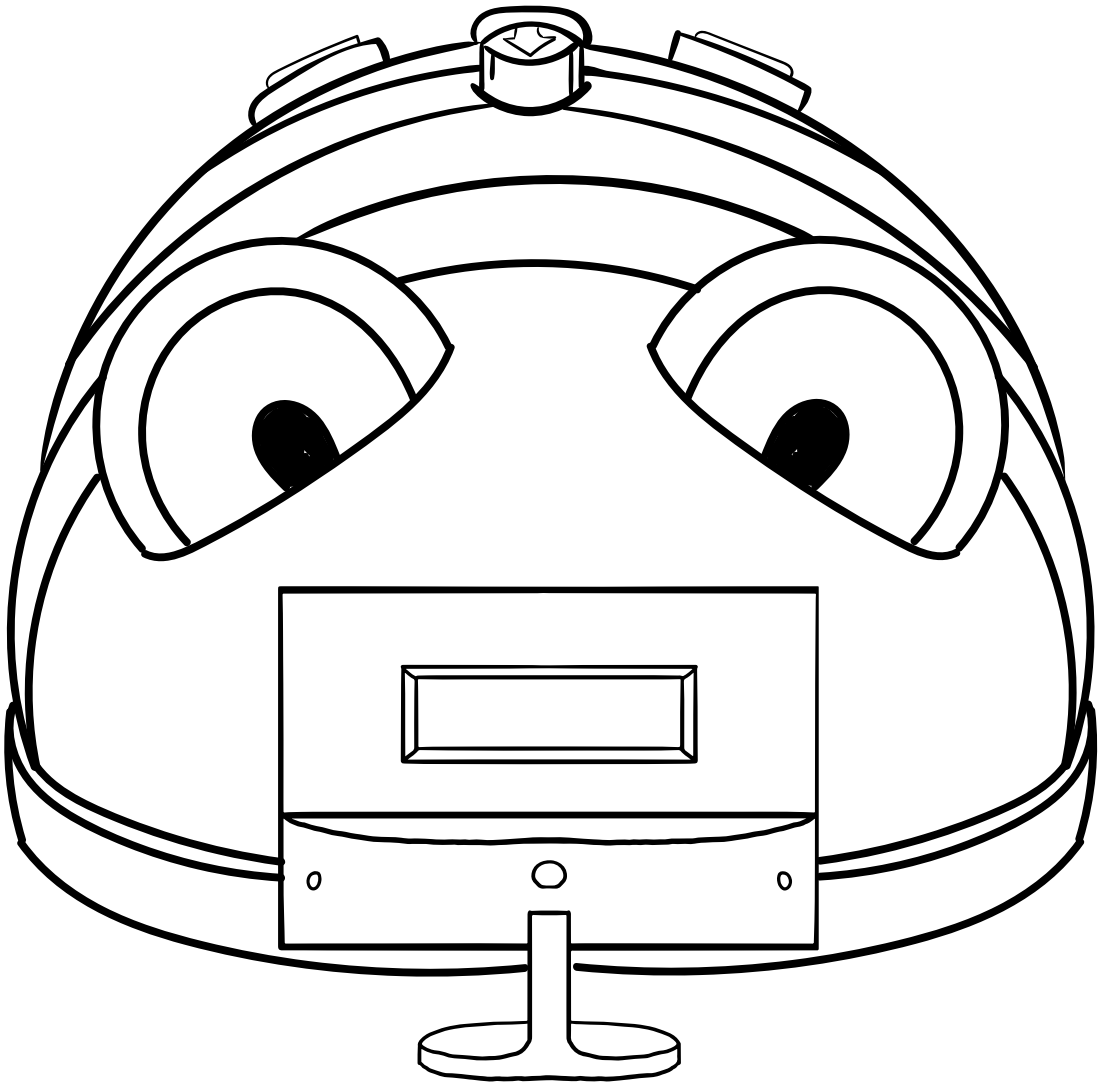
It helps us pay for our food at the supermarket.

We take it on holiday to take photos and record our memories digitally…

What examples of information technology do you have in your house?

Draw and label some of the technology found in your home:

Bee-safety



Bee-Bot loves to use the internet. He loves playing games and watching videos of flower gardens. He knows that to stay safe he should follow some simple rules.

- If he is going online he makes sure that someone knows – like his big brother Blue-Bot.
- He only talks online to people he knows in real life – not strangers.
- If something doesn't seem right or upsets him he lets Blue-Bot know straight away.
- If he needs more information he looks online for more information at **www.thinkuknow.co.uk/**

Create an e-safety poster which could be used in school to help keep your friends safe online:

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 you start and finish school.

Key words

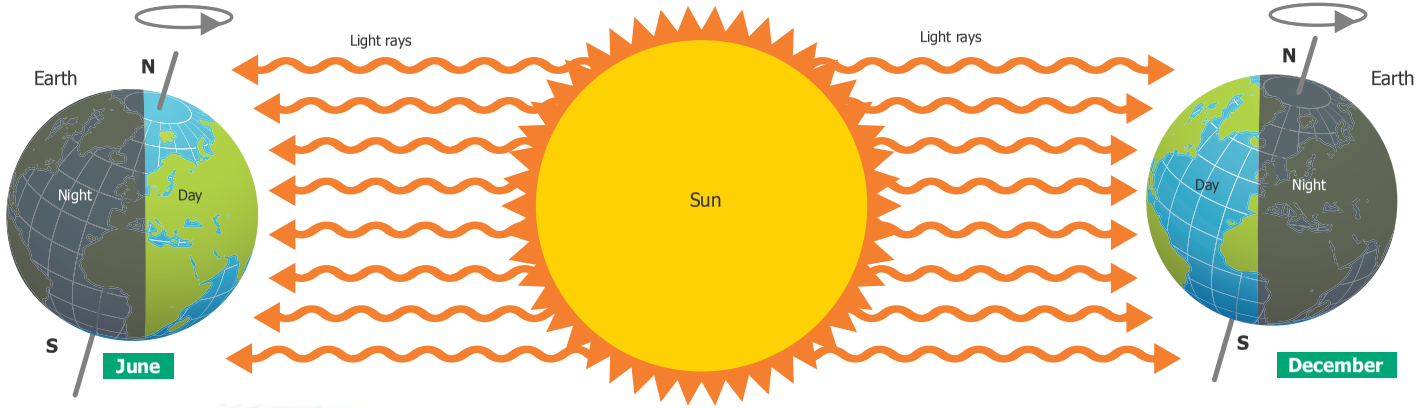
- Axis
- Earth
- Orbit
- Sun

Night and 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.

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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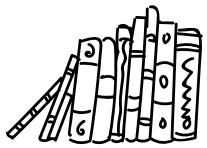
Questions

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 you start and finish 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?

Challenges

1 Match each continent shown on a globe with those shown on the map and say what you can see.

2 Design a passport and have a section for each continent, where you can add some important facts.

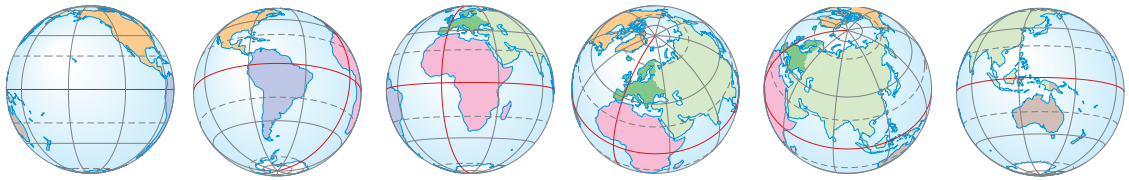
3 A new island has appeared that you can call your own! Give this new country a name, design a flag and draw a map of it to show its places and features.

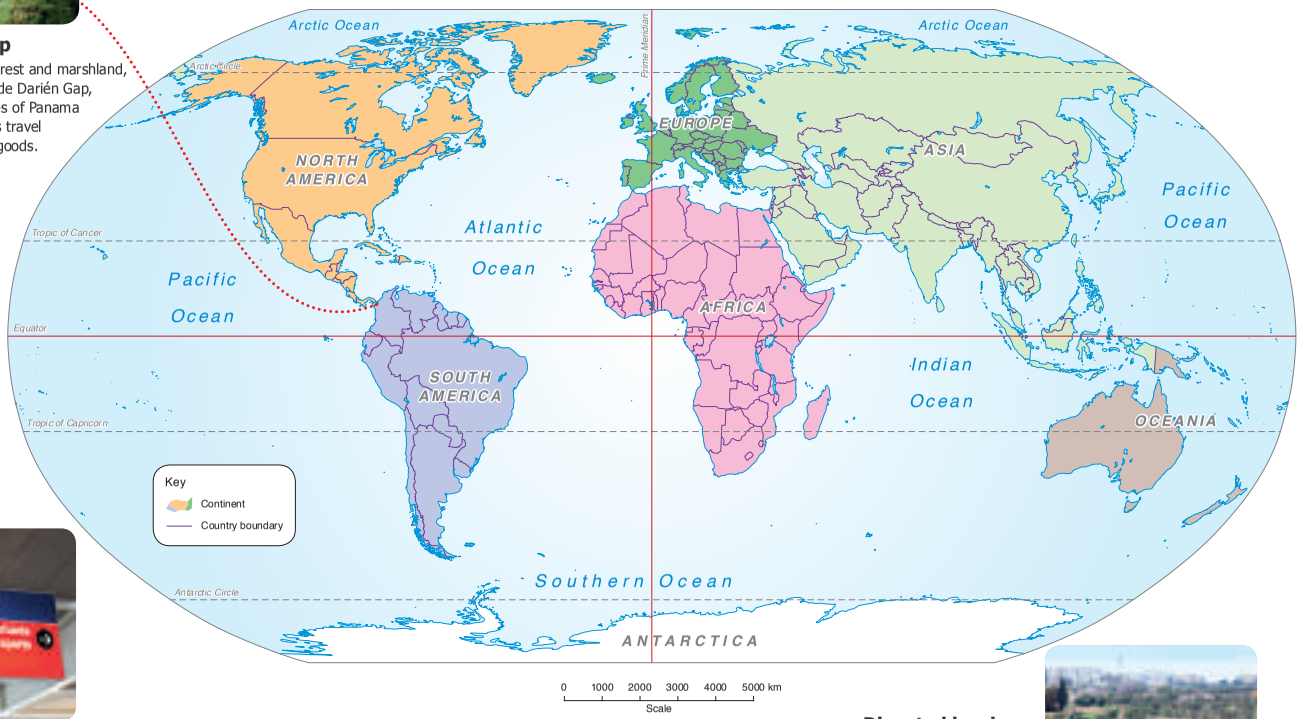
Key words

- Continent
- Country
- Border
- International

The Darién Gap

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

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.

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.

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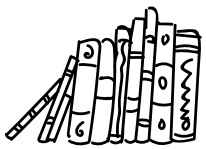
Work through the questions and challenges.

Questions

1 Which continent do we live on?

2 What would happen if the world didn't have any borders?



3 A new island has 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.

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 .....

B .....

C .....

D .....

E .....

F .....

G .....

H .....

I .....

J .....

K .....

L .....

M .....

N .....

O .....

P .....

Q .....

R .....

S .....

T .....

U .....

V .....

W .....

X .....

Y .....

Z .....

My Timeline

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

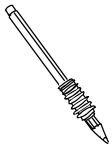
Here is an example of a TTS Bot Timeline:

January 2008
Bee-Bot was born

January 2013
Bee-Bot's brother Blue-Bot was born

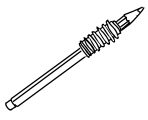
June 2019
Rugged Robot was born

January 2020
Rugged Robot had a big adventure and won his first award!



Think about your life and write a list of key events that have happened, for example when you were born, a special birthday, starting school.

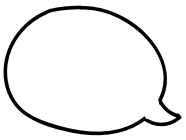
- Draw a timeline showing the key events in your life.
- Draw pictures for each key event and remember to include the date.



Learning About The Past

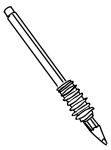
Lots of things about life change very quickly. A great way to find out about the past is to ask people about their lives and compare this to our own.

- Interview someone in your family who is older than you and ask them all about their life growing up.
- Record what you learn in the box below by either sticking in photos, drawing pictures or writing facts

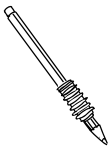


Remember to use the W questions:

Who? What? Where? When? Why?



Think about everything you have learnt about life in the past and write down 3 things that are the **same** and 3 things that are **different** to life now.

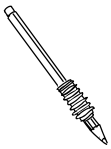


Same

1 .....

2 .....

3 .....



Different

1 .....

2 .....

3 .....

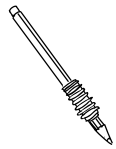
Past, Present, Future

We can learn a lot about the past by looking at artefacts and thinking about how they were used.

Look at these images of artefacts from the past.

For each artefact think about and discuss these questions:

- What do you think it was used for?
- Who may have used it?
- How long ago do you think it was used?



Now look at objects in your home.

- In the first box draw a picture of what it looked like in the past.
- In the middle box draw a picture of what it looks like now (present).
- In the last box draw what you think it might look like in the future.

Television

Past	Present	Future

Washing Machine

Past	Present	Future

Telephone

Past	Present	Future

Mona Lisa

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 draw a line to match the product to the material it is made from? (There might be more than one on each picture!)

Wood

Metal

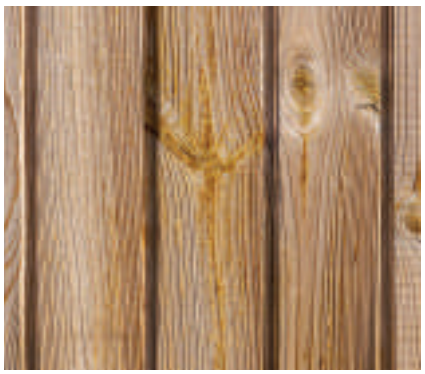
Fabric

Plastic

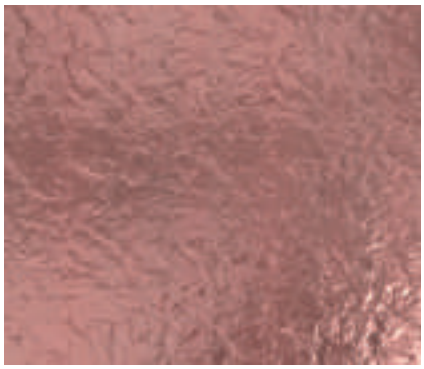
Glass

Cardboard

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:

Which material is there most of in your home?

Where Food Comes From

We live in a global, connected world where we rely on people and things in other countries. In the map we can see where some of our food comes from. Have a look in your fridge and kitchen cupboards and use the box below to write a list of all of the different countries your food comes from.

What's in my kitchen? Where did it come from?

Can you add the items on your list to the correct country on the map?

Strawberries

Strawberries and soft fruit don't grow all the year around in the UK. We grow some of our own but also import strawberries from other countries like Spain.

Cereals from India, France and Canada

Many different types of cereals are imported to the UK that are used to make your breakfast cereal or the daily bread that you eat.

Bananas from Colombia and Ecuador

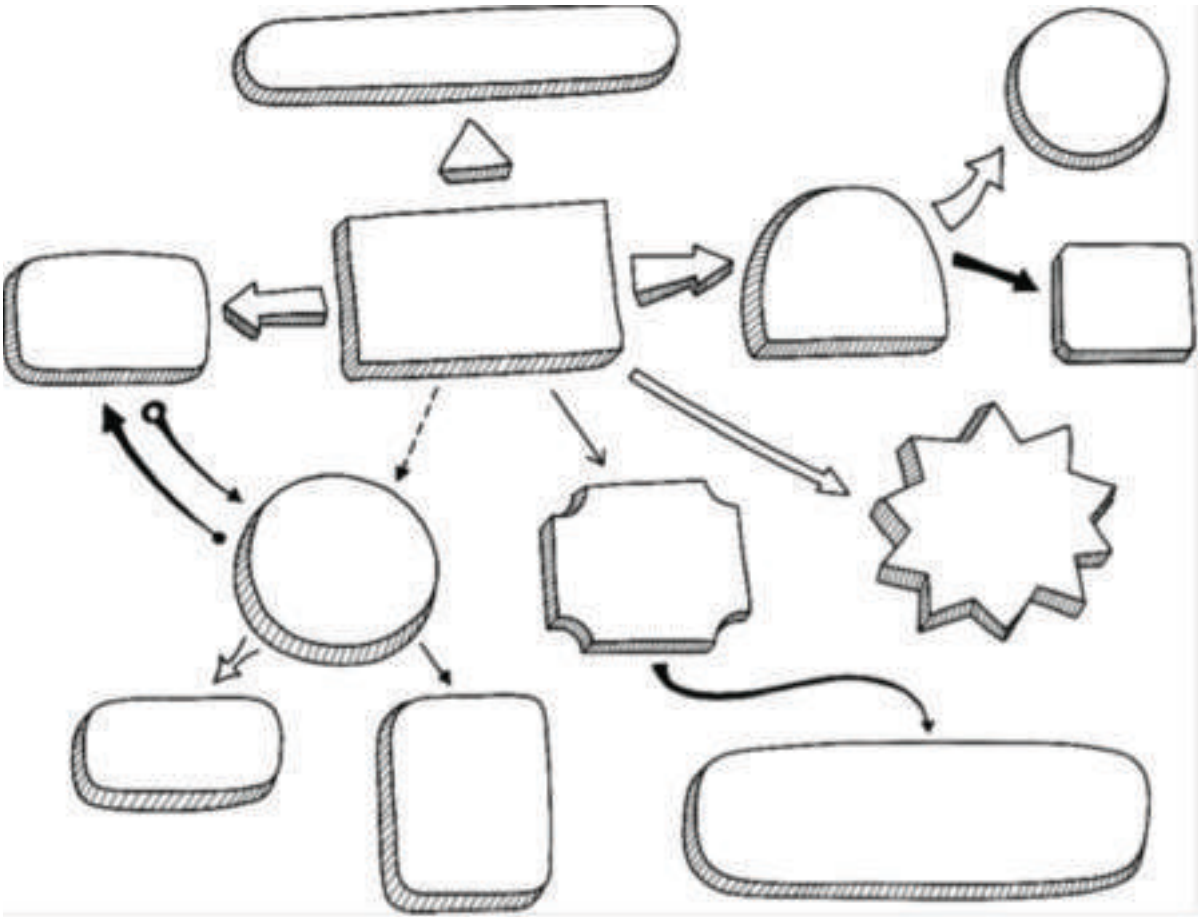
We import a lot of bananas. On average each person in the UK eats 10 kilograms of bananas a year – about 100 bananas! Most of our bananas come from Columbia and Ecuador.

Cocoa beans from C'ote d'Ivoire

Can you create a tally of how many items in your cupboard come from the country you live in below?

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.



Write a song about your town

Rugged Robot le Pirate!

Rugged Robot has been on an adventure conquering the high seas! Help colour him in using les couleurs below:

rouge

orange

jaune

vert

noir

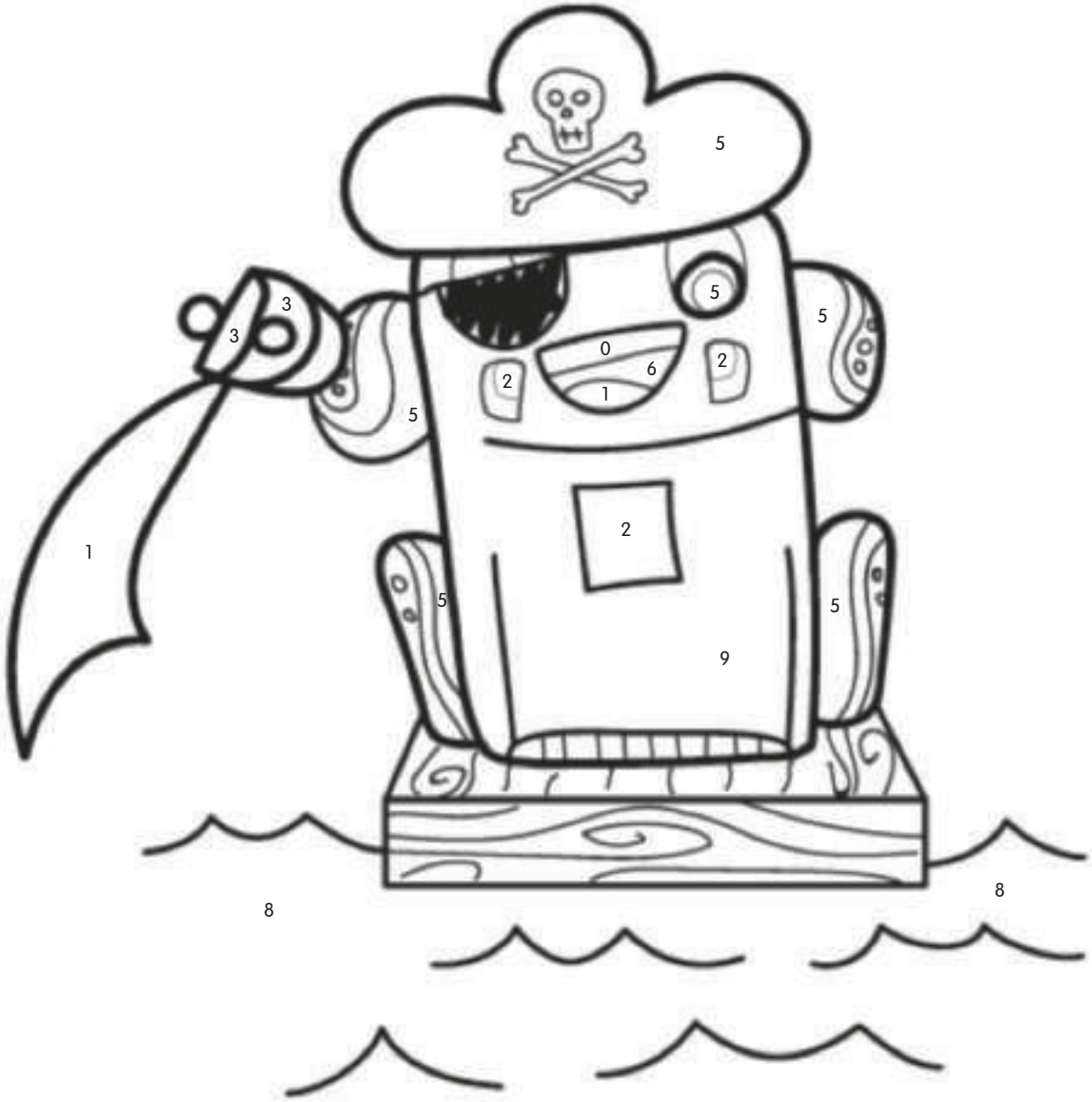
rose

violet

bleu

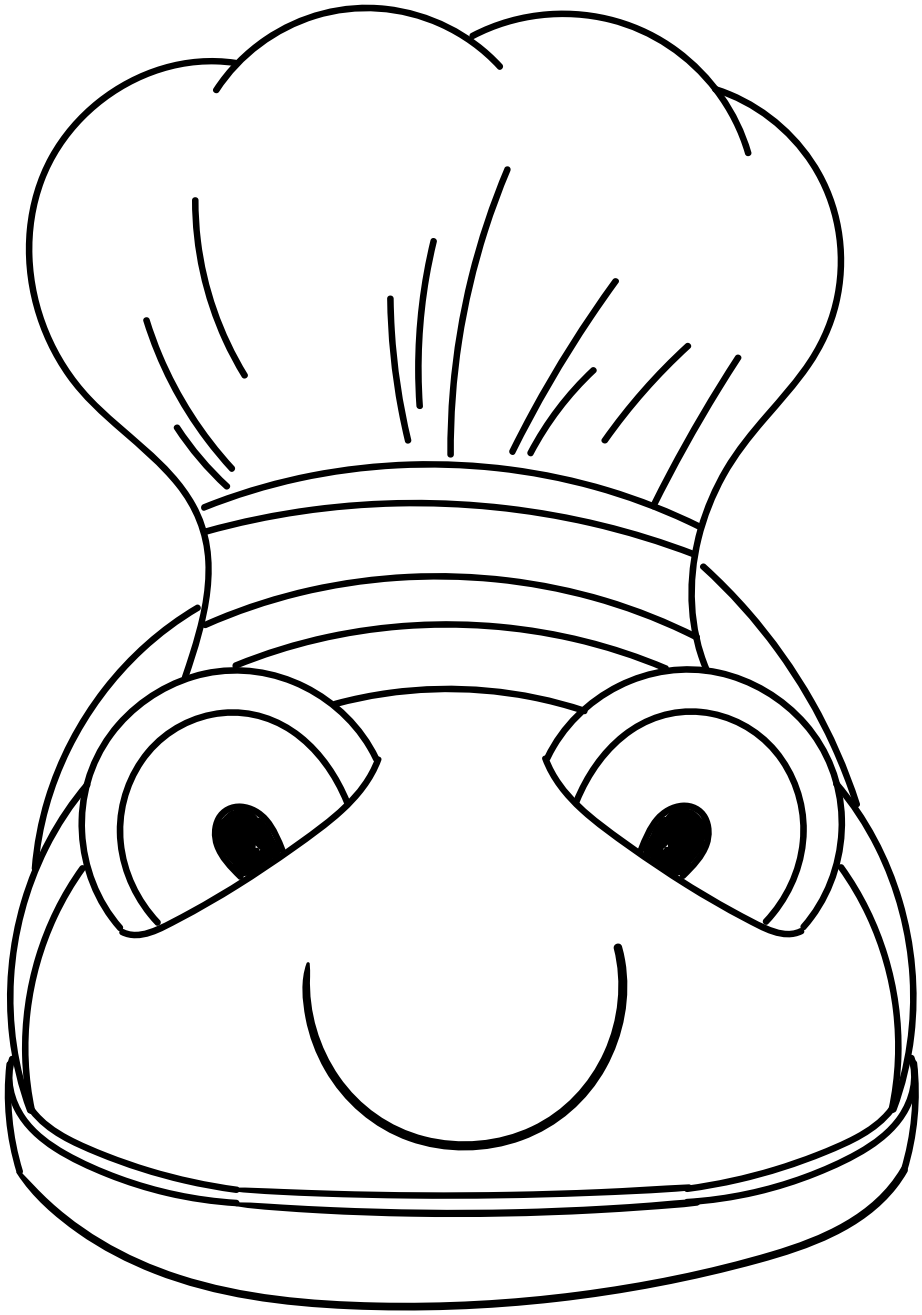
gris

blanc



Rouge	1	Orange	2	Jaune	3	Vert	4	Noir	5
Rose	6	Violet	7	Bleu	8	Gris	9	Blanc	0

Bee-Bot est le Chef!



chocolat

une crêpe

un hamburger

Draw in the correct amount of items from Bee-Bots menu into the boxes:

Une (1) glace						
Deux (2) croissant						
Trois (3) jus d'orange						
Quatre (4) chocolat						
Cinq (5) crêpe						
Six (6) hamburger						

un jus d'orange

une glace

un croissant

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.

Understanding 3 Child

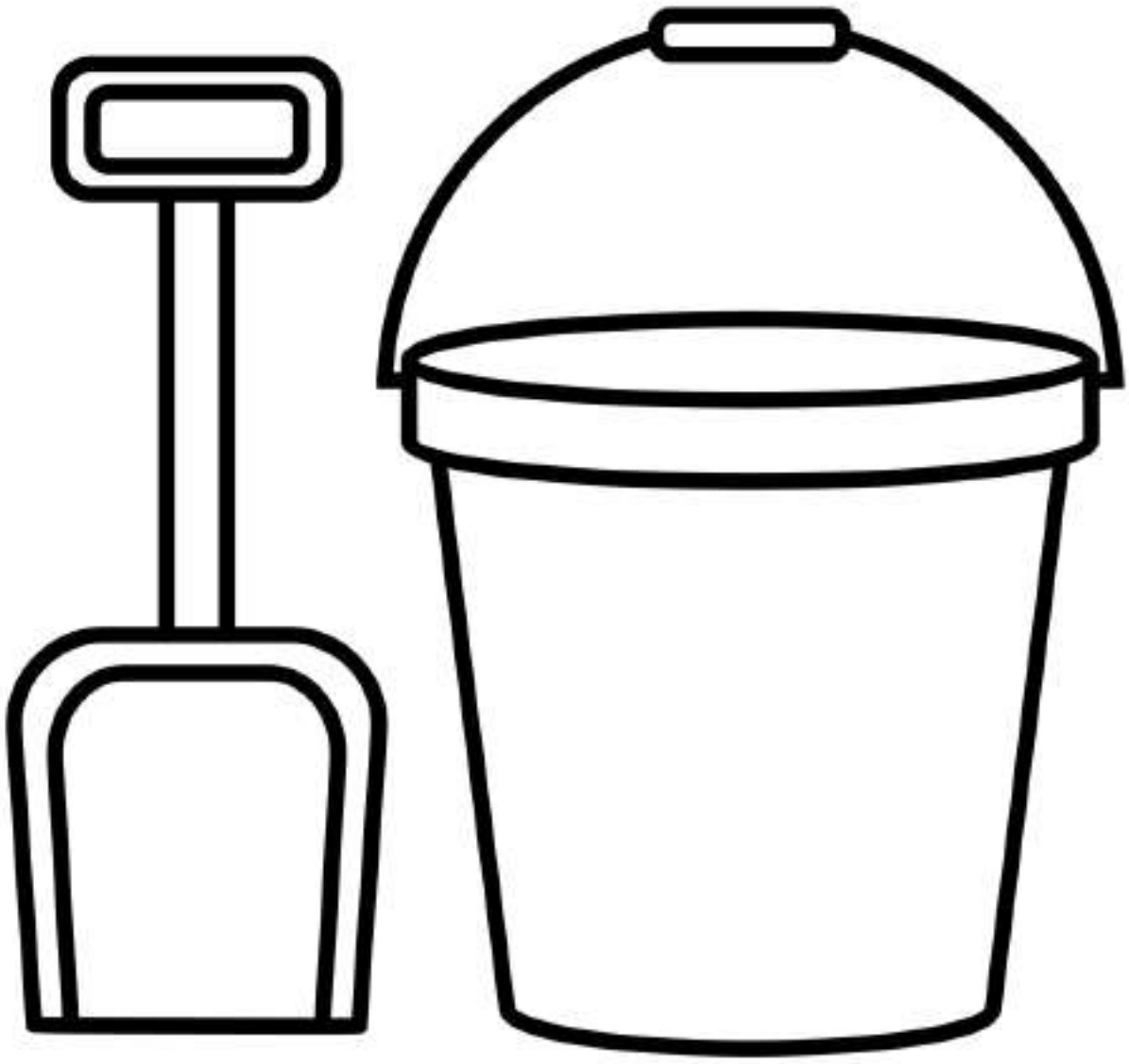
Bucket analogy – Part 1

- Imagine your body is a bucket.
- When we get anxious or upset our stress hormones pour in and can spill over.
- If this happens we might cry or get angry.
- We need to think of the things that start to make us feel upset much earlier.
- Little things might add up or a few bigger things might fill your bucket.
- Think of worries that upset you, draw them in your bucket as water levels or pebbles. What fills up your bucket/body?

Understanding 4 Child

Bucket analogy – Part 2

- Look at your bucket and the things that worry you.
- Your Calming Cat coach will help you to think about different activities which might help you to let go of some of those tensions.
- Let it go
- Let it go



Skills

Coach 3

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.

Skills

Child 3

Lion's roar

- ☆ Imagine 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

Coach 14

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.

Skills

Child 14

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

Coach 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?

Skills

Child 8

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?

Fun

Coach 2

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

Child 2

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!

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

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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TTS, Park Lane Business Park, Kirkby-in-Ashfield, Nottinghamshire, NG17 9GU