SHAWLANDS PRIMARY SCHOOL

BETTER TOGETHER

Family Maths Activities

Year 1

SHAWLANDS PRIMARY SCHOOL

About this booklet:

You can make a huge difference to your children's maths learning! This booklet aims to promote enjoyment of maths through discussion and working together on everyday maths!

It contains short, fun, 'real-life' activities for families to do together.

They are aligned to the English National Curriculum, with a strong focus on problem solving and reasoning.

The activities can be spread out across the year (as suggested on the following page) or at your own leisure in any order.

You might want to take photos, draw pictures, write calculations or create diagrams - it's up to you!

Use the comment boxes to reflect your discussions and thoughts as you complete each activity together.

Evidence shows that talking about everyday maths helps develop children's maths confidence. Here are some questions that you can ask each other when tackling the activities:

- What do we need to do?
- What information do we have? What do we need to find out?
- Would any equipment help?
- What do you notice when...?
- Shall we make a guess and see if it works?
- What could we do if we get stuck?
- What could we do differently next time?

You can adapt these activities to suit your family's interests and use whatever items you may have to hand, at home or out and about.

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Y1 Long Term Plan – Curriculum Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Number and Place Value (10) Addition and Subtraction	Number and Place Value (20) 2D and 3D shapes	Addition and Subtraction Number and Place Value (50) Measurement – length	Number and Place Value (100) Measurement – Money Multiplication and Division Fractions	Position and Direction Measurement – time	Measurement – weight, mass, capacity & volume Consolidation

Suggested Delivery of Challenges

Challenge	Term	National Curriculum Link
Trooping the Colour	Autumn 1	Number and Place Value
Taking Away Challenge	Autumn 1	Number and Place Value / Addition and Subtraction
Numbers Challenge	Autumn 1 / Autumn 2	Number and Place Value
Baby Birds	Autumn 1 / Spring 2	Addition & Subtraction / Multiplication & Division
Looking for Shapes at Home	Autumn 2	2D/3D Shapes
Decorating a Christmas Tree	Autumn 2	2D/3D Shapes
Firework Challenge	Autumn 2	2D/3D Shapes
Finding 3D shapes	Autumn 2	2D/3D Shapes
Easter Egg Patterns	Autumn 2	2D/3D Shapes
On the way to School	Autumn 2	2D/3D Shapes
Traditional Story Maths	Spring 1	Addition and Subtraction / Number and Place Value
Chinese New Year	Spring 1	Addition and Subtraction
Size Challenge	Spring 1	Measurement – Length
Measures	Spring 1 / Summer 2	Measurement – Length, Mass
Sharing Lollies	Spring 2	Multiplication and Division
Money Challenge	Spring 2	Measurement – Money
Using Money Challenge	Spring 2	Measurement - Money
Piggy Banks	Spring 2	Measurement – Money
The Tooth Fairy	Spring 2	Measurement – Money
Sharing a Picnic	Spring 2	Fractions
Paper Folding	Spring 2	Fractions
Counting Challenge	Summer 1	Measurement – Time / Number and Place Value
Paddy the Dog's Week	Summer 1	Measurement – Time
What Time is it?	Summer 1	Measurement – Time
Directions	Summer 1	Position and Direction
Weight of Fruit	Summer 2	Measurement – Mass
Capacity Challenge	Summer 2	Measurement – Capacity and Volume
Monkey Addition Fun	Summer 2	Consolidation
Train Driver's Challenge	Summer 2	Consolidation
Yummy Ice Cream Sundaes	Summer 2	Consolidation

Numbers challenge

Family Maths Toolkit

Do you have a clock in your house?



Can you read all the numbers?

Where else in the house can you find numbers? Can you find some in every room in the house? What numbers can you find?

Look carefully, some of them might be hidden.

Write down some of the numbers you find and draw what they are on.

8 9 10 11 12

Family comments:

Child comments:

Curriculum Link

To read and write numbers to 20.

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Monkey addition fun

Family Maths Toolkit

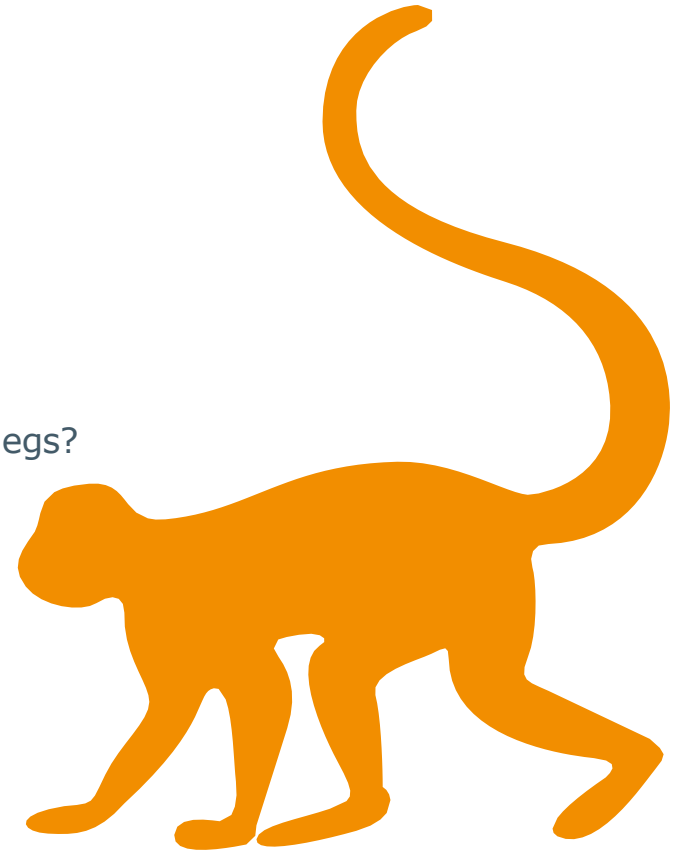
Some monkeys are playing in the park.

Each monkey has 1 curled tail; 1 wet nose; 2 little ears; 2 bright eyes and 4 legs.

1. There are 5 monkeys in the park – how many wet noses?
2. How many little ears? How many legs?
3. There are 5 monkeys playing ball – how many curled tails?
4. How many legs? How many bright eyes?
5. 2 monkeys go down the slide! How many legs?

Can you make up some more questions (and answers!) about the monkeys in the park? You can change how many monkeys there are if you like.

Helpful hint: Drawing the monkeys can help see the repeated addition.



Family comments:

Child comments:

Curriculum Link

Solve one-step problems that involve addition, using concrete apparatus and pictorial representations.

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Taking away challenge

Family Maths Toolkit

Find one pair of socks for everyone in your house.



How many socks have you got altogether? Write that number.

Hide your own socks. How many have you got now? Can you write that number? How many socks will you have if you use a pair of your socks and one of everyone else's?

Put all the socks in a row. Ask someone to hide some of the socks. How many do you have left? How many do you think they have hidden?

Can you count the socks in 2s? (2, 4, 6 and so on). These are even numbers.

What happens if someone loses a sock?

2 4 6 8 10

Family comments:

Child comments:

Curriculum Link

Practical problems using subtraction, odds and evens and counting in 2s.

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Weight of fruit

Family Maths Toolkit

Find some fruit or vegetables (such as an apple or potato or similar).

1. Find 3 different ones – which one do you think will be the heaviest?
2. Now hold them in your hand one at a time – were you right?
3. Can you find 3 things which you think will be lighter than a potato?
4. Can you find 3 things which are heavier?
5. Find your 5 favourite toys – can you put them in order, lightest to heaviest?





Family comments:

Child comments:

Curriculum Link

Compare, describe and solve practical problems for mass/weight.

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Measures

Family Maths Toolkit

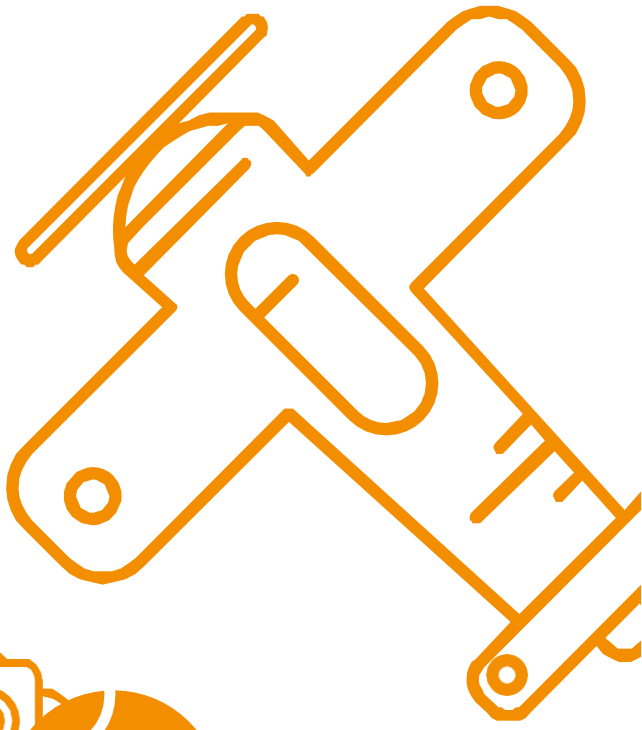
Choose 5 of your favourite toys.

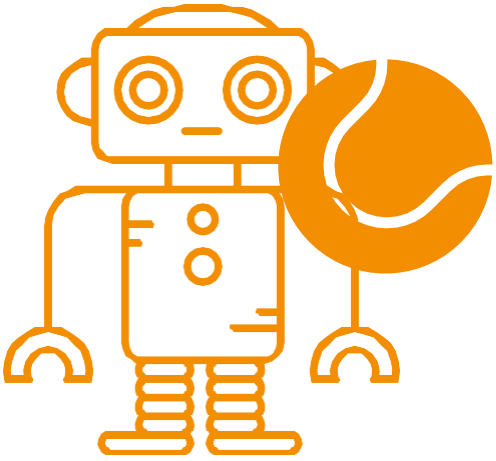
Put them in order from shortest to tallest. Are any taller than the length of your hand?

Now put them in order from lightest to heaviest. Are they in the same order?
Which are in a different place?

Find 5 things in the food cupboard. Estimate which will be the lightest and heaviest. Feel them in your hands – were you right?

What is the lightest piece of food you can find?





Family comments:

Child comments:

Curriculum Link

Use and compare measures using non-standard units.

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Money challenge

Family Maths Toolkit

Ask an adult if you can look at some coins in their purse or money box.



1. How many different coins can you find?
2. How many 10p coins have you got?
3. Can you put the coins in order of size or group them into the same colours? Which coins are not the same shape as the others?
4. Practise writing the numbers on the coins. Are there any numbers that you do not have coins for?
5. Are there any other types of money that are not coins?

You could try putting the coins under the page and making rubbings of them.







Family comments:

Child comments:

Curriculum Link

Recognise and know the value of coins and notes.

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Size challenge

Family Maths Toolkit

Can you find a pair of socks for everyone in your house?



Who has the biggest pair? Who has the smallest pair of socks? Can you put them in order from the biggest to the smallest? You can do this challenge with lots of things around the house.
You could use feet, shoes, hands or even hats.

What else can you find to put in order of size? Can you record what you have done? Maybe draw a picture or take a photograph.



Family comments:

Child comments:

Curriculum Link

Compare lengths and heights using vocabulary long/ longer/short/shorter/ tall/taller.

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Looking for shapes at home

Family Maths Toolkit

You can be detectives looking for shapes that are all around us.

1. Can you find a square in the kitchen?
2. Can you find a rectangle in your bathroom?
3. Can you find a circle in your bedroom?
4. What other shapes can you see around your house? Can you find a triangle anywhere in your house?
5. Can you draw what you have found?



Family comments:

Child comments:

Curriculum Link

2D shapes including square, rectangle, triangle, circle.

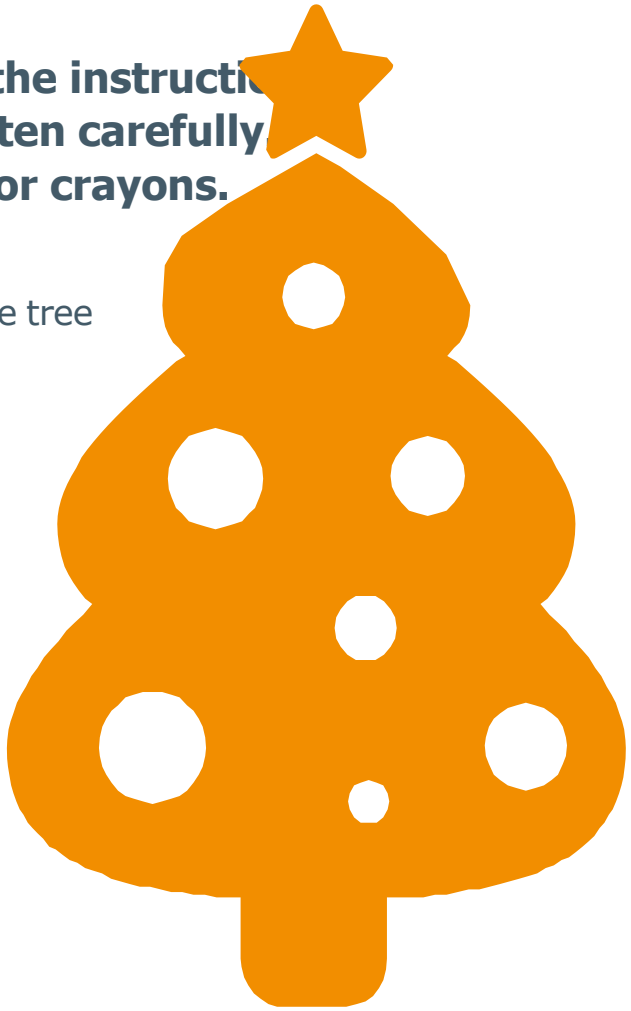
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Decorating a Christmas tree

Family Maths Toolkit

Draw a plain Christmas tree.

Ask one of your family to read out the instructi to decorate it – you will have to listen carefully. You will need some colour pencils or crayons.



Draw:

- a red bucket around the trunk (bottom) of the tree
- 3 yellow round decorations on the tree
- a star on the top
- a brown teddy bear next to the tree
- 4 chocolates in the middle of the tree
- a square present in front of the tree
- a red triangle decoration between the star and one of the chocolates
- a blue bauble close to the star
- 2 angels on the right of the tree.

Did you get all the things in the right place? Now make up some instructions for one of your family to draw on another tree.

Family comments:

Child comments:

Curriculum Link

Positional language, 2D shapes, listening to instructions accurately.

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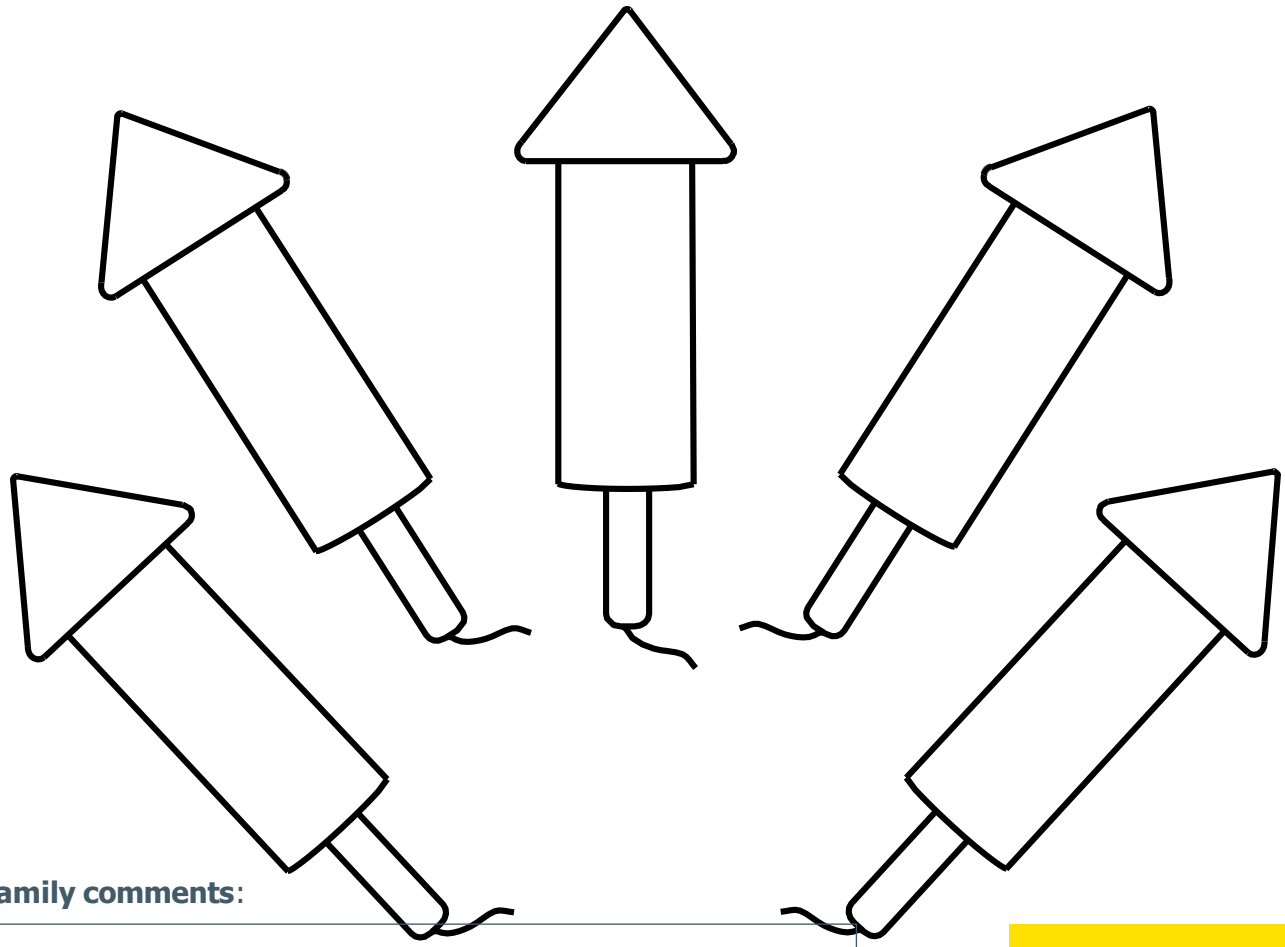
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Firework challenge

Family Maths Toolkit

How many different ways can you colour the rockets, using the same three colours each time?



Family comments:

Child comments:

Curriculum Link

Problem solving and working systematically, finding all the possibilities.

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Counting challenge

Family Maths Toolkit

The challenge for this week is to find different opportunities to count.



You could:

- Count out the knives and forks needed to lay the table, talk about how many more we need.
- Count how many letters are delivered in one day/a week.
- Count how long it takes the bath to fill.
- Count how many strokes it takes to brush hair.

Can you think of lots of other things to count? Did you find anything that was near 100?

What did you find that was too large a number to count? What could you count together?



Family comments:

Child comments:

Curriculum Link

Count to and across 100; talk about one more than, one less than.

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Baby birds

Family Maths Toolkit

In spring, mother blackbirds have to feed their babies who cannot fly yet. One mother had 3 babies – one large, one middle and one small.

The big one needs 5 worms a day; the middle one needs 3 worms and the small one needs 2 worms a day.

How many worms does the mother need to find?

To make the small one grow faster, she is going to give it some more worms – how many different ways could she split up 10 worms bet her babies to make sure the baby always gets more than the mi the big bird?

Helpful hint: Each bird must always get at least 1.

Draw a different bird with babies in the nest - what need to Make up what the mother has to find.

Helpful hint: Draw pictures of the birds and use counters, st s or similar to count out the 'worms'. Practise counting in 2s.

Family comments:

Child comments:

Curriculum Link

Add number bonds to 10; counting in 2s; multiplication problems using concrete apparatus.

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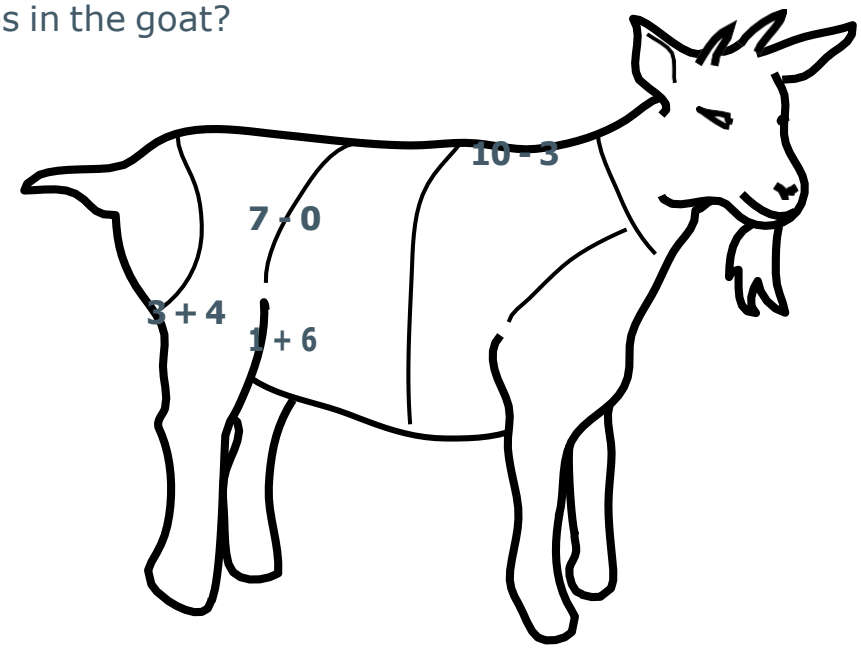
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Chinese New Year

Family Maths Toolkit

Each Chinese New Year has its own animal sign. From February 2015-2016 it is the year of the goat.

7 is a lucky number for the Chinese goat. Can you complete the number sentences in the goat?



Next year 2016 will be the year of the monkey – can you draw a simple monkey and put some number sentences inside? One of monkey's lucky numbers is 4 – can you make all your number sentences have 4 as an answer?

Family comments:

Child comments:

Curriculum Link

Addition and subtraction number bonds to 10 including zero.

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Traditional story maths

Family Maths Toolkit

1. Add the number of bears that Goldilocks met with the number of dwarves that Snow White met.
2. Double the number of Billy Goats Gruff and then add the number of trolls under the bridge.
3. The Prince looked for Cinderella for 2 weeks. How many days
4. There are 7 dwarves in Snow White.
   How many shoes would they need altogether?
5. Baby Bear eats 5 boxes of porridge a week. Daddy Bear
   amount.
   How much does Daddy Bear eat?

   Do you know any other stories you could make up a
   about?





Family comments:

Child comments:

Curriculum Link

Solving one step word problems, involving addition, doubling, days in a week, counting in 2s.

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Using money challenge

Family Maths Toolkit

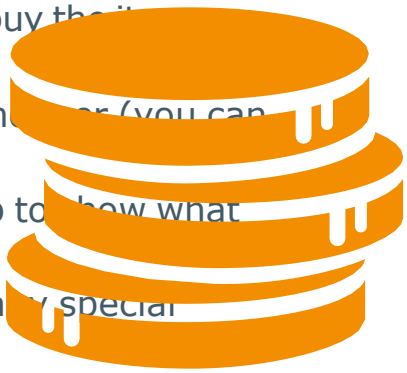
Gather some items to sell. You could make a toy shop, a supermarket or even a shoe shop. Then you need to make some price tickets.

Make labels of up to 20p. Now you need some money to buy the i
Use 1p, 2p, 5p, 10p and 20p only.

Decide who will be the shopkeeper and who will be the sh er (you can swap round).

Have fun shopping and then make an advert for your shop to how what you have for sale and the prices.

Which is the most expensive thing for sale? Do you have a y special offers?





Family comments:

Child comments:

Curriculum Link

Recognise and know the value of coins.

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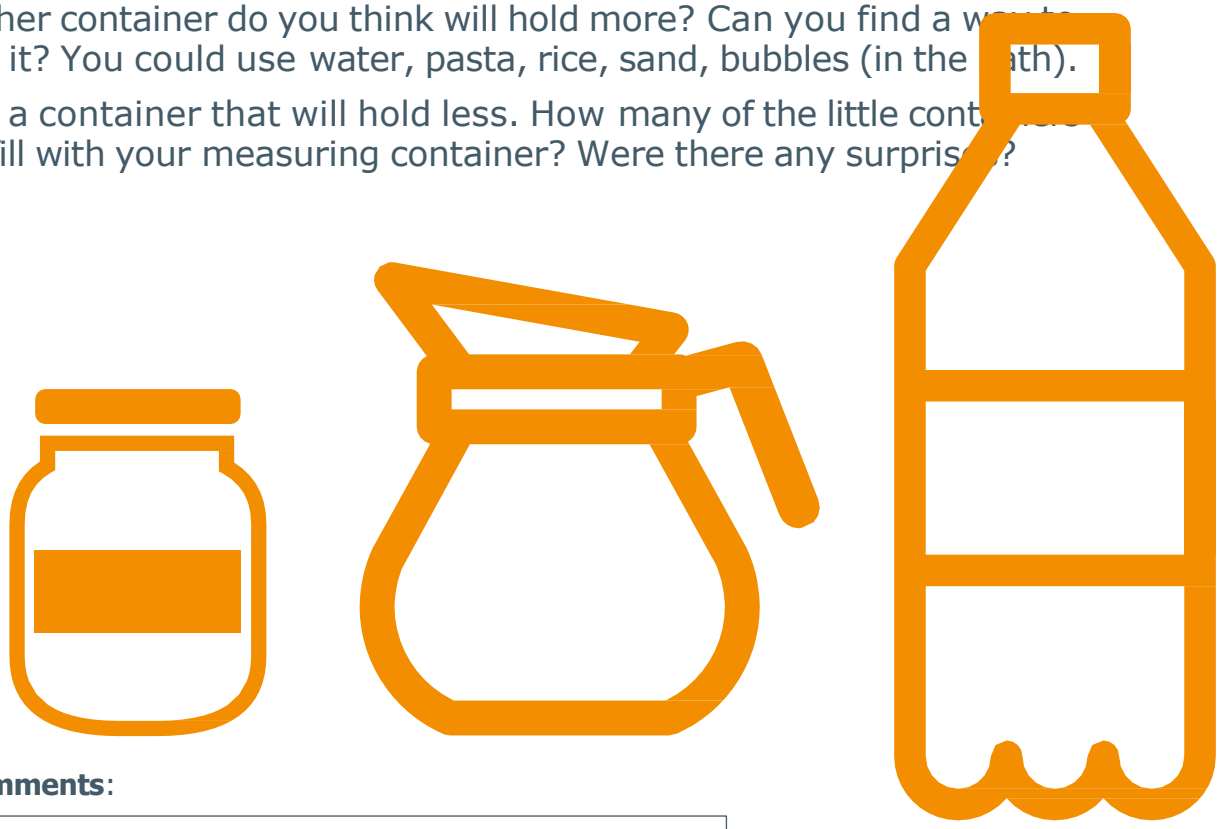
Capacity challenge

Family Maths Toolkit

Make a collection of empty different containers. Choose one to be the measuring container.

Which other container do you think will hold more? Can you find a way to measure it? You could use water, pasta, rice, sand, bubbles (in the bath).

Now find a container that will hold less. How many of the little containers can you fill with your measuring container? Were there any surprises?



Family comments:

Child comments:

Curriculum Link

Compare and describe capacity/volume (full, empty, more than, less than, half, quarter).

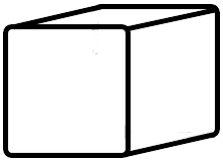
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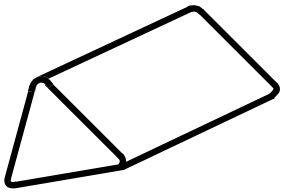
Finding 3D shapes

Family Maths Toolkit

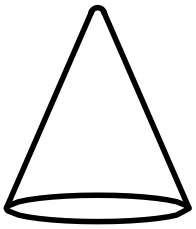
Can you find any objects around the house which are 3D like these -

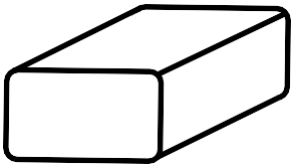


cube
prism

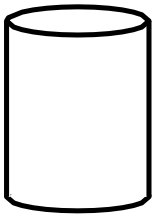


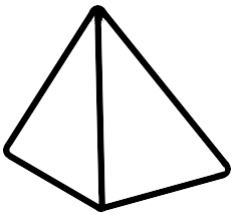
triangular
cone





cuboid





cylinder
tetrahedron

1. How many did you find?
2. What are they used for?
   Why is it a good shape to use?
3. What is a cone a good shape for?
4. There is a common 3D shape not in the picture – can you think what it is?
   Do you have one?

Family comments:

Child comments:

Curriculum Link

Handle common 3D shapes, naming them and relating everyday objects. Recognise these shapes in different orientations and sizes.

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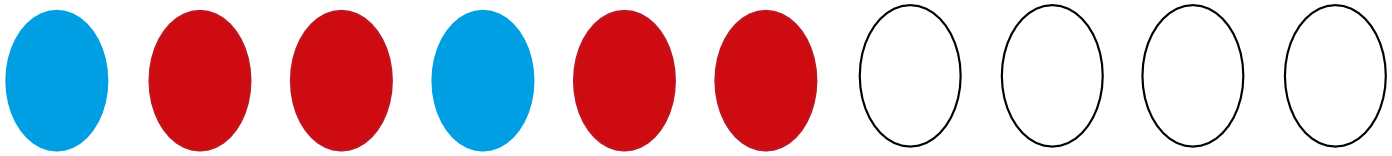
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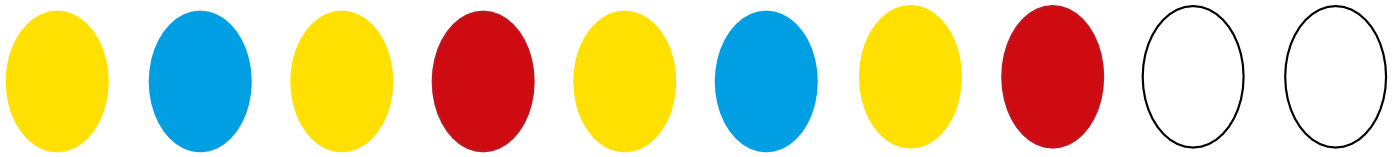
Easter egg patterns

Family Maths Toolkit

Sophie has 10 eggs and 3 different pieces of wrapping paper – blue, red and yellow. She wants to put them in boxes in lines which make patterns.

Can you help her finish these patterns?





Then can you make up your own patterns using lines of 10 eggs and 3 colours?

Family comments:

Child comments:

Curriculum Link

Create, copy and reorganise patterns.

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On the way to school

Family Maths Toolkit

On your way to school, look around for shapes – see if you can spot any circles, rectangles or triangles. Look at houses, cars, toys and anything else you can find.

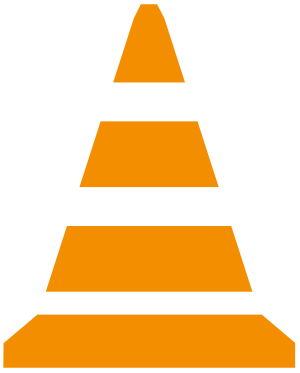
If you look carefully at things, can you see any 3D such as spheres, cuboids, cylinders or pyramids



Choose your favourite things to draw and show the shape.

Helpful hint: Talk about why things are the shape the decoration?





Family comments:

Child comments:

Curriculum Link

Recognise and name common 2D and 3D shapes, relating them to everyday objects in different orientations and sizes.

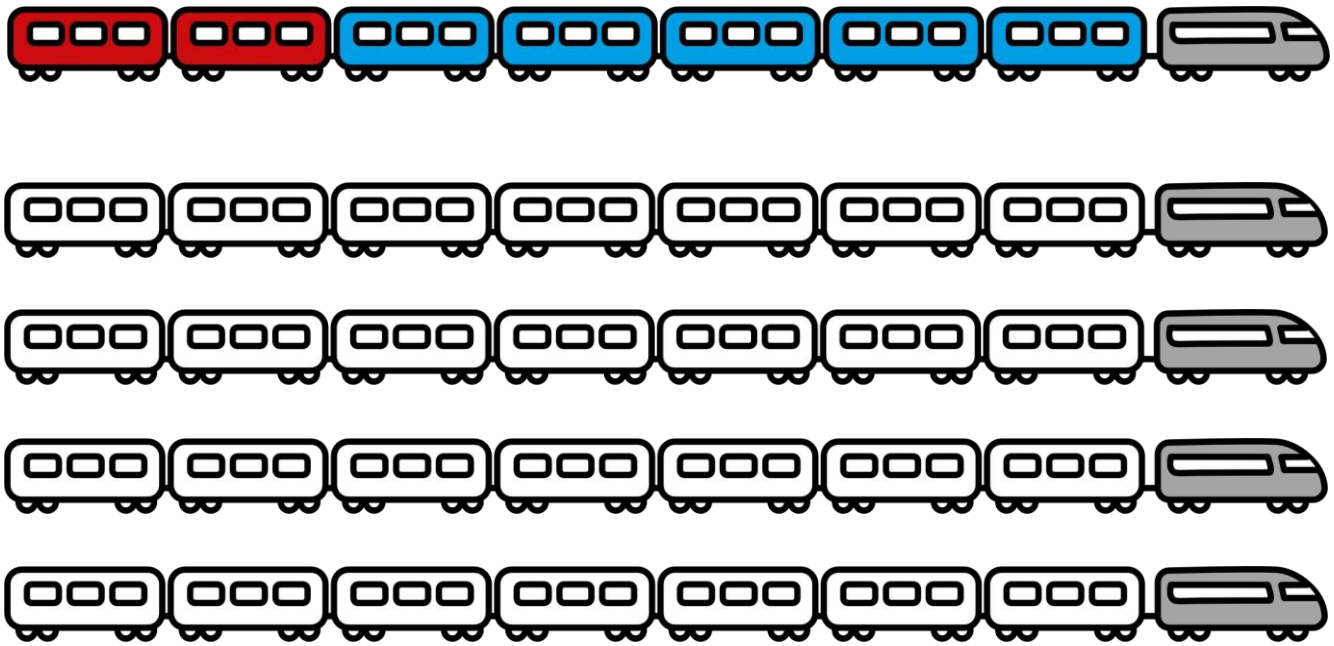
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Train driver's challenge

Family Maths Toolkit

A toy train set has one engine, five blue carriages and two red carriages. How many different ways can the carriages be arranged?

Here is one way:



Can you draw any more ways?

Family comments:

Child comments:

Curriculum Link

Solve problems through reasoning and working systematically, finding all the possibilities.

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Trooping the Colour

Family Maths Toolkit

When Trooping the Colour takes place in London, all the guards march in front of the Queen.
This is a photo of some. There are hundreds of guardsmen and they all have to be in line.



Can you find some small toys and line them up to pretend the Queen will look at them? How many are in each line? Can you make each line the same? Are there any left over? Can they march in pairs (2s)? Can you count them in 2s? How many altogether?

If you were a guard, how many steps does it take you to march across the room? Or across the garden?

Family comments:

Child comments:

Curriculum Link

Counting to and across 100; counting objects in 2s; recognising odd and even.

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Piggy banks

Family Maths Toolkit

A piggy bank holds up to 10 coins.

In Matthew's piggy bank there are only 10p coins – how much c have?

Victoria has a piggy bank which holds more coins, up to 20 coins, but she only saves 5p coins – how much could she have?

Matthew's Dad holds some coins in his hand – they ar f 2p, 5p and 10p coins – how much do you think he could be ho.



Family comments:

Child comments:

Curriculum Link

Count in 2s, 5s and 10s; recognise coins.

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Sharing lollies

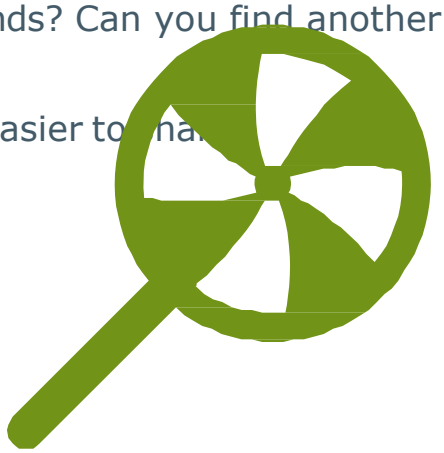
Family Maths Toolkit

In the cupboard are a bag of 6 orange lollies and a bag of 4 green lollies.

How could these be shared fairly between 4 friends? Can you find another way?

If there were 2 of each bag, would this make it easier to share?





Helpful hint: Use counters or other small objects to represent the sweets or draw pictures to help understanding. Talking about equal sharing is valuable.

Family comments:

Child comments:

Curriculum Link

Through sharing small quantities, begin to understand multiplication and division.

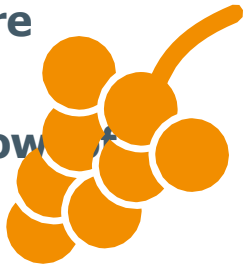
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Sharing a picnic

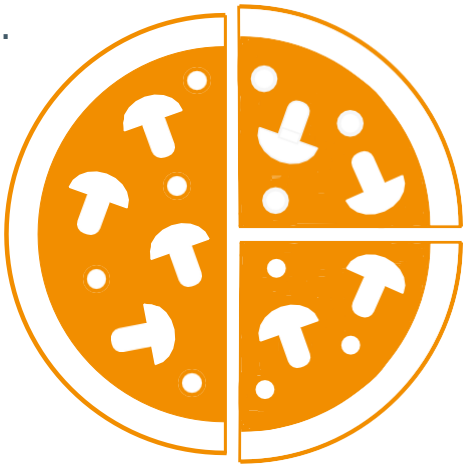
Family Maths Toolkit

Think of a picnic which two children are going to share equally – what will they each have?

How could we share the pizza fairly? What about a bowl of tomatoes?
A bunch of grapes? One apple? A cake?



What would you have in your picnic that could be shared with a friend? Draw a picture and show how it could be shared.





Family comments:

Child comments:

Curriculum Link

Recognise, find and name half as one of two equal parts; recognise two quarters are the same as a half.

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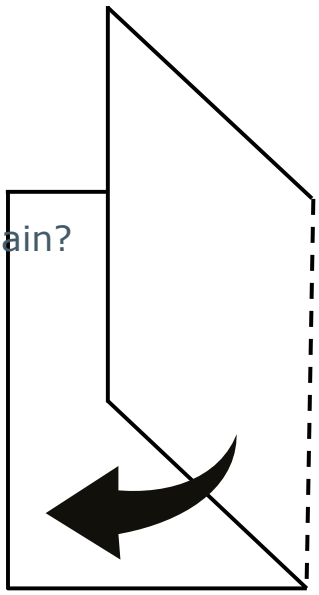
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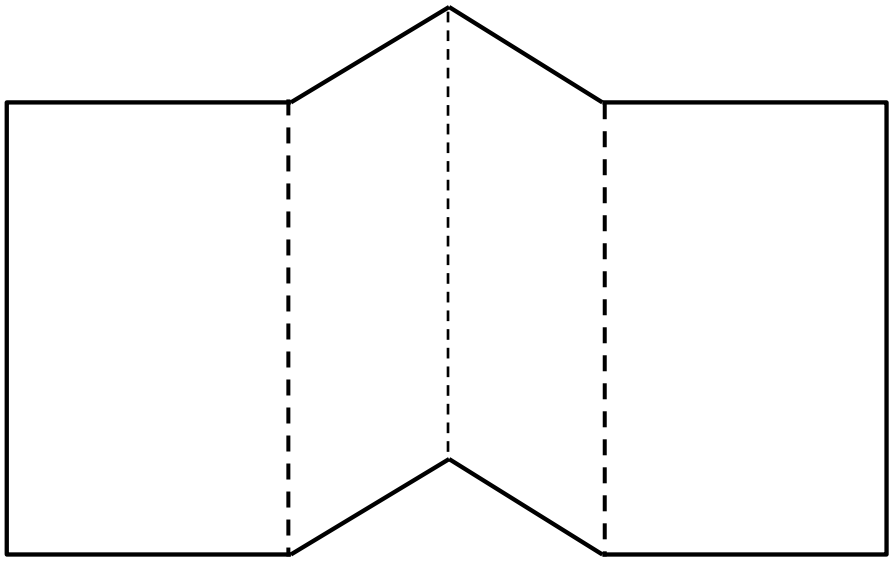
Paper folding

Family Maths Toolkit

Fold a piece of paper in half.

1. Now fold it a different way.
2. What is the same? What is different? Why?
3. What about folding a different size piece of paper?
4. What happens if you fold the paper in half and then half again?





Challenge – Can you cut a circle and fold it in half? And fold it in half again?

Helpful hint: Talk about the shapes made using top, bo
left, right, rectangle, square, triangle.

Family comments:

Child comments:

Curriculum Link

Recognising and combining halves and quarters as parts of a whole.

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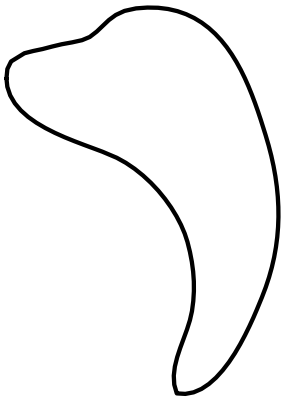
The tooth fairy

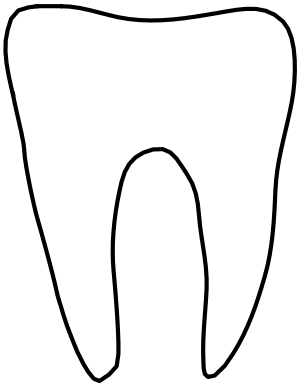
Family Maths Toolkit

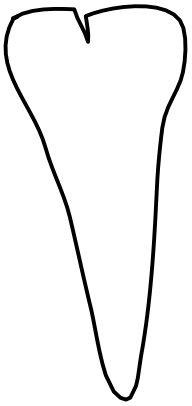
The tooth fairy has left 20p under your pillow.

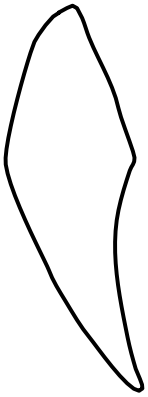
What combination of teeth could you have left for her?











incisor
molar
20p

molar
canine
10p
2p

pre-
5p

Family comments:

Child comments:

Curriculum Link

Know value of coins; adding to 20.

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Paddy the dog's week

Family Maths Toolkit

Here is one of Paddy's weeks.



		ay				
a long walk to s	cial dinner	n to the beac		favourite	collar	h M

Can you show what you do each day of one week? Which was your favourite day? Are there some things you do on the same day every week?

Helpful hint: Talk about the next day; the day before; in two days time; every Tuesday; how many days from Monday to Friday.

Family comments:

Child comments:

Curriculum Link

Sequence chronological events and know the days of the week.

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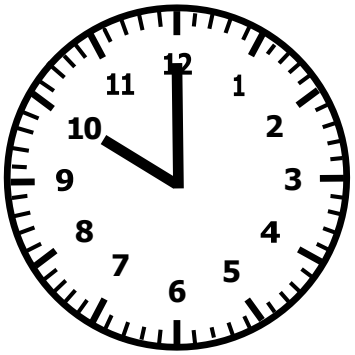
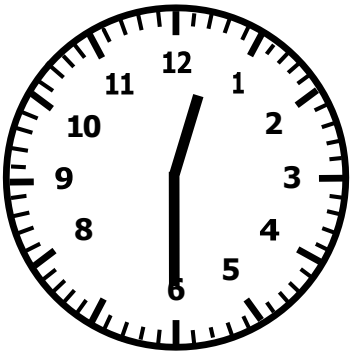
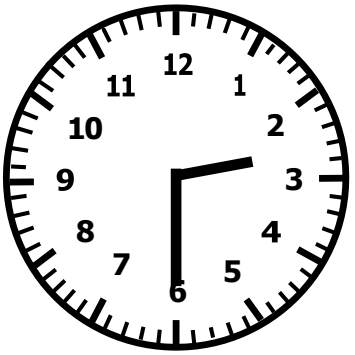
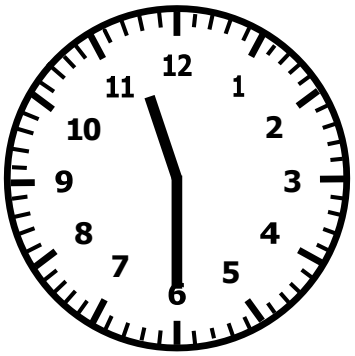
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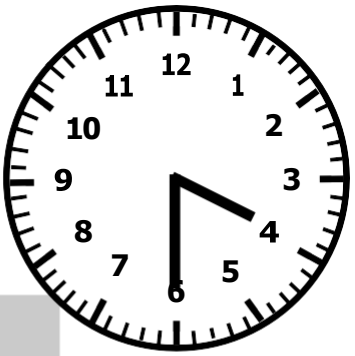
What time is it?

Family Maths Toolkit

Cut out the clocks and put them in order.

What might you be doing at these times?



Challenge – Talk about night times too!

Family comments:

Child comments:

Curriculum Link

Use the language of time and recognise the hour and half past.

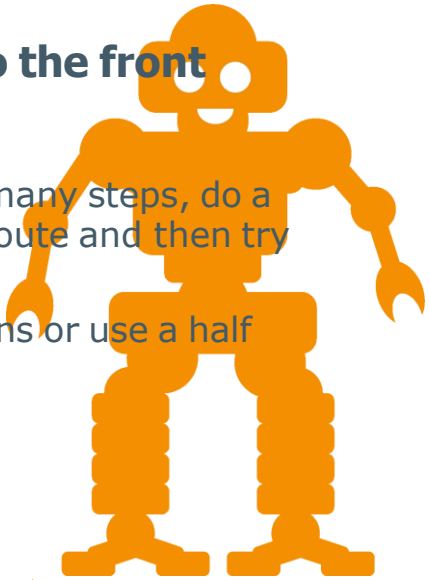
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Directions

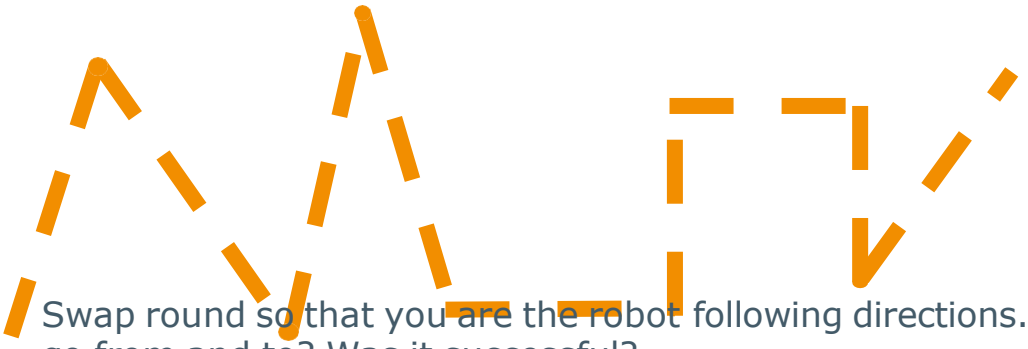
Family Maths Toolkit

Imagine a robot has to get from your bed to the front door. It does not know which way to go!



Think up directions for the robot – use words like how many steps, do a quarter turn right, walk in a straight line. Practise the route and then try it on someone in the family.

If they go wrong, you may need to change your directions or use a half turn to start again.



Swap round so that you are the robot following directions. Where did you go from and to? Was it successful?

Family comments:

Child comments:

Curriculum Link

Distinguish between rotation as a turn ($^1/_4$ or $^1/_2$) and movement in a straight line.

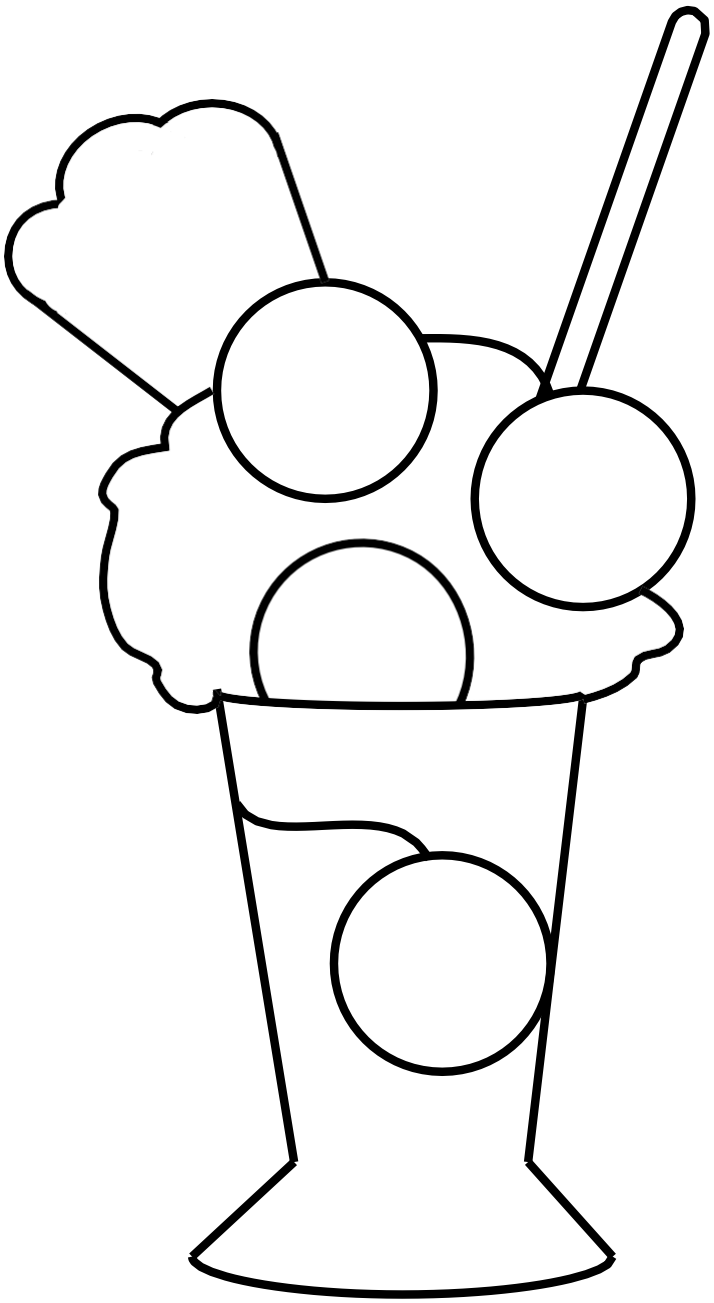
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Yummy ice cream sundaes!

Family Maths Toolkit

Choose your 3 favourite flavours of ice cream.

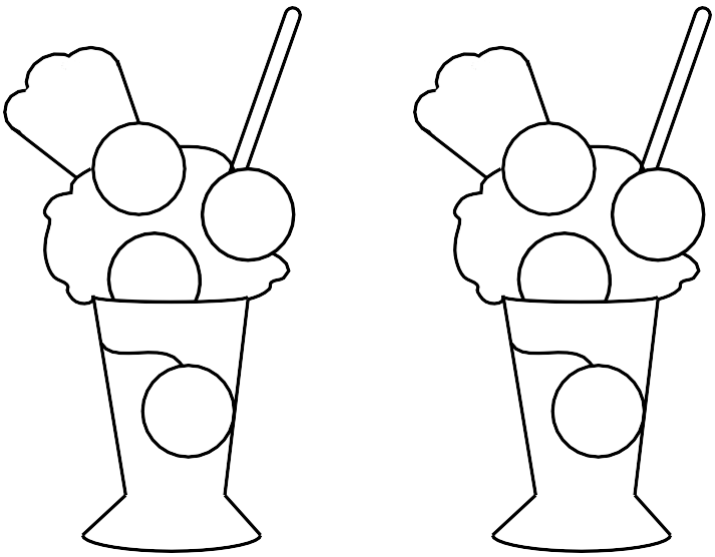
Colour in the scoops in your favourite flavours.

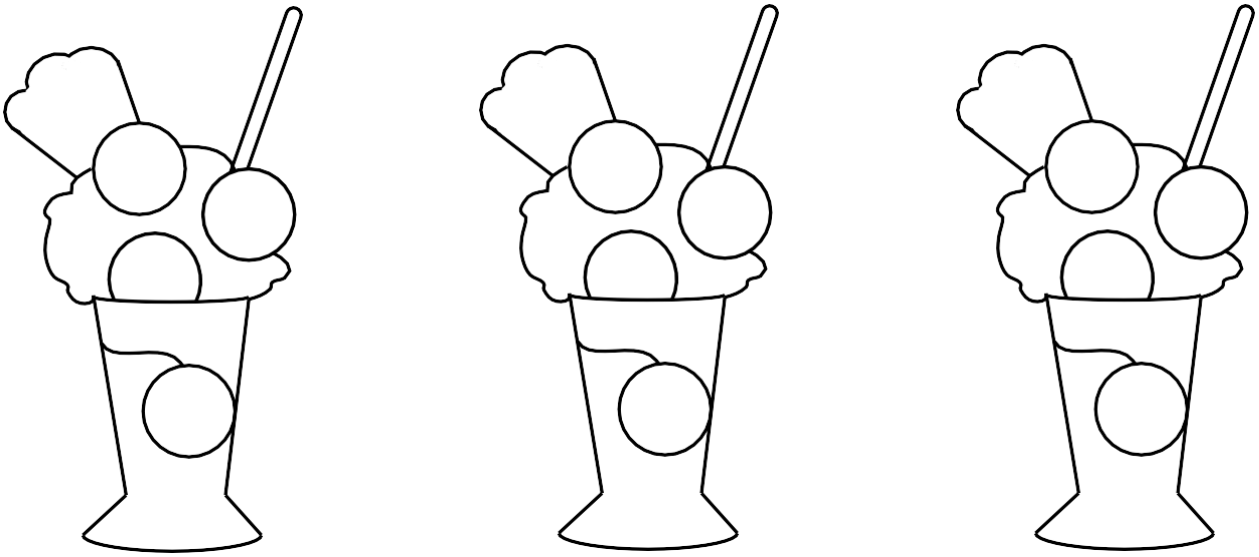


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Now keep the same flavours but colour them in a different order…remember, we want all our ice cream sundaes to look different!





Family comments:

Child comments:

Curriculum Link

Solve a mathematical problem, working systematically and explain reasoning.

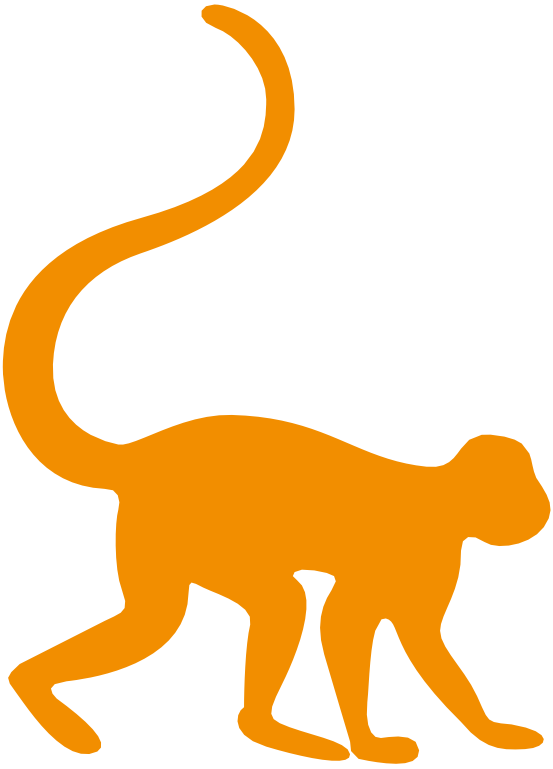
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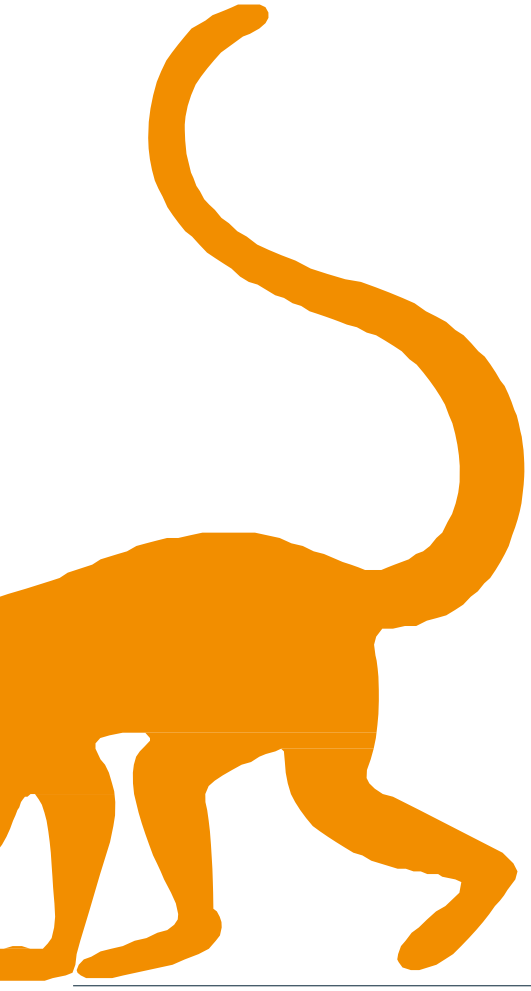
Y1 Autumn activities answers

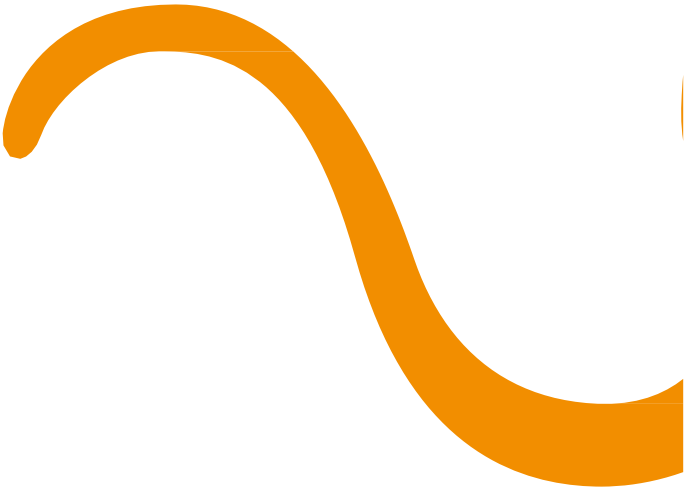
Family Maths Toolkit

Monkey addition fun

- 5 wet noses
- 10 little ears
- 20 legs
- 5 curled tails
- 20 legs
- 10 bright eyes
- 8 legs on the slide







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Y1 Spring activities answers

Family Maths Toolkit

Baby birds

- 10
- 9 ways:

1	1 8
1	2 7
1	3 6
1	4 5

2	2	6
2	3	5

3	1	6
3	2	5
3	3	4



Traditional story maths

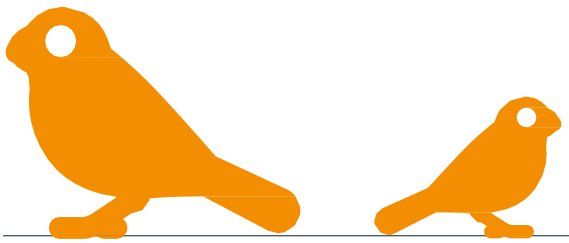
1. 10

2. 7

3. 14

4. 14

5. 10



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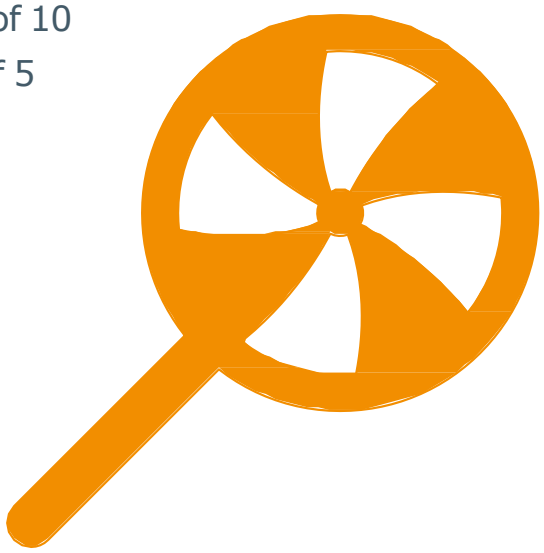
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Y1 Summer activities answers

Family Maths Toolkit

Piggy banks

- Anything from 10p to £1.00 (100p) in multiples of 10
- Anything from 5p to £1.00 (100p) in multiples of 5



Sharing lollies

- 2 each of any colour (2 left over)
- 1 green and 1 orange each (2 left over)
- 2 $^{1}/_{2}$ each
- Yes – 5 each (3 orange and 2 green each)

Tooth fairy

- 1 incisor
- 2 molars
- 1 molar + 2 pre-molars
- 1 molar + 5 canines
- 4 pre-molars
- 2 pre-molars + 5 canines
- 10 canines

Total = 7 combinations are possible – any of these combinations is the right answer.



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