Year 2

Maths Overview

ST. MARY'S ACADEMY TRUST

MathsHUBS White Rose

Year 2 Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15
Autumn	Number: Place value		Number: Addition & Subtraction			Measures: Money	Measures: Length & height Weight/Mass		Number: Multiplication and Division		Number: Fractions		Geometry: Position & Direction	Opportunity to consolidate, revisit and reinforce	
Spring	Number: Place value		Number: Four operations (addition, subtraction, multiplication & division)		Geometry: Properties of Shape		Measures: Volume & capacity, Temperature		Measures: Time	Statistics					
Summer	Number: Fractions		Measures: Money	Measures: Time		Geometry: Properties of Shape	Number: Four operations (addition, subtraction, multiplication & division)				Measures: Length & height, Weight/Mass, Volume & capacity		Opportunity to consolidate, revisit and reinforce		

Please note: The length of each unit has been given as a guide only. Use professional judgement to either extend or shorten units in line with the needs of pupils. The 'spare' weeks at the end of each term have been planned in to allow for this flexibility or give the opportunity to consolidate, revisit and reinforce.
Where units revisit objectives, use assessment data to inform planning.

AUTUMN TERM															
Wk 1	**Wk 2**	**Wk 3**	**Wk 4**	**Wk 5**	**Wk 6**	**Wk 7**	**Wk 8**	**Wk 9**	**Wk 10**	**Wk 11**	**Wk 12**	**Wk 13**	**Wk 14**	**Wk 15**
<u>Number: Place value</u> Count in steps of five from 0 and steps of ten from any number- forwards and backwards Count in steps of 2 from 0- forward and backward. Count in steps of 3 from 0- forward and backward. Recognise the place value of each digit in a two-digit number (tens, ones) Identify, represent and estimate numbers using different representations including the number line. Compare numbers from 0 up to 100 (use <, > and = signs) Order numbers from 0 up to 100 Read and write numbers to at least 100 in numerals. Read numbers to at least 100 in words. Write numbers to at least 100 in words. Use place value and number facts to solve problems.		<u>Number: Addition & subtraction</u> Show that the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. Add numbers using concrete objects, pictorial representations, and mentally: two-digit number and ones Subtract numbers using concrete objects, pictorial representations, and mentally: two-digit number and ones Add numbers using concrete objects, pictorial representations, and mentally: a 2-digit number and tens Subtract numbers using concrete objects, pictorial representations, and mentally: a 2-digit number and tens Use estimation to check answers are reasonable **(WA-ITAF)** Use concrete objects, pictorial representations and mental strategies to add three one digit numbers. Recognise and use the inverse relationship between addition and subtraction to check calculations Use the inverse relationship between addition and subtraction to solve missing number problems. Work out mental calculations where regrouping is required (e.g. 52 – 17; 91 – 73) **GD-ITAF** Solve more complex missing number problems (e.g. 14 + __- 3 = 17; 14 + __= 15 + 27) **GD- ITAF** Reason about addition. **GD-ITAF**			<u>Measures: Money</u> Recognise and use symbols of pounds (£) and pence (p) Combine amounts to make a particular value. Find different combinations of coins that equal the same amounts of money. Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.	<u>Measures: Length & height, Weight /Mass</u> Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) to the nearest appropriate unit. Choose and use appropriate standard units to estimate and measure mass (kg/g) to the nearest appropriate unit. Read scales in divisions of 1s, 2s, 5s, and 10s Compare length and mass and record the results using >, < and =. Order measures (lengths and mass) Read scales in divisions of 1s, 2s, 5s and 10s where **not** all numbers on the scale are given. **GD-ITAF**		<u>Number: Multiplication & division</u> Recall doubles and halves to 20 **(WT-ITAF)** Recognise odd and even numbers. Recall and use multiplication & division facts for the 10 times tables Recall and use multiplication & division facts for the 5 times tables Recall and use multiplication & division facts for the 2 times tables Calculate mathematical statements for multiplication & division within the multiplication tables and write them using x, ÷ and = signs. Show that the multiplication of 2 numbers can be done in any order (commutative) and division of one number by another cannot. Solve multiplication problems, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts. Solve division problems, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts. Determine remainders given known facts **GD-ITAF** Solve word problems that involve more than one step **GD-ITAF** Rewrite addition statements as simplified multiplication statements **GD-ITAF** Use multiplication facts to make deductions outside known multiplication facts **GD-ITAF**		<u>Number: Fractions</u> Recognise, find, name and write fractions 1/3, ¼, 2/4 and 3/4 of a shape. Recognise, find, name and write fractions 1/3, ¼, 2/4 and 3/4 of a length, set of objects or quantity Write simple fractions for example, ½ of 6 = 3 Recognise the equivalence of 2/4 and ½ . Compare fractions of amounts (e.g. 1/4 of £20 = £5 and 1/2 of £8 = £4 so 1/4 of £20 is greater than 1/2 of £8). **GD-ITAF**		<u>Geometry: Position & direction</u> Order and arrange combinations of mathematical objects in patterns and sequences. Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line. Distinguish between rotation as a turn and in terms of right angles for ¼, ½, ¾ turns (clockwise and anti-clockwise)	Opportunity to consolidate, revisit and reinforce	

SPRING TERM									
Wk 1	**Wk 2**	**Wk 3**	**Wk 4**	**Wk 5**	**Wk 6**	**Wk 7**	**Wk 8**	**Wk 9**	**Wk 10**
<u>Number: Place value</u> Count in steps of five from 0 and steps of ten from any number- forwards and backwards Count in steps of 2 from 0- forward and backward. Count in steps of 3 from 0- forward and backward. Recognise the place value of each digit in a two-digit number (tens, ones) Identify, represent and estimate numbers using different representations including the number line. Compare numbers from 0 up to 100 (use <, > and = signs) Order numbers from 0 up to 100 Read and write numbers to at least 100 in numerals. Read numbers to at least 100 in words. Write numbers to at least 100 in words. Use place value and number facts to solve problems.		<u>Number: Four operations (addition, subtraction, multiplication & division)</u> Recall and use addition & subtraction facts to 20 fluently, and derive and use related facts up to 100. Add numbers using concrete objects, pictorial representations, and mentally: a 2-digit number and tens Subtract numbers using concrete objects, pictorial representations, and mentally: a 2-digit number and tens Use concrete objects, pictorial representations and mental strategies to add three one digit numbers. Add numbers using concrete objects, pictorial representations, and mentally: two 2-digit numbers Subtract numbers using concrete objects, pictorial representations, and mentally: two 2-digit numbers Use estimation to check answers are reasonable **(WA-ITAF)** Recognise and use the inverse relationship between addition and subtraction to check calculations Use the inverse relationship between addition and subtraction to solve missing number problems. Solve addition problems using concrete objects and pictorial representations, including those involving numbers, quantities and measures Solve subtraction problems using concrete objects and pictorial representations, including those involving numbers, quantities and measures Solve problems with addition and subtraction by applying their increasing knowledge of mental and written methods Work out mental calculations where regrouping is required (e.g. 52 – 17; 91 – 73) **GD-ITAF** Solve more complex missing number problems (e.g. 14 + __- 3 = 17; 14 + __= 15 + 27) **GD- ITAF** Reason about addition. **GD-ITAF** Recall and use multiplication & division facts for the 5 times tables Recall and use multiplication & division facts for the 2 times tables Calculate mathematical statements for multiplication & division within the multiplication tables and write them using x, ÷ and = signs. Show that the multiplication of 2 numbers can be done in any order (commutative) and division of one number by another cannot. Solve multiplication problems, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts. Solve division problems, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts. Determine remainders given known facts **GD-ITAF** Solve word problems that involve more than one step **GD-ITAF** Rewrite addition statements as simplified multiplication statements **GD-ITAF** Use multiplication facts to make deductions outside known multiplication facts **GD-ITAF**	<u>Shape: Properties of Shape</u> Identify and describe the properties of 2D shapes, including the number of sides Identify line symmetry Identify and describe the properties of 3D shapes, including the number of edges, vertices and faces. Identify 2D shapes on the surface of 3D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]. Compare and sort common 2D and 3D shapes and everyday objects on the basis of their properties. Describe similarities and differences of shape properties **GD- ITAF**		<u>Measures: Volume & capacity, Temperature</u> Choose and use appropriate standard units to estimate and measure temperature (°) to the nearest appropriate unit. Choose and use appropriate standard units to estimate and measure capacity (l/ml) to the nearest appropriate unit. Read scales in divisions of 1s, 2s, 5s, and 10s Compare volume/capacity and record the results using >, < and =. Order measures (volume/capacity) Read scales in divisions of 1s, 2s, 5s and 10s where **not** all numbers on the scale are given. **GD-ITAF**		<u>Measures: Time</u> Know the number of minutes in an hour & the number of hours in a day. Tell and write the time to the nearest 15 minutes Tell and write the time to the nearest 5 minutes **(GD-ITAF)** Draw hands on a clock face to show times to the nearest 15 minutes Compare and sequence intervals of time.	<u>Statistics</u> Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. Ask & answer simple questions by counting the number of objects in each category and sorting the categories by quantity. Ask and answer questions about totaling and comparing categorical data

SUMMER TERM												
Wk 1	**Wk 2**	**Wk 3**	**Wk 4**	**Wk 5**	**Wk 6**	**Wk 7**	**Wk 8**	**Wk 9**	**Wk 10**	**Wk 11**	**Wk 12**	**Wk 13-14**
Number: Fractions Recognise, find, name and write fractions 1/3, ¼, 2/4 and 3/4 of a shape. Recognise, find, name and write fractions 1/3, ¼, 2/4 and 3/4 of a length, set of objects or quantity Write simple fractions for example, ½ of 6 = 3 Recognise the equivalence of 2/4 and ½ . Compare fractions of amounts (e.g. 1/4 of £20 = £5 and 1/2 of £8 = £4 so 1/4 of £20 is greater than 1/2 of £8). **GD-ITAF**		Measures: Money Recognise and use symbols of pounds (£) and pence (p) Combine amounts to make a particular value. Find different combinations of coins that equal the same amounts of money. Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.	Measures: Time Know the number of minutes in an hour & the number of hours in a day. Tell and write the time to the nearest 15 minutes Tell and write the time to the nearest 5 minutes **GD-ITAF** Draw hands on a clock face to show times to the nearest 15 minutes Compare and sequence intervals of time.		Shape: Properties of Shape Identify and describe the properties of 2D shapes, including the number of sides Identify line symmetry Identify and describe the properties of 3D shapes, including the number of edges, vertices and faces. Identify 2D shapes on the surface of 3D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]. Compare and sort common 2D and 3D shapes and everyday objects on the basis of their properties. Describe similarities and differences of shape properties **GD- ITAF**		Number: Four operations (addition, subtraction, multiplication & division) Recall and use addition & subtraction facts to 20 fluently, and derive and use related facts up to 100. Add numbers using concrete objects, pictorial representations, and mentally: two 2-digit numbers Subtract numbers using concrete objects, pictorial representations, and mentally: two 2-digit numbers Use estimation to check answers are reasonable **(WA-ITAF)** Recognise and use the inverse relationship between addition and subtraction to check calculations Use the inverse relationship between addition and subtraction to solve missing number problems. Solve addition problems using concrete objects and pictorial representations, including those involving numbers, quantities and measures Solve subtraction problems using concrete objects and pictorial representations, including those involving numbers, quantities and measures Solve problems with addition and subtraction by applying their increasing knowledge of mental and written methods Work out mental calculations where regrouping is required (e.g. 52 – 17; 91 – 73) **GD-ITAF** Solve more complex missing number problems (e.g. 14 + __- 3 = 17; 14 + __= 15 + 27) **GD- ITAF** Reason about addition. **GD-ITAF** Recall and use multiplication & division facts for the 5 times tables Recall and use multiplication & division facts for the 2 times tables Calculate mathematical statements for multiplication & division within the multiplication tables and write them using x, ÷ and = signs. Show that the multiplication of 2 numbers can be done in any order (commutative) and division of one number by another cannot. Solve multiplication problems, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts. Solve division problems, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts. Determine remainders given known facts **GD-ITAF** Solve word problems that involve more than one step **GD-ITAF** Rewrite addition statements as simplified multiplication statements **GD-ITAF** Use multiplication facts to make deductions outside known multiplication facts **GD-ITAF**			Measures: Length & height, weight/mass, volume & capacity Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) to the nearest appropriate unit. Choose and use appropriate standard units to estimate and measure mass (kg/g) to the nearest appropriate unit. Choose and use appropriate standard units to estimate and measure capacity (l/ml) to the nearest appropriate unit. Read scales in divisions of 1s, 2s, 5s, and 10s Compare measures and record the results using >, < and =. Read scales in divisions of 1s, 2s, 5s and 10s where **not** all numbers on the scale are given. **GD-ITAF** Order measures		Opportunity to consolidate, revisit and reinforce

	National Curriculum Statement	All students		
		Fluency	**Reasoning**	**Problem Solving**
Number: Place Value	Count in steps of five from 0 and steps of 10 from any number- forwards and backwards Count in steps of 2 from 0- forwards and backwards Count in steps of 3 from 0- forwards and backwards	• **Continue the sequence:** 2, 4, 6, 8, 10, , , ___ 15, 20, 25, 30, , _____ 90, 80 , 70, , , __ 21, 18, 15, , , __ • **Fill in the missing numbers** 10 | | 20 | 25 | 30 | | 40 • **Circle the odd one out:** 20, 18, 17, 14, 12, 10 3, 8, 13, 18, 23, 27, 33, 12, 15, 18, 20, 24	• **Spot the mistake:** What is wrong with this sequence of numbers? 55, 50, 45, 35 • **True or False** I start at 0 and count in 3's. I say the number 14. • **What comes next?** 21 + 5= 26 26 + 5= 31 31+ 5 = 36	• Harry has made a sequence of numbers using six number cards. Here are three of the cards: can you think of two sequences Harry could have made? 10 20 30 • A spider is climbing a 30m building. Each day it climbs 5m and slides back down 1m. How many days will it take to reach the top? • Sid is counting in 2's, Luke is counting in 3's. Sid says 'If we add our numbers together as we count we can make a new pattern.' What pattern do they make? What happens if Sid counts in 5's and Luke counts in 10's?

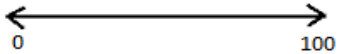
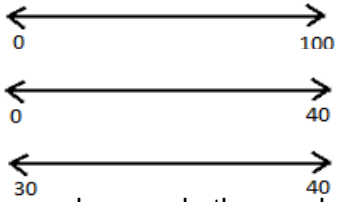
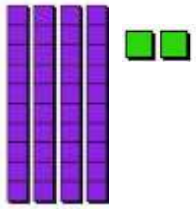
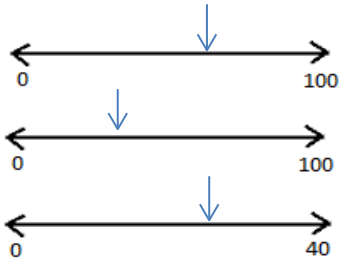
Number: Place Value

	National Curriculum Statement	All students		
		Fluency	**Reasoning**	**Problem Solving**
	Recognise the place value of each digit in a 2 digit number (tens, ones)	• In the number 36 there are __ groups of ten and ones. • The number_____is made up of seven groups of ten and eight ones. • The number 89 shows in the tens place and in the ones place.	• Use manipulatives to show and then explain the value of 5 in the following numbers: 35, 56, 75 • Use manipulatives to make 2 digit numbers where the ones digit is two less than the tens digit. What is the largest number you can make? What is the smallest number? • Sally says 'My number has 5 tens. The ones digit is less than the tens.' What could Sally's number be?	• Work in a pair. Partner A writes down a 2 digit number. Partner B guesses the number. Partner A ticks one of the columns in the table below and Partner B keeps guessing until they guess the correct number. • You have 0-9 number cards Using each card once, make: -Largest even number -Largest odd number - Smallest odd number -Largest multiple of 5 - Number closest to 50. • How many 2 digit numbers can you make using 3 counters and the number grid below?

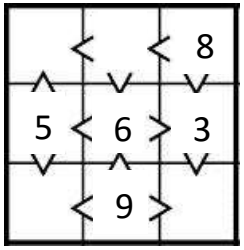
Clue	Guess 1	Guess 2
Both digits correct		
Tens digit correct		
Ones digit correct		
Neither digit correct		

Tens	Ones
	

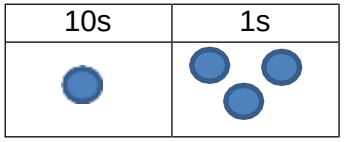
Number: Place Value

National Curriculum Statement	All students		
	Fluency	**Reasoning**	**Problem Solving**
Identify, represent and estimate numbers to 100 using different representations including the number line.	• Place these numbers on the number line. 12, 22, 5, 19  • Use manipulatives to represent the following numbers 23, 35, 53, 42 • Place the following numbers on the number line. 50, 23, 78  	• Place 36 on each of the number lines below.  • reg has made the number 24 using Base 10. Is he correct? Explain your answer.  • **True or False?** The arrow on the line below is pointing to 70.  Convince me	• Match each number line to the clue that describes it.  - The number is over half way along the number line. - The number is bigger than 50. - The number is between 20 and 40. • Play a game of snap with cards that match 2 digit numbers with Base 10 blocks. (See resources) • How many different numbers can you make using 4 counters and the place value grid below?  Tens | Ones

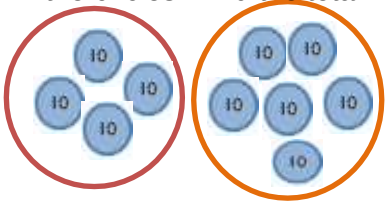
Number: Place Value

	National Curriculum Statement	All students		
		Fluency	**Reasoning**	**Problem Solving**
	Compare numbers from 0 up to 100 (use <, > and = signs) Order numbers from 0 up to 100	• Order the numbers from smallest to largest: 23, 32, 27, 30, 19, 41 • Use <, > and = to make these number sentences correct. 4 tens_____40 ones 2 tens_____9 ones 4 tens_____44 ones • Order the amounts below, 2 tens and 5 ones, 27, 2 lots of 10 and 8 ones, 1 ten and 14 ones.	• If you ordered the numbers below, which would be fourth? Explain how you ordered them. 33, 53, 37, 29, 34, 43 • Use <, > and = to make these number sentences correct. 4 tens + 3 ones____3 tens + 13 ones 2 tens and 7 ones 1 ten and 14 ones 5 tens and 2 ones 4 tens + 15 ones • **True or False:** One ten and twelve ones is bigger than two tens. Explain how you know.	• Bill has written a list of 2 digit numbers. The digits of each number add up to 5. None of the digits are 0. Can you find all the numbers Bill could have written? Write the numbers in order from smallest to largest. • Fill in the missing numbers in the grid using 1, 2, 4 and 7.  • What numbers could go in the grid below? 52 < ___ < 56 The number in the grid is even. Which number must it be?

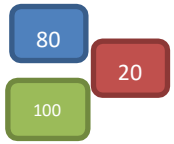
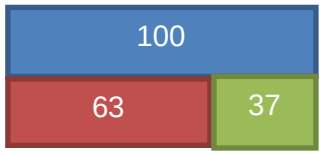
Number: Place Value

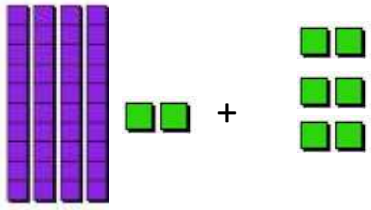
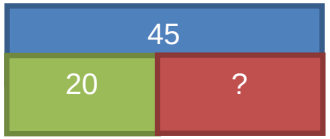
	National Curriculum Statement	All students		
		Fluency	**Reasoning**	**Problem Solving**
	Read and write numbers to at least 100 in numerals. Read numbers to at least 100 in words. Write numbers to at least 100 in words.	• **Match the numerals to words.** 43 thirty four 62 thirty nine 39 forty three 34 sixty two • **Write the following numbers in words:** 32, 75, 52, 41. • **Write the following numbers in numerals:** seventy four, thirty six, fifty five.	• Dan has written the number 40 4. Is he correct? Explain how you know. • **True or False?** The number fourteen is written as 40 in numerals. Prove it. • What number is represented in the place value grid?  How many different numbers can you make with four counters? Write them in numerals and words.	• Match the words to the numerals. Fill in the missing digits. Forty four 3 _ Forty six _ 4 Sixty four 4 _ Thirty four _ 6 • Complete the wordsearch (see resources) to find the numbers written in words. • Work out the answers to the clues in order to complete the number-word crossword (see resources)

Addition and Subtraction

	National Curriculum	All students		
		Fluency	**Reasoning**	**Problem Solving**
	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts to 100.	• **Fill in the gaps:** __ + 16 = 20 20 - = 5 20 + 80 = _ 100 - = 30 • Add the tens together in the circles. Find the total.  • Harry has 15p. Which coin does he need to make 20p? 	• **Continue the pattern** 90 = 100 – 10 80 = 100 – 20 Can you make up a similar pattern starting with the numbers 75, 25 and 100? • **Missing numbers** 81 +___= 100 100 -___= 89 Explain how you can use number bonds to 10 to find the missing numbers above. • Sam says 'If I know 9 + 1= 10, I also know what I add to 90 to make 100.' Is he right? Prove it.	• Jenny has ten 10p's. How many ways can she add them together to make £1. Eg 20p + 80p • Can you find the missing number so each row and column adds up to 100? | 20 | | 50 | | 30 | 40 | | | | | | • Use the numbers 1, 2 and 3. In pairs, one child chooses a number. The other child has to choose another number to add to the first number. The aim is to be the person who reaches 20 first. You must try to make sure your partner doesn't reach 20.

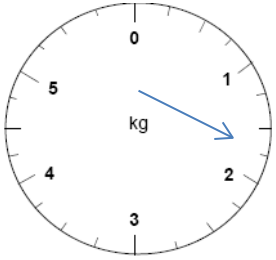
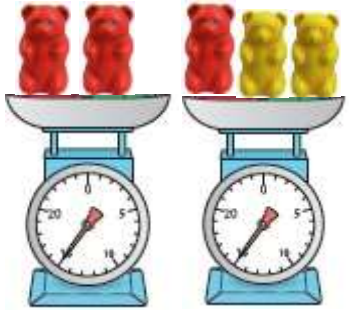
Addition and Subtraction

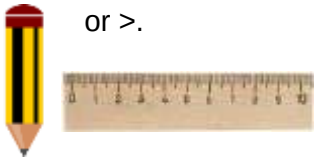
	National Curriculum Statement	All students		
		Fluency	**Reasoning**	**Problem Solving**
	Show that the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.	• Show how the number cards can be sorted to complete each sentence. □ + □ = □ □ = □ + □ □ • □ = □ □ = □ - □  • Use the bar model below to write 2 additions and 2 subtractions.  • If I know 34 + 43 = 76, what other addition can I write?	• **True or False?** These four calculations have the same answer. 1 + 4 + 2 2 + 4 + 1 4 + 2 + 1 4 + 1 + 2 Explain your answer. • **True or False?** These four calculations have the same answer. 7 – 3 – 2 2- 3- 7 3 – 2 – 7 7 – 2 – 3 Use cubes to help to explain your answer. • Sid says 'In a subtraction, you always start with the biggest number and take away from that.' Do you agree? Explain your answer.	• Use the number cards below to make as many additions and subtractions as you can? How many can you make? 

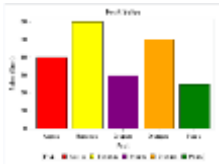
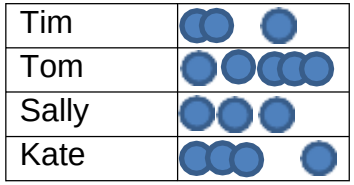
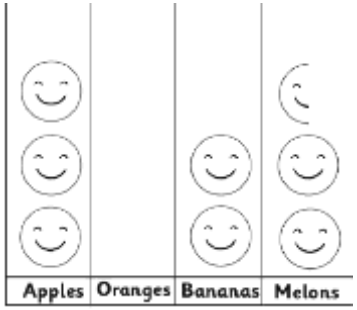
	National Curriculum Statement	All students		
		Fluency	**Reasoning**	**Problem Solving**
Addition and Subtraction	Add numbers using concrete objects, pictorial representations, and mentally: a 2 digit number and ones Subtract numbers using concrete objects, pictorial representations, and mentally: a 2 digit number and ones Add numbers using concrete objects, pictorial representations, and mentally: a 2 digit number and tens Subtract numbers using concrete objects, pictorial representations, and mentally: a 2 digit number and tens Add numbers using concrete objects, pictorial representations, and mentally: two 2 digit numbers Subtract numbers using concrete objects, pictorial representations, and mentally: two 2 digit numbers Use concrete objects, pictorial representations and mental strategies to add three one-digit numbers.	• Calculate:  • Owen has 45 football cards, he gives 20 to his friend Jack. How many does he have left? Use the bar model to help you.  • Work out the total of each row and column. 5 4 2 3 7 8 5 7 3	• **True or False?** When you add two odd numbers together you always get an even number. Convince me. • What digits could go in the boxes? □ 2 + □ 5 = 87 How many ways can you do it? Show me. • Sam says 'I am thinking of a two digit number, if I add ones to it, I will only need to change the ones digit.' Is he right? Explain your answer.	• Take 3 consecutive numbers that are neighbours when you count. Eg 4, 5, 6. Add them together, what do you notice? Choose 3 more neighbour numbers up to 10. See if there is a pattern as you add them. • Lily has 3 dogs.  **A** **B** **C** Dog A and B weigh 7kg. Dog B and C weigh8kg. Dog A and C weigh 11kg. What does each dog weigh? • Take five coins: 1p, 2p, 5p, 10p, 20p. Put them in a row using these clues. The total of the first three coins is 27p. The total of the last three coins is 31p. The last coin is double the value of the first coin.

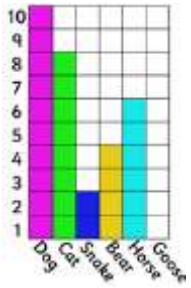
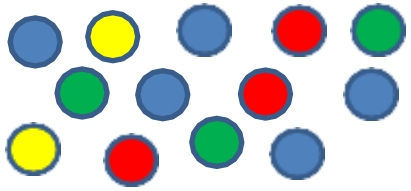
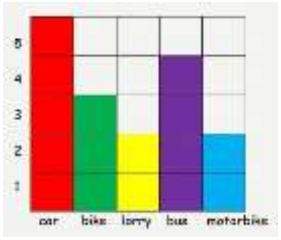
	National Curriculum Statement	All students		
		Fluency	**Reasoning**	**Problem Solving**
Addition and Subtraction	Recognise and use the inverse relationship between addition and subtraction and use this to check calculations Use inverse relationships between addition and subtraction to solve missing number problems.	• Fill the gaps: 17 + 5 = 22 22 - = 17 • If I know 34 + 20 = 54, what other addition and subtractions sentences do I know? • Dan calculates 67 + 8 = 75, use a subtraction to check his answer.	• Kate has baked 32 buns, she sells 15 buns. She says 'I have 16 more to sell'. Is she right? Use an addition sentence to prove your answer. • Oliver is working out a missing number problem. 17 + ___ = 24 I am going to use a subtraction to solve the problem. Explain how he is going to work out the answer.	• I think of a number. I take away 7 and add 2. My answer is 15. What is my number? • Look at the temperature on the thermometer. The temperature has dropped 8 degrees in 2 hours. What was the temperature 2 hours ago? 

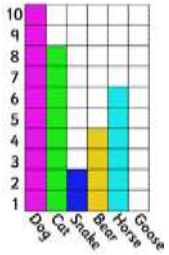
	National Curriculum Statement	All students		
		Fluency	**Reasoning**	**Problem Solving**

Measurement	Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) to the nearest appropriate unit.
	
	Choose and use appropriate standard units to estimate and measure mass (g/kg) to the nearest appropriate unit.
		• How long is the car?
		 
		• How tall is the teddy bear?
		 
		• How much do the cubes weigh?
		 
			• How much do the 2 red bears weigh?
			 
			Which is heavier the red or the yellow bear? Explain your reasoning.
			• Can you use the ruler below to measure an item that is longer than 10cm? Explain your answer.
			 
			• Decide which item to use to measure the following items.
			  • The length of the hall.
			  • The width of the table.
			  • The weight of a book.
				• Get five boxes that each have a different amount of sand in them. Some tall, some long, some small. Work out which the children think is the biggest (they can measure with a ruler), then introduce the idea: the biggest box is the heaviest. Children then can choose how they work out the answer through weighing.
				
				• Choose 5 objects from around the classroom, estimate how long they are. Then measure them, choosing the most appropriate equipment and unit. How close was your estimate?

	National Curriculum Statement	All students		
		Fluency	**Reasoning**	**Problem Solving**
Measurement	Compare length and mass and record the results using >, < and =. Order measures	• Order the lengths below from shortest to longest: 12cm, 25cm, 20cm, 15cm • Weigh the items below, write a number sentence showing which is heavier using < or >.  • Fill in the boxes using <, > 12 ☐ 17m Table length ☐ Chair height 3kg ☐ 7kg	• How long is the pen?  How much shorter is the pencil? Show me. • Helen says 'I think the bigger something is, the heavier it is' Do you agree? Use objects in your classroom to prove your answer. • **True or False?** 24cm < 36cm 45cm > 46cm 31m > 30m Explain your reasoning.	• Four students measured their heights. Lucy was taller than Katie, but not as tall as Tim. Gary was taller than Tim. Write down their names in order of their heights, from shortest to tallest. • Usain Bolt can run 100m in 9.58 seconds (just below 10 seconds). How far do you think you can run in 10 seconds? Measure how far you and your friends can run in 10 seconds. Order your distances from longest to shortest. • Hannah is weighing three bags.  The green bag is heavier than the pink bag. The orange bag is lighter than the pink bag. Order the bags from heaviest to lightest. If the pink bag weighs 7kg, what could the other bags weigh?

	National Curriculum Statement	All students		
		Fluency	**Reasoning**	**Problem Solving**
Statistics	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables.	• Look at the bar chart, which fruit is the most popular? Which is the least popular?  • an you use the information in the table to make a tally chart? Favourite sandwiches / Names Cheese / Paul, Lucy, Jim, Noah, Hattie Ham / Libby, James, Pat, Kim Chicken / Matt, Naomi Jam / Dan, Susie, Tim, Hannah • Make a pictogram using your tally chart. Make a key where each symbol represents 2 sandwiches.	• Four children are playing cards. Each time one of them wins they take a counter. The results are below.  Tim Tom Sally Kate Can you present the information in a clearer way? • Complete the tally chart. Compare the tally chart with the pictogram below. What's the same and what's different? Apples / 12 Oranges / 𝍸 𝍸 | Bananas / 4 Melons / 𝍸 |  Apples Oranges Bananas Melons Can you complete the pictogram? Each smiley face means 2 pieces of fruit. • Using the tally chart and pictogram can you draw a block diagram? Which do you think shows the information the most clearly? Explain your answer.	• Think of something you want to find out eg. What is Class 7's favourite chocolate bar? Collect the data using a tally chart and present it in a pictogram or block diagram. • Split into groups. Everyone needs to write their name on a post it note. Using a blank axis of a block diagram, use your post it notes to find the answers to the following questions: •How many boys and how many girls are there in your group? •Which month has the most birthdays for your group? •How old are the children in your group?

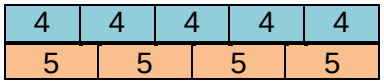
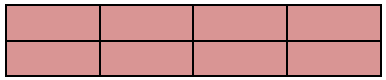
	National Curriculum Statement	All students		
		Fluency	**Reasoning**	**Problem Solving**
Statistics	Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.	• How many people liked dogs the most? Which was the least favourite animal?  • Count the coloured dots. Make a tally chart to show how many dots there are of each colour.  • Using your tally chart, answer the following questions. Which colour is the most? Which is the least? How many green dots are there?	• **True or False?** The children saw more cars than bikes.  • Make up your own true or false statement about the pictogram above. • Henry is making the block diagram below using cubes. He says 'The higher the tower of cubes, the more popular the transport.' Do you agree? Explain your answer.  	• **Which letter is used most in our names?** Conduct a survey in your class to find out which letter appears most in your first names. Work out how to collect the data and then present it in a graph. Answer the questions below: - Which letter appears the most? - Which letter appears the least? - How many times does the letter a appear?

	National Curriculum Statement	All students		
		Fluency	**Reasoning**	**Problem Solving**
Statistics	Ask and answer questions about totaling and comparing categorical data.	• Use the bar graph to answer the following questions: -How many cats and dogs were there altogether? -How many more bears were there than snakes? - Add together the animal with the most votes and the animal with the least. How many altogether? 	• Harry said 'If I add the number of lorries and bikes together then it will be equal to the number of cars' Is he right? Convince me.  • Lucy says 'To find the total number of vehicles I need to add all the cars up.' Is she correct? Explain your answer.	• **What is the most common colour of car that passes school?** Conduct a traffic survey. Make a tally chart and then create a pictogram and bar chart. Answer the questions such as: - How many cars were there altogether? - How many more blue cars were there than red cars?

	National Curriculum Statement	All students		
		Fluency	Reasoning	Problem Solving
Multiplication and Division	Recall and use multiplication and division facts for the 10 times tables. Recall and use multiplication and division facts for the 5 times tables. Recall and use multiplication and division facts for the 2 times tables. Recognise odd and even numbers.	• Calculate: 4 x 5= 20 ÷ 2 = 6 x 10= 25 ÷ 5 = • A flower has 5 petals. How many petals do 5 flowers have? • Circle the odd numbers. 12 13 17 18 21	• Which has more? 4 bags of sweets with 5 in each or 3 bags of sweets with 10 in each? Explain your reasoning. • 20 = ☐ x ☐ What numbers could go in the boxes? Prove it. • I have 35p in my pocket in 5p coins. How many coins do I have? Draw a picture to prove your answer.	• Tubes of bubbles come in packs of 2 and 5. Holly has 22 tubes of bubbles. How many of each pack could she have? How many ways can you do it? • Sally and Katie want to share sweets out equally between them. They can buy bags of 17, 18 or 21 sweets. Which bag should they buy? What other packs of sweets could they buy? • Fran and Lily had a tub of lollies. When they shared them between them they had one left over. Just as they had finished sorting, three of their friends came and wanted some lollies so they shared the same lollies again. This time they had 2 left over. How many lollies might have been in the tub?

	National Curriculum Statement	All students		
		Fluency	**Reasoning**	**Problem Solving**
Multiplication and Division	Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) sign.	• 5 x 3= 15 Write a division sentence using the same numbers. • Write these addition sentences as multiplication sentences. 5 + 5 + 5+ 5= 5 x 4 2 + 2 + 2 = 10 + 10 = • Can you write 4 number sentences to describe the array? 	• How many number sentences can you write to describe this array? Can you use addition, multiplication and division? Explain your answers.  • Which four number sentences link these numbers 2, 4, 8? Prove it. • Write these addition sentences as multiplication sentences. 10 + 10 + 10 + 5 + 5= 2 + 2 + 2 + 10 + 10 = 5 + 5 + 5 + 2 + 2 + 2=	• Ted buys 4 books for £2 each. If he has a £10 note, how much change will he get? Write the multiplication sentence you need to do. • Use the number cards to make multiplication and division sentences. How many numbers up to 20 can you make?  • Use the picture below to think of multiplication and division sentences using x , ÷ and = 

Multiplication and Division

National Curriculum Statement	All students		
	Fluency	**Reasoning**	**Problem Solving**
Show that the multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.	• Write multiplication sentences for the bars below. What do you notice?  • Fill in the gaps: □ X 3 = 15 3 x □ = 15 • Here are some number cards. Use them to fill in each number sentence below.  __ x __ = __ __ = __ x __ __ ÷ __ = __ __ = __ ÷ __	• **True or False?** 2 x 5 = 5 x 2 2 x 5 = 10 x 1 2 x 5 = 1 x 10 What do you notice? • Circle the incorrect number sentence. Explain your reasons. 4 x 5 = 20 5 x 4 = 20 20 ÷ 5 = 4 5 ÷ 20 = 4 • The rectangle is made of 2 rows of 4 and 4 columns of 2. Can you write 2 multiplication sentences to show this? What do you notice about the numbers? 	• Use the number cards to make multiplication and division sentences. How many can you make?  • Cassie has 4 bags with 5 sweets in each, Rachel has 5 bags with 4 sweets in each. How many do they have each? Can you split the sweets into different numbers of bags so they both still have the same number?

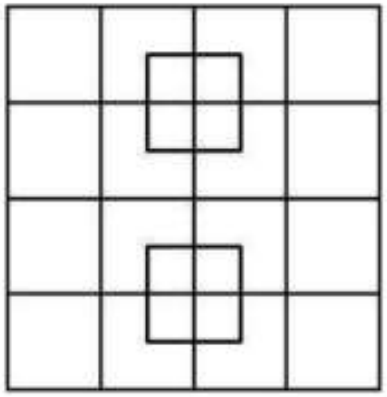
Measurement

National Curriculum Statement	All students		
	Fluency	**Reasoning**	**Problem Solving**
Recognise and use symbols of pounds (£) and pence (p); combine amounts to make a particular value.	• Here is a table of money that three people have in pounds and pence. Can you fill in the blank boxes? **Name** / **£** / **p** / **Total** Phil / 4 / / £4.65 Sue / 3 / 95 / Gary / / 115 / £6.15 • Jackson went to the shop to buy milk and bread.  How much money does he need to pay without receiving any change? • Tara has 2 ten pence coins, a five pence coin and a fifty pence coin. How much money does she have altogether?	• Anna has 3 silver coins in her hand. Larry says, "I have more than you because I have a £1 coin." Is he correct? Explain why. • Always, sometimes, never. You can make £1 using an odd number of coins. Convince me! • True or false 5 copper coins can be worth more than 1 silver coin.	• Jamie has 5 silver coins in his hand. How many different ways can he make £1 or more? • Patrick visits an arcade. He has £5. He wants to go on at least 4 games. **Game** / **Price** Whack-a-rat / 70p Donkey Derby / 90p Bingo / £1 Grab-a-prize / 50p Dance mania / 85p Deal or no deal / £1.25 Which games can he go on? Will he have any change? Can you find more than one combination of games? • How many ways can you make £1 using an unlimited amount of coins?

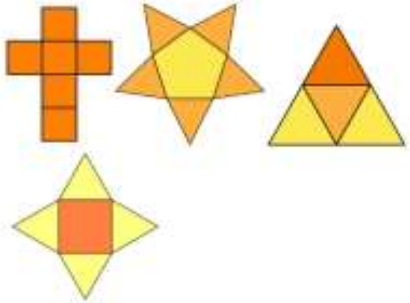
Measurement

National Curriculum Statement	All students		
	Fluency	**Reasoning**	**Problem Solving**
Find different combinations of coins that equal the same amounts of money	• Make 50p three ways using the coins below. You can use the coins more than once.  • I have £1.45. Can you find or draw the coins I could have to make this? • Paul has £2 and Tony has £1.20. Which coins could Tony add to his pile to make his and Paul's amounts equal?	• Charanjot tells her friend Sam she has only silver coins in her hand. She says she has 43p. Sam thinks that's impossible. Do you agree with Sam? Explain why. • True or false: 4 five pence coins are worth more than 2 ten pence coins. Explain why.  • Emily finds a 20p coin and thinks she now has enough for a ride on the ghost train. She puts it with her other three 20p coins. The ghost train costs £1. Is she correct? Explain why.	• Hanna and Ste both claim to have 90p. Hanna has 3 coins and Ste has 4 coins. Are they correct? Which coins could they have? • Emily has £3.40 and Katie has £2.20. How much does Emily need to give Katie so they have the same amount? • Here is a price list. Jay has £2.20 What can he buy? **Item** / **Price** Chicken sandwich — £1 Ham sandwich — £1.50 Turkey sandwich — £1.20 Salad — 30p Jacket potato — £1 Panini — £1.30 Soup — £1.60 Sauce — 10p Can of pop — 60p Bun — 60p Chocolate bar — 50p Can you find a different set of items he can buy?

	National Curriculum Statement	All students		
		Fluency	**Reasoning**	**Problem Solving**
Measurement	Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.	• Benji spends £1.35 in the shop and pays with a £2 coin. How much change will he receive? • Arun buys an ice lolly from the ice cream van. It costs 90p. He pays in 10 pence coins. How many 10 pence coins does he use? • Fill in the missing box: ☐ + 40p = £1 – 30p 70p – 50p = 5p + ☐	• True or false: you can make 51p using just 2 pence coins. Write an explanation with your answer. • Alex has 90p. He bought a rubber for 30p and wants to buy a pencil.  The shopkeeper will not sell him the pencil. Can you explain why to Alex? • Odd one out. Look at the coins below. Which one is the odd one out and why? 	• Marie went to the shop and spent 20p. She bought at least one of each sweet. Which item did she buy two of? Munchy 2p Sweetie 3p Choccy bar 5p Spotty eggs 7p • Frankie bought candyfloss at a fayre. She paid with 6 coins. How much could the candyfloss have been? Which answer do you think is the most reasonable? • Colin has 5 coins in his pocket. How much money might he have?

	National Curriculum Statement	All students		
		Fluency	**Reasoning**	**Problem Solving**
Geometry	Identify and describe the properties of 2D shapes, including the number of sides Identify line symmetry	• How many sides does an octagon have? • Count the sides of this shape and then name it.  • How many corners does a square have?	• Caroline is finding the properties of a shape. She thinks it is a square because it has four sides. Explain why she could be wrong. • Look at the line of symmetry in the shape below. Do you agree it is a line of symmetry? Explain why.  • I am thinking of a shape with more than two lines of symmetry. Prove which shape I am thinking of by using a pictorial image. Is that the only shape it could be?	• How many squares can you see in this picture?  • Draw a shape for a friend. How many lines of symmetry can they find? Can you now draw a shape with more lines of symmetry?

	National Curriculum Statement	All students		
		Fluency	**Reasoning**	**Problem Solving**
Geometry	Identify and describe the properties of 3D shapes, including the number of edges, vertices and faces	• How many faces does a cube have? • What is my shape? I have 5 faces, 8 edges and 5 vertices. • What is the name given to 2 faces that meet?	• Katie is trying to build a tower with 3D shapes. When she uses one shape they keep rolling off each other. What shape do you think she is using and why? • Class 2 are using straws to make 3D shapes. Each child is given 12 straws to make a cuboid. Is this the right amount? Explain how you know. (Give children straws to use). • Jack says, "All 3D shapes have at least 1 vertex." Do you agree? Convince me.	• Look at the shapes on your table. Can you create a table/diagram to organise these shapes? How many different ways could they be sorted? • Put different shapes into a bag. In pairs, take turns to feel a shape, without looking, and describe it to your partner. Can they guess it? Record the clues you gave. • Three children have a 3D shape each. They are all different. They each give a fact about their shape. Aidan says, "My shape has 1 vertex." Anthony says, "My shape has less than 9 faces." Bevan says, "My shape has a triangle on one of their faces." List all the shapes they could each possibly have.

	National Curriculum Statement	All students		
		Fluency	**Reasoning**	**Problem Solving**
Geometry	Identify 2D shapes on the surface of 3D shapes, [for example, a circle on a cylinder and a triangle on a pyramid].	• Which 2D shape makes 2 of the faces on a cylinder? • Fill in the missing number: A square based pyramid has  faces made from triangles. • Name a 3D shape that has a rectangle as one of their faces?	• I am thinking of a 3D shape. The faces are made up of triangles. What shape am I thinking of? • Saira is drawing all the 2D shapes she finds on 3D shapes. She draws 8 squares for a cube. Is she right? Prove it!	• Use the straws provided to create 3D shapes using the correct properties. What shapes do you notice on the faces? • Abigail is folding paper to make a 3D shape. Work out the shapes she has made by looking at her folded papers. 

<table>
<tr><th></th><th>National Curriculum Statement</th><th colspan="3">All students</th></tr>
<tr><th></th><th></th><th>Fluency</th><th>Reasoning</th><th>Problem Solving</th></tr>
<tr><td>Geometry</td><td>Compare and sort common 2D and 3D shapes and everyday objects.</td><td>• Find 3 different 3D shapes in the classroom.

• Sort the shapes on your tables into 2D and 3D.

• What is my shape?
It is used in a game with two teams. It has only 1 face.</td><td>• What's the same about a cube and cuboid? What's different?

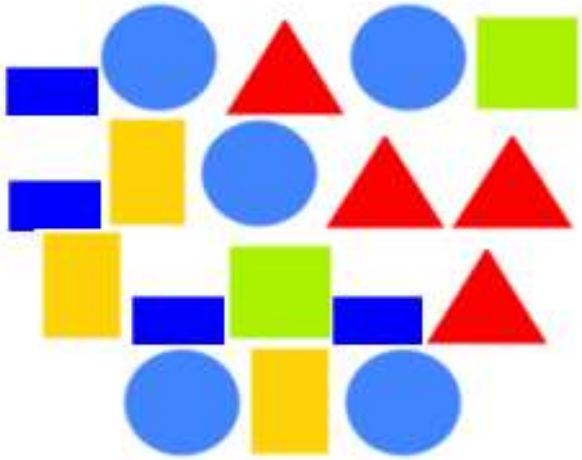
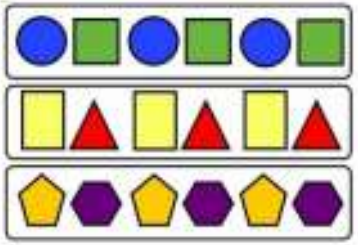
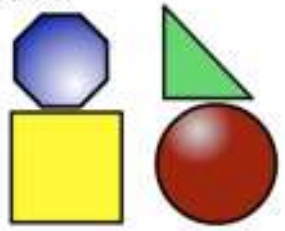
• Using the shapes on your table, sort them into different groups. Explain why you have organised them this way.

• Find a 2D shape and a 3D shape in the classroom – could these objects have been designed better using a different shape e.g. would a clock look better as a square?</td><td>• Shape hunt! Look around the school and playground. What shapes can you find?

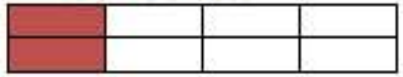
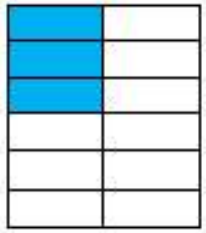
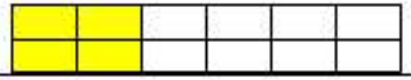
• Look at the diagram below.

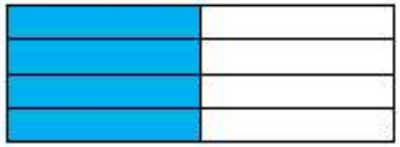
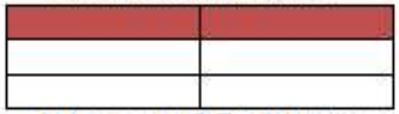
<table><tr><td></td><td>3D</td><td>Not 3D</td></tr><tr><td>Has 1 or more curved sides/ faces</td><td></td><td></td></tr><tr><td>No curved sides/ faces</td><td></td><td></td></tr></table>
Sort the shapes on your table into this diagram.</td></tr>
</table>

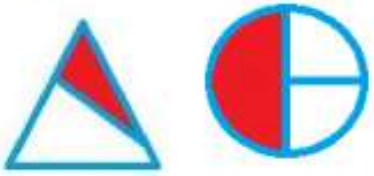
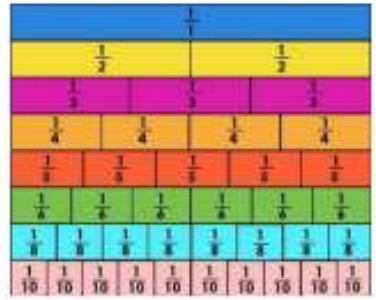
Geometry: Position & direction

National Curriculum Statement	All students		
	Fluency	**Reasoning**	**Problem Solving**
Order and arrange combinations of mathematical objects in patterns and sequences.	• Draw a pattern to show the following: red triangle, yellow square, blue circle. • Use the cubes to make a sequence. Can your partner continue it? • Create a pattern using only these shapes. 	• Jessie is making a pattern. It goes like this: red square, blue circle, green triangle. She thinks the 12th term will be a red square. Is she right? How do you know? • Spot and correct the mistake.  • What's the same and what's different about these patterns? 	• How many patterns can you see on this picture?  • How many different sequences can you make from the shapes below?  • Can you create a sequence for a partner?

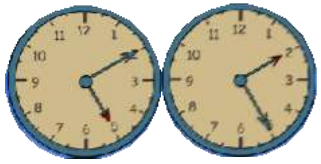
Fractions

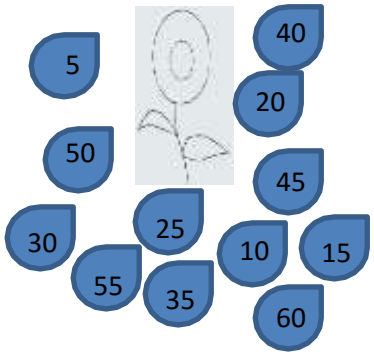
National Curriculum Statement	All students		
	Fluency	**Reasoning**	**Problem Solving**
Recognise, find, name and write fractions 1/3, ¼, 2/4 and ¾ of a shape. Recognise, find, name and write fractions 1/3, ¼, 2/4 and ¾ of a length, set of objects or quantity.	• What fraction of the shape below is shaded?  • Pat is organising her teddy bears. She donates $\frac{1}{4}$ of them to charity. How many bears did she have left?  • Circle the shape showing $\frac{1}{4}$  	• Circle the odd one out. Explain why you have chosen this fraction. $\frac{1}{4}$ $\frac{1}{3}$ $\frac{2}{4}$ $\frac{1}{2}$ • Four children want an equal share of this paper signed by a famous singer.  Explain how they can do it. • Amy is picturing two fractions. She says, "I think $\frac{1}{4}$ will be bigger than $\frac{1}{2}$ because 4 is bigger than 2." Draw these fractions to prove her wrong.	• Find fractions all around you. Write and illustrate them in your journal e.g.  The food filled $\frac{1}{2}$ of the plate. • Look at 20 toy cars. Is it possible to find $\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$ of them without breaking any of them? • Use 3 circles, colour them in so they show $\frac{1}{4}$ $\frac{2}{4}$ and $\frac{3}{4}$. Write a sentence to explain what you notice. Now colour 3 circles and colour them in so they show $\frac{1}{2}$ $\frac{1}{3}$ and $\frac{1}{4}$ Write a sentence to explain what you notice. What is the difference between the first set of circles and the second set of circles?

	National Curriculum Statement	All students		
		Fluency	**Reasoning**	**Problem Solving**
Fractions	Write simple fractions for example, $\frac{1}{2}$ of 6 = 3	• Find $\frac{1}{3}$ of 30. • Fill in the boxes: $\frac{1}{2}$ of 6 = ☐ $\frac{1}{☐}$ of 12 = 3 $\frac{2}{4}$ of ☐ = 4 • Write a simple fraction sentence for the space shaded below. 	• Here is what is left of a pizza that Byron ate.  If he had another equal piece to this left, he would have $\frac{1}{2}$ of the original pizza. How much did he eat? Explain how you know. • Bill is asked to shade a half of his shape. This is what he shades.  Is he correct? Explain why. • Jessie is writing simple fraction sentences. She says, "I know $\frac{1}{2}$ of 8 is 4 so $\frac{1}{4}$ of 8 is 8." Explain the mistake Jessie has made.	• Look at the toy cars. Write as many different fraction sentences as you can e.g. $\frac{1}{2}$ of 20 = 10. • Look at the picture below. How many fraction sentences can you write? e.g. 1/3 of the stars are blue. 

	National Curriculum Statement	All students		
		Fluency	**Reasoning**	**Problem Solving**
Fractions	Recognise the equivalence of $\frac{1}{2}$ and $\frac{2}{4}$.	• $\frac{2}{4}$ of this tower is blue. How else can we describe this?  • What fraction of these shapes are shaded orange?  • What is $\frac{2}{4}$ equivalent to?	• Mihal receives $\frac{1}{2}$ of £10. Violet gets $\frac{2}{4}$ of it. How much money is left? Explain why. • Tick the shapes that are showing $\frac{1}{2}$ or $\frac{2}{4}$ are shaded. Explain how you know.  • Gareth and Stacey both have the same sized chocolate bar. Gareth eats 1 piece of his. Stacey eats 2 equal pieces of hers. They eat the same amount of chocolate. Can you explain how you know this is true?	• Take different shaped paper e.g.  Ask the children to fold them and colour them in different colours to show $\frac{1}{2}$ and $\frac{2}{4}$ • Look at the fraction wall.  How many times can you find $\frac{1}{2}$ or $\frac{2}{4}$?

Year 2 Summer

	National Curriculum Statement	All Students		
		Fluency	Reasoning	Problem Solving
Measures: Times	Tell and write the time to the nearest 15 minutes Tell and write the time to the nearest 5 minutes (GD-ITAF) Draw hands on a clock face to show times to the nearest 15 minutes Draw hands on a clock face to show times to the nearest 5 minutes (GD-ITAF)	• Lily starts school at 8:45am. She arrives 10 minutes early. Show what time she arrived on the clock.  • What time is the clock showing?  • Complete the missing times. James wakes up at 6:50am. 15 minutes later, he eats his cereal. This takes him 5 minutes. It is now_____. Half an hour later the time is_____. This is when he arrives at work.	• At a supermarket, the workers take turns to have a break. All breaks start at either quarter past and quarter to and end at either quarter past or quarter to. What are the two lengths of break times? How do you know? • The big hand on the clock is pointing to the 8 and small hand is pointing to the 8. What time is it? How do you know? • Which clock is showing 10 past 5? Explain why. 	• Put these clocks in order  • Look at these 3 clocks. What might you be doing at these times in the day?  • Sammy starts her questions at 11:10 It takes her 5 minutes per question. She finishes at 11:55 How many questions did she complete?

Measures: Time	Know the number of minutes in an hour & the number of hours in a day.	• The petals of the flower that shows how many minutes have passed the hour have fallen off. Can you put them back in the right order?  • Amie arrives to a party at 4:30pm. She leaves at 5:30pm. How long did she stay? Tell me in hours and then in minutes. • Tell me: The number of minutes in an hour. The number of hours in a day.	• Nick is looking at the amount of minutes in one hour and two hours. 1 hour = 60 minutes 2 hours = 120 minutes He says, "The amount of minutes are doubling each time. To find how many minutes are in 3 hours I will double 120 minutes." Is he correct? • **True or false?** There are more minutes in the day than there are hours. Explain why. • Kim says "If you are looking at a clock and adding 3 hours on, the minutes do not change". Is she correct? Prove it!	• Show all the different ways you can calculate how many hours are in 2 days. • Play pairs – create a set of cards with time facts. When two cards are turned over that equal the same length of time then that person wins those cards e.g. 24 hours 1 day Half a day 12 hours

Measures: Times	Compare and sequence intervals of time.	• Which is greater? Half an hour | 45 minutes 60 minutes | 1 hour • Order these from the earliest time to the latest time: Half past 2 3 o'clock 1 o'clock Quarter to 3 • Andy worked from half past 10 until 2 o'clock. Kat worked from 3 o'clock till 6 o'clock. Who worked the shortest amount of time?	• Beth needs to be in Leeds for a film showing that starts at 4 o'clock. She can either: - Get the 3:20 bus that takes half an hour or - Get the 3:30 train that takes 30 minutes. Which should she take and why? • Kassie records the time every half an hour. Her sequence looks like this 11:15, 11:45, 12:15, 12:45, 1:15, 1:45 What do you notice? Can you explain why this happens? • Which is time is longer? 43 minutes or 10 minutes less than an hour. Explain how you know.	• Amee is planning her birthday. She wants to plan something to do from 9am to 5pm. Here are the things she wants to do: - visit the zoo (3 hours) - go to Pizza Hut (1 hour and a half) - Have breakfast (half an hour) - Play party games (1 hour) - Watch a film (2 hours) Create a timetable for Amee's day. Share and compare with a friend. • A football match kicks off at 1pm. Half time is 45 minutes later. Full time is 2:50pm. The first and second half are equal in length. How long was half time?

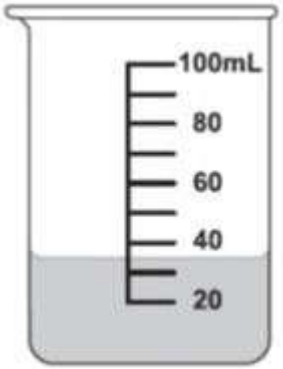
Measures: Volume & capacity, Temperature

Choose use appropriate standard units to estimate and measure temperature (°C) to the nearest appropriate unit

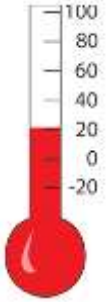
Choose and use appropriate standard units to estimate and measure capacity (l/ml) to the nearest appropriate unit

Read scales in divisions of 1s, 2s, 5s and 10s

- How much water is in the container?



- What temperature is the classroom?



- Choose the appropriate unit to measure how much water is used in a shower.

ml or l

- Class 2 were recording the temperatures of 2 classes at different times of the day.
  Two classrooms, in the same building, had a difference of 6˚c at 12 noon. Why might this be?

- **Sometimes, always, never**
  Liquid can be measured in millilitres.

- Sarah's 1L bucket has a hole in it. She needs exactly 1L to water the plants.
  She has a 250ml measuring jug.
  Can she use this?

- Below is a table of temperatures. Write a story about each place and what they will be doing at 1pm. Relate this to the temperature.

City	**Temp (˚c) at 1pm**
Leeds	14˚c
Barcelona	32˚c

- Gather different sized containers in width and height.
  Estimate how much is in each container.
  Record your results in the table below.

Container	Estimate	Actual

Measures

Compare measures and record the results using >, < and =.

Order measures

- Complete the sentences using the following symbols <, > or =

30ml ◯ 60ml

1L jug ◯ Two half litre jugs

52L ◯ 25L

- Order the results from largest to smallest:
  500ml, 750ml, 250ml, 1L

- Who has more pop?

Eric

"I have these 2 bottles."

Sasha

"I have a 750ml bottle."

- **True or false?**
  The taller a container is, the more liquid there is. Explain why you agree or disagree.

- Work out these values:
  40ml – 20ml =
  20ml – 10ml =
  10ml – 5ml =

  What do you notice about the answers?
  Why do you think this happening?

- **True or false?**
  You can use both < and > if you are ordering 25ml and 30ml.

- Sahil, Marta & John have 700ml of pop between them. Sahil and John drink the same amount. Marta has 100ml more than Sahil and John. How much do they all drink?

- These 3 bottles each have more than 20ml of water in but less than 50ml. The green bottle has 5ml more than the red bottle. The blue bottle has 10ml more than the green bottle. How much could each bottle have in?