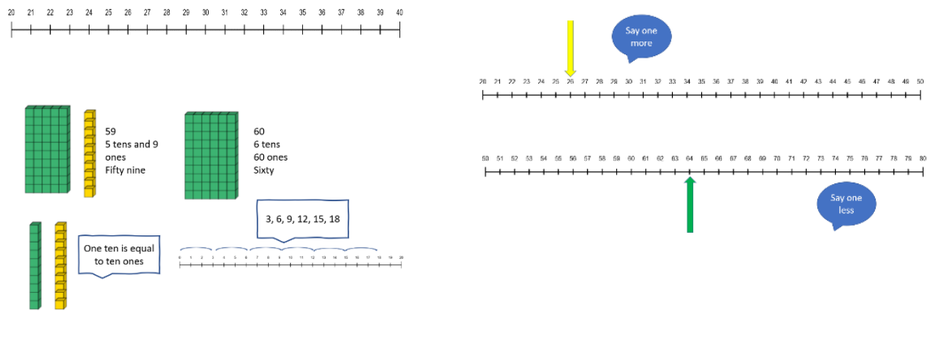
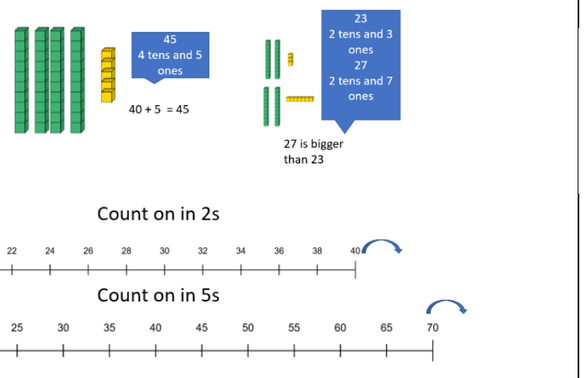
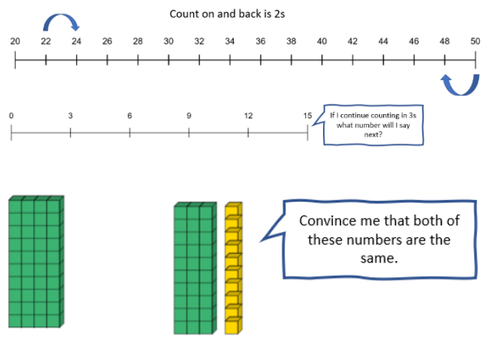
Squirrel Class Maths Medium Term Planning: Autumn term Class – Y1/2.

Week.	Mathematical aspect	Non-negotiable end points Year 1.	Non-negotiable end points Year 2.	Curriculum statements – Year 1.	Curriculum Statements. Year 2.
1.	Number and place value: counting, reading and writing 2-digit numbers, place value	Knows the counting patterns from 1 to 100. Knows that counting can go forwards or backwards in order.	Knows the properties of two digit numbers. Knows that counting can be done in varying step sizes.	● To count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. ● To identify and represent numbers using objects and pictorial representations including the number line, and use the language of equal to, more than, less than (fewer), most, least.	●To count in steps of 2, 3, and 5 from 0, and count in tens from any number, forward or backward. ● To recognise the place value of each digit in a two-digit number (tens, ones). ● To identify, represent and estimate numbers using different representations, including the number line. ● To compare and order numbers from 0 up to 100; use <, > and = signs. ● To read and write numbers to at least 100 in numerals and in words. ● To use place value and number facts to solve problems.
Count in 1s, 2s, 5s, 10s 					
2.	Addition and subtraction: concrete, visual and number facts	Knows that addition makes a larger total. Knows that subtraction reduces the amount.	Knows number bonds to 20. Knows efficient strategies for adding and subtracting for up to two 2-digit numbers. Knows that addition is commutative.	● To read and write numbers from 1 to 20 in numerals and words. When given a number, identify one more and one less. ● To read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs. ● To add and subtract one-digit and two-digit numbers to 20, including zero.	To solve problems with addition and subtraction: ● Using concrete objects and pictorial representations, including those involving numbers, quantities and measures ● Applying their increasing knowledge of mental and written methods. ● To recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100. ● To add and subtract using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers. ● To show that addition can be done in any order (commutative) and subtraction cannot. ● To recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.

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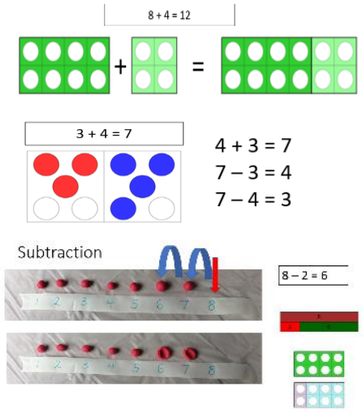
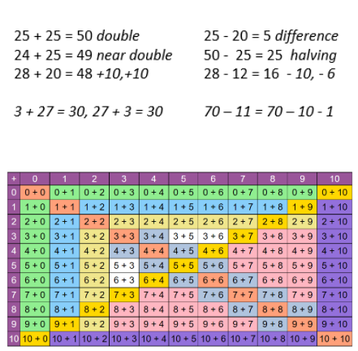
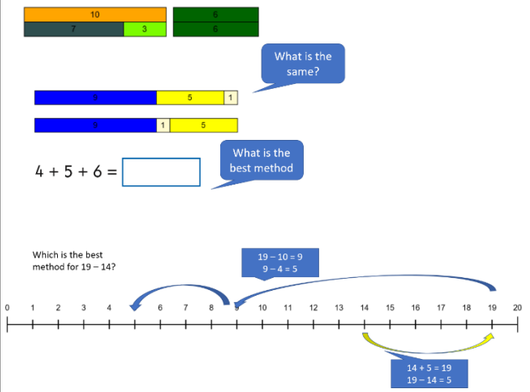
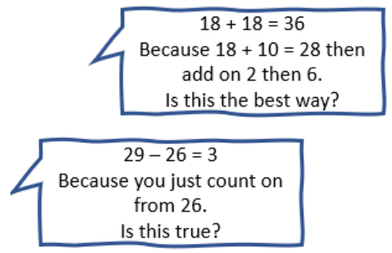
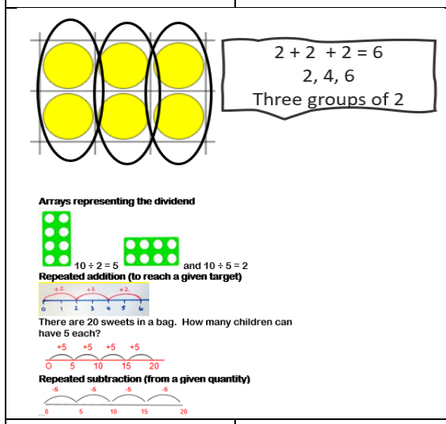
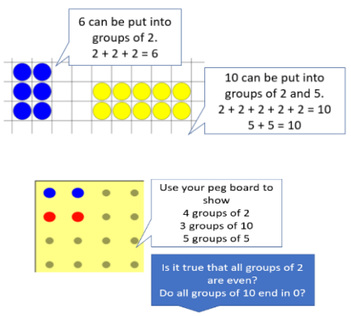
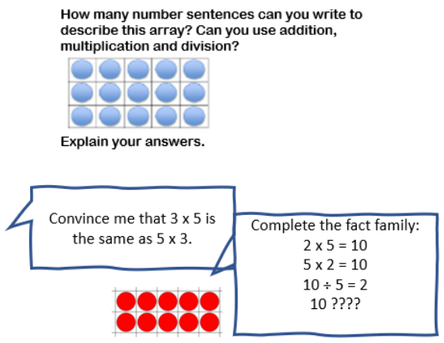
						
3.	Multiplication and division: repeated addition equal groups of	Knows the operations of multiplication (repeated addition) and division (equal groups of).	Knows the operations of multiplication (repeated addition) and division (equal groups of). Knows that multiplication is commutative.	● To solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	● To recall and use multiplication and division facts for the 2,5 and 10 multiplication tables, including recognising odd and even numbers. ● To calculate mathematical statements for multiplication and division within the multiplication tables and write them using multiplication, division and equals signs. ● To recognise and use the inverse relationship between multiplication and division in calculations. ● To show that multiplication of two numbers can be done in any order (commutative) and division for one number by another cannot. ● To solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.
					
4.	Geometry: properties of shape	Know the mathematical names of 2d and 3d shapes.	Know the mathematical names and properties of 2d and 3d shapes.	● To recognise and name common 2D and 3D shapes, including: 2D shapes (rectangles (including squares), circles and triangles) 3D shapes (cuboids (including cubes), pyramids and spheres).	● To identify and describe the properties of 2D shapes, including the number of sides and symmetry in a vertical line. ● To identify and describe the properties of 3D shapes including the number of edges, vertices and faces.

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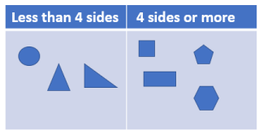
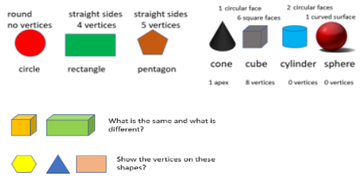
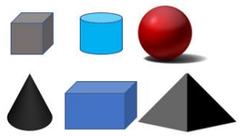
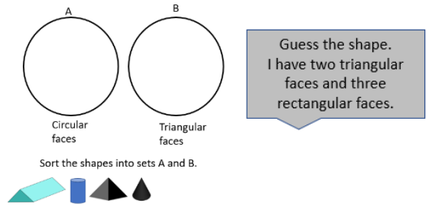
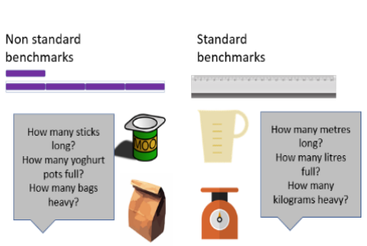
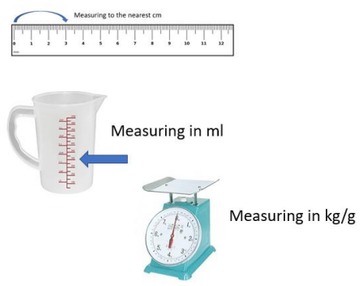
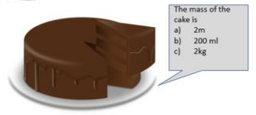
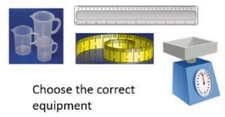
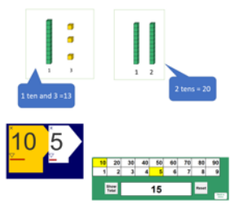
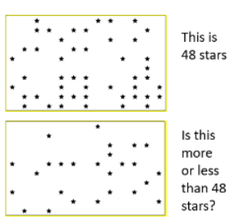
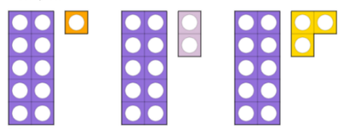
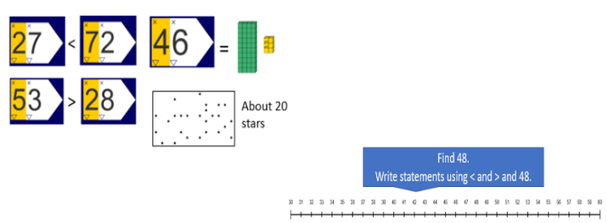
					● To identify 2D shapes on the surface of 3D shapes, for example circle on a cylinder and a triangle on a pyramid. ● To compare and sort common 2D and 3D shapes and everyday objects.
 All pentagons have 5 sides 	What is the same and what is different?  Name the shape.	
5.	Measurement: length, mass, capacity	Know how to measure a length, a mass and a capacity in nonstandard units then standard units.	Knows the standard units of measure for length, mass and capacity.	● To compare, describe and solve practical problems for: ● lengths and heights (long/short, longer/shorter, tall/short, double/half) ● mass or weight (heavy/light, heavier than, lighter than) ● capacity/volume (full/empty, more than, less than, quarter)	To choose and use appropriate standard units to estimate and measure length/ height in any direction; mass; temperature; volume and capacity to the nearest appropriate unit using rulers, scales, thermometers and measuring vessels. ● To compare and order lengths, mass, volume/capacity and record the results using >, < and =.
 	 The packet of seeds says that the sunflowers may grow to 2m high. How will you measure the sunflower? How can you find out how many cups of tea can be poured from the teapot? 	 Find the mass of the parcels in grams. Find the length of the ribbon in centimetres. Find the capacity of the jug in millilitres.  Choose the correct equipment
6.	Number and place value: comparing, ordering two-digit numbers and knowing their place value	Count to 100 in 1s, 2s, 10s and 5s. Knows small quantities that do not need counting. Knows that 1 ten is ten ones as a base ten value. Knows how the teen numbers are built.	Knows the symbols of comparing numbers. Uses the skill of estimation.	● To count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. ● To count, read and write numbers to 100 in numerals, count in multiples of twos, fives and tens. When given a number, identify one more and one less. ● To identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least. ● To read and write numbers from 1 to 20 in numerals and words.	●To identify, represent and estimate numbers using different representations, including the number line. ● To compare and order numbers from 0 up to 100; use <, > and = signs. ● To read and write numbers to at least 100 in numerals and in words. ● To use place value and number facts to solve problems.
 15 1 ten and 5 ones Fifteen 	Complete  11 eleven Make models of 1 ten and 6 ones 1 ten and 4 ones Which is bigger?	

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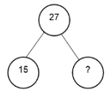
7&8.	Addition and subtraction: using recall of addition and subtraction facts and mental calculation strategies Subtraction as take away & difference (counting on and back)	Knows the operation required and calculates using counting and known facts, including doubles. Knows that counting back is 'take away' and counting on is 'find the difference'.	Knows efficient methods using number sense, place value, bridging, near doubles and adjustment strategies.	● To read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs. ● To represent and use number bonds and related subtraction facts within 20. ● To add and subtract one-digit and two-digit numbers to 20, including zero. ● To solve one-step problems that involve addition using concrete objects and pictorial representations, and missing number problems such as 7 = □ - 9.	To solve problems with addition and subtraction: ● Using concrete objects and pictorial representations, including those involving numbers, quantities and measures ● Applying their increasing knowledge of mental and written methods. ● To add and subtract using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers. ● To show that addition can be done in any order (commutative) and subtraction cannot. ● To recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.

Whole-part model



27	
15	?

100	
23	77

20	
3	17

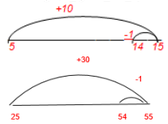
9 = 9
9 = 8 + 1
9 = 7 + 2
8 + 1 = 7 + 2

20 = 3 + 17
20 = 17 + 3
20 – 3 = 17
20 – 17 = 3

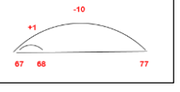
10 = 10
10 = 8 + 2
10 = 6 + 4
8 + 2 = 6 + 4

Adjustment strategy

5 + 9 =
5 + 10 – 1= 14



77 - 9 =
77-10 +1 =67+ 1
=68



Re-arranging

18+4 =
Tell me what you know about 4, e.g. 3+1, 2+2
18+4= Rearrange the 4 into 2+2 18+2+2= 20+2 =22

(Round and adjust)
What is the nearest 10?
55 – 27 =
55 – 30 +3 =25 + 3
= 28
91 – 48 =
91-50 +2=41 +2
=43

Add
15 + 4 =
16 + 6 =
17 + 8 =

Bridge the 10

Spot the mistake
18 + 4 = 18 + 2 + 2
13 + 9 = 13 + 7 + 3
17 + 8 = 17 + 3 + 5

How would you find the missing number?

9	
6	?

18	
?	11

Subtract
25 - 8 =
16 - 7 =
27 - 23 =

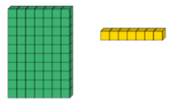
Add
25 + 10
25 + 15
25 + 17

Subtract
65 - 10
65 - 15
65 - 55

Spot the mistake
75 + 25 = 100
76 + 34 = 100
100 – 24 = 76

Better, best
25 + 29 = 54
25 + 30 = 55, then subtract 1
25 + 25 = 50, then add 4

Show me how to do 76 – 43 using the Dienes.



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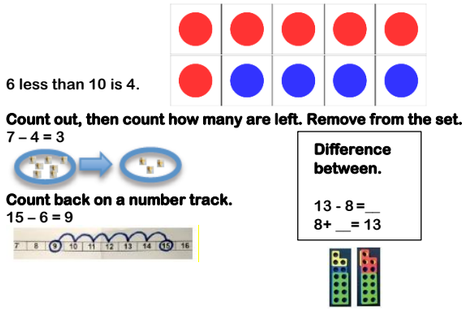
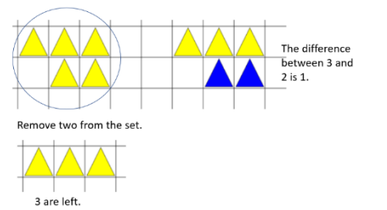
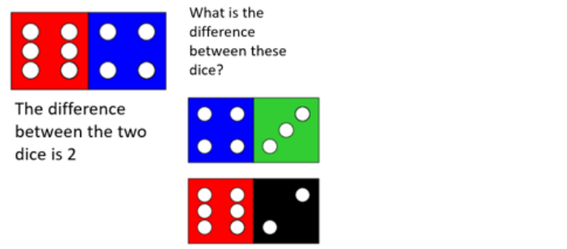
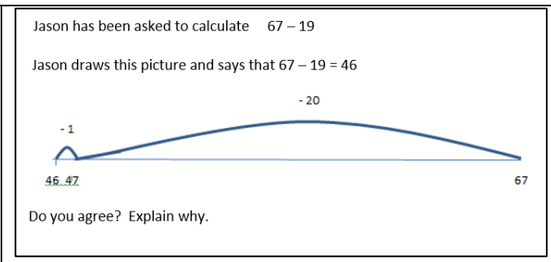
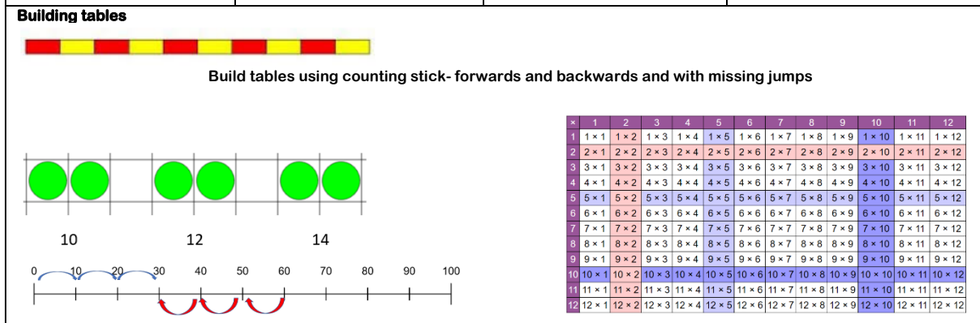


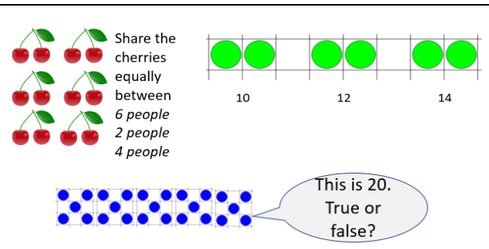


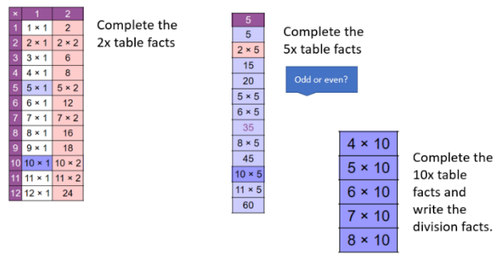




9.	Multiplication and division: repeated addition and subtraction, arrays, grouping and using times tables facts	Knows that equal groups can be represented as an array	Knows the 2s, 5s and 10s times tables. Uses arrays to represent multiplication and division facts.	● To solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	● To recall and use multiplication and division facts for the 2,5 and 10 multiplication tables, including recognising odd and even numbers. ● To calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs. ● To recognise and use the inverse relationship between multiplication and division in calculations. ● To show that multiplication of two numbers can be done in any order (commutative) and division for one number by another cannot. ● To solve one-step problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.







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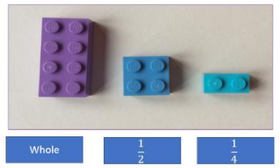
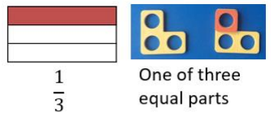
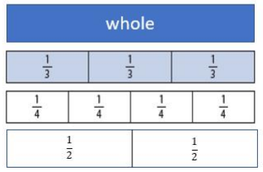
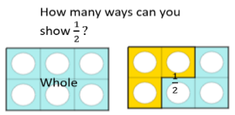
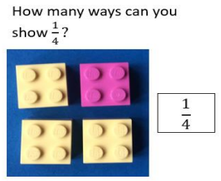
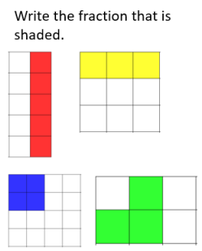
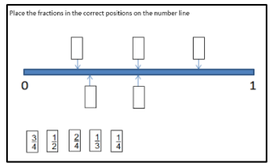
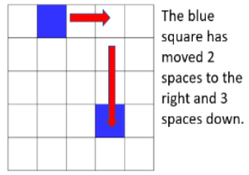
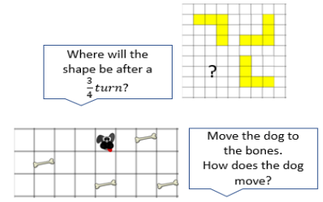
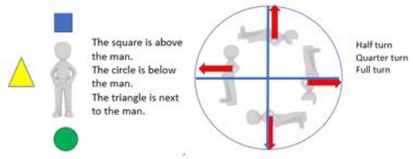
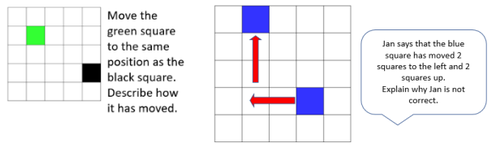
10.	Fractions: finding fractions of quantities, shapes and sets of objects	Knows that halves are two equal parts of a whole. Knows that quarters are 4 equal parts of a whole.	Knows that fractions are relative to the whole. Knows that fractions are equal parts to the whole.	● To recognise, find and name a half as one of two equal parts of an object, shape or quantity.	● To recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4. ● To write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of two quarters and one half.
  				 	 
11.	Geometry: position, movement and motion	Knows that shapes can be placed in different locations.	Knows how to describe position and movement using the correct terms.	● To recognise and name common 2D and 3D shapes, including: ● 2D shapes (rectangles (including squares), circles and triangles) ● 3D shapes (cuboids (including cubes), pyramids and spheres). ● To describe position, directions and movements, including half, quarter and three- quarter turns.	● To order and arrange combinations of mathematical objects in patterns. ● To use mathematical vocabulary to describe position, direction and movement, including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise) and movement in a straight line.
 					
12.	Measurement: time and money	Knows that days of the week and the months of the year. Knows the coins and notes by their value, size and colour.	Knows how to read the time to the nearest 15 minutes. Knows how to find totals and equivalent amounts in money using notes and coins.	● To compare, describe and solve practical problems for: ● time (quicker, slower, earlier, later). ● To recognise and know the value of different denominations of coins and notes.	To compare and sequence intervals of time. ● To tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times. ● To recognise and use the symbols for pounds and pence; combine amounts to make a particular value ● To find different combinations of coins that equal the same amounts of money ● To solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change

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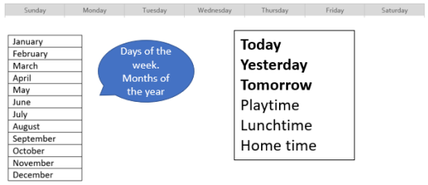
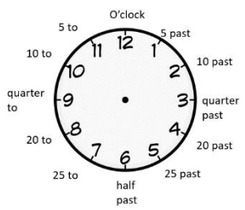


Days of the week.
Months of the year

Today
Yesterday
Tomorrow
Playtime
Lunchtime
Home time



January
March
April
June
July
August
October
November
December

Put May February and September in the right order.

Today is Monday.
So yesterday was....
and tomorrow will be.....

Minutes, seconds, hours

"The clock shows half past 7."

The time it will take to read a page of your book
The time it will take to walk from the class room to get your coat
The time it would take to write your name

Put the hour hand on the clock to show: quarter past 5 quarter past 11

Put the hour hand on the clock to show: half past 7 half past 2

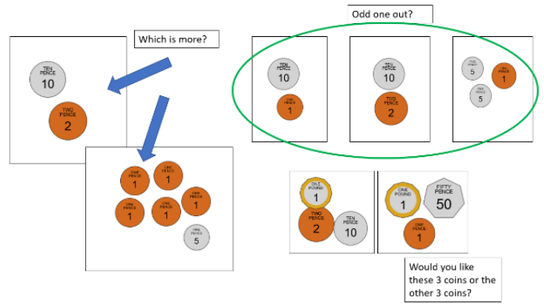
Sam says the clock shows the time is quarter to 3. Explain why Sam is not correct.

Knows the coins by size, colour and value

Knows the notes by size, colour and value

How do I find half of 20p? 50p?

How much do I have?

True or false?
I have 20p

What is the same and what is different about these coins/notes?