





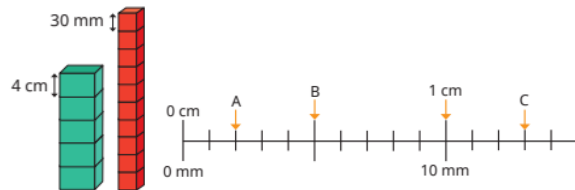



BJS Maths Curriculum

Term & Topic	Topics	Vocabulary	Skills/knowledge	Manipulatives/ representations
Year 3				
Autumn	Place value	<ul style="list-style-type: none"> - place value - place holder - ones - tens - hundreds - thousands - estimate - partition - whole - part - number line - intervals - exchange - value - digit - equal to - more than/greater than - less than - smallest - greatest 	<ul style="list-style-type: none"> • To be able to develop a secure understanding of numbers to 1,000. • To be able to count in 50s • To understand number lines to 1,000 	



<p>Addition and subtraction</p>	<p>(see key vocab for 'place value autumn')</p> <ul style="list-style-type: none"> - column - addition - subtraction - plus - minus - sum - minuend - subtrahend - addend - difference - inverse - multiple 	<ul style="list-style-type: none"> • To be able to add and subtract 2 to digit from 3 digit numbers involving exchange. • To understand inverse • To be able to estimate answers 	
<p>Multiplication and division</p>	<ul style="list-style-type: none"> - multiplier - multiplicand - product - equal groups - multiply - repeated addition - times - multiple - lots of - triple - double - divide - dividend - quotient - divisor - share - array 	<ul style="list-style-type: none"> • To know 2,5,10s times tables (recapped from year 2) • To be able to multiply and divide by 3 • To be able to multiply and dividing by 4 • To be able to multiply and divide by 8 • To know multiplication facts for 3,4,6 and 8 times tables. 	



Spring	Multiplication and division	(See key vocab for 'autumn – multiplication and division') <ul style="list-style-type: none">- Scaling- Gattegno chart- remainder- combinations- possibilities	<ul style="list-style-type: none">• To be able to multiply by 10• To be able to multiply a 2- digit and 1-digit number with exchange• To be able to divide a 2-digit number by a 1-digit number with remainders• To understand Scaling• To understand combinations – How many ways?	(See key representations for 'autumn – multiplication and division') <div><table data-bbox="1435 303 1865 418"><tr><td>100</td><td>200</td><td>300</td><td>400</td><td>500</td><td>600</td><td>700</td><td>800</td><td>900</td></tr><tr><td>10</td><td>20</td><td>30</td><td>40</td><td>50</td><td>60</td><td>70</td><td>80</td><td>90</td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr></table></div>	100	200	300	400	500	600	700	800	900	10	20	30	40	50	60	70	80	90	1	2	3	4	5	6	7	8	9
100	200	300	400	500	600	700	800	900																							
10	20	30	40	50	60	70	80	90																							
1	2	3	4	5	6	7	8	9																							
	Length and perimeter	<ul style="list-style-type: none">- equivalent- measure- centimetre- millimetre- meter- perimeter- sides- length- meter stick- trundle wheel- ruler- distance- intervals- unit of measurement	<ul style="list-style-type: none">• To be able to measure in mm, cm and m.• To be able to convert between cm and mm.• To be able to add and subtract lengths.• To be able to measure and calculate perimeter.	<div></div>																											



	Fractions	<ul style="list-style-type: none"> - fraction - denominator - numerator - equal parts - whole - half - quarter - third - fifth - unit fraction - non- unit fraction - divide - scale - intervals - equivalent 	<ul style="list-style-type: none"> • To understand numerators and denominators • To understand unit and non-unit fractions • To be able to compare and order fractions • To understand fractions and scales • To understand fractions on a number line • To understand equivalent fractions 	<div>Examples and non-examples</div>
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
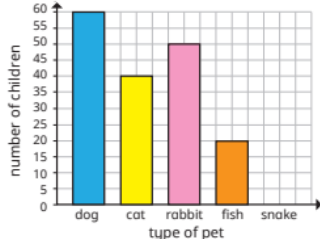


































	Mass and capacity	<ul style="list-style-type: none"> - mass - capacity - volume - scales - litres - millilitre - kilogram - gram - intervals - equivalent 	<ul style="list-style-type: none"> • to understand scales split into 2/4/5/10. • To be able to measure mass • To be able to compare mass • To be able to add and subtract mass • To be able to measure capacity and volume • To be able to compare capacity and volume. • To be able to add and subtract capacity and volume. 	<p>The mass scale shows a balance scale with 20g weights. Below it are blocks for 5 kg, 6 kg and 900 g, 3 kg and 900 g, 3 kg and 100 g, and 1 kg and 450 g. A number line from 0 to 100 has points A and B marked. Another number line from 0 to 200 has point B marked.</p> <p>The capacity scale shows a measuring jug with 500 ml markings. Below it are blocks for 500 g, 450 g, 400 g, 350 g, 300 g, 250 g, 200 ml, 150 ml, 100 ml, and 50 ml.</p>
Summer	Fractions	(See key vocab for 'Spring -fractions')	<ul style="list-style-type: none"> • To be able to add and subtract fractions. • To understand unit and non-unit fractions of amounts. 	<p>The number line shows $\frac{2}{5} + \frac{1}{5} = \frac{3}{5}$. Below it are fraction bars for $\frac{1}{5}$, $\frac{2}{5}$, $\frac{3}{5}$, and $\frac{4}{5}$. A circle is divided into 11 parts, with 7 parts shaded. A bar model shows 24 divided into 3 groups of 8.</p>



	Money	<ul style="list-style-type: none">- £ - pounds- P – pence- value- coins- notes- change- exchange- equivalent	<ul style="list-style-type: none">• To know pounds and pence• To be able to add money• To be able to subtract money• To be able to find change	<p>A tree diagram shows £5 branching into £4 and 100p. Below are images of UK banknotes (50p, 20p, 10p, 5p) and coins (1p, 2p, 5p, 10p, 20p, 50p). A number line starts at £1 and 70p, jumps +30p to £2, and then jumps +£3 to £5. A bar chart shows two bars: one for £4 and 30p, and another for £2 and 99p.</p>									
	Shape (moved earlier in scheme of learning)	<ul style="list-style-type: none">- clockwise- anti-clockwise- full turn- quarter turn- compass- north- south- east- west- right angle- horizontal- vertical- parallel- perpendicular- obtuse- acute- lines of symmetry- properties- polygon- vertex- sides- vertices- edge- curved surface- nets	<ul style="list-style-type: none">• to understand turns and angles• To know horizontal and vertical• To know parallel and perpendicular• To be able to recognise and describe 2D and 3D shapes• To be able to draw polygons	<p>A blue cross net and a green triangular net are shown. A pile of colorful 3D blocks (cubes, cylinders, cones, spheres) is displayed. A table classifies shapes by parallel lines. A yellow tray contains red geometric shapes. A colorful grid pattern is shown.</p> <table><tr><th></th><th>At least 1 pair of parallel lines</th><th>No pairs of parallel lines</th></tr><tr><td>4 sides</td><td></td><td></td></tr><tr><td>Not 4 sides</td><td></td><td></td></tr></table>		At least 1 pair of parallel lines	No pairs of parallel lines	4 sides			Not 4 sides		
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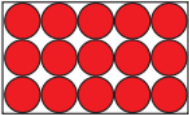
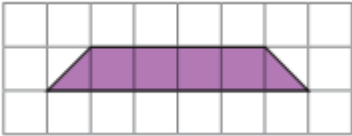



	<div>Time</div>	<div><ul style="list-style-type: none">- Roman numeral- hour- minute- second- hour hand- minute hand- past the hour- to the hour- half past- quarter to- quarter past- digital- analogue- leap year- duration- clockwise- anti-clockwise</div>	<div><ul style="list-style-type: none">• To know Roman numerals to 12.• To be able to tell the time to 1 minute• To be able to use am and pm• To understand years, months, days• To understand duration• To understand minutes and seconds• To understand units of time• To be able to problem solve involving time</div>	<div><div><div><div><div>+ 35 mins</div><div>+ 45 mins</div></div><div><div>12:25</div><div>1:00</div><div>1:45</div></div></div><div><div>2:00</div></div><div></div></div><div><table><tr><th colspan="7">July</th></tr><tr><th>Monday</th><th>Tuesday</th><th>Wednesday</th><th>Thursday</th><th>Friday</th><th>Saturday</th><th>Sunday</th></tr><tr><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td></tr><tr><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td></tr><tr><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td></tr><tr><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td><td>31</td><td></td></tr></table></div></div>	July							Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
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	<div>Statistics</div>	<div><ul style="list-style-type: none">- pictogram- bar chart- axis- key- symbol- scale- data- column- row</div>	<div><ul style="list-style-type: none">• To be able to interpret and draw pictograms• To be able to interpret and draw bar charts• To be able to collect and represent data• To understand two way tables</div>	<div><div><table><tr><th>Sport</th><th>Tally</th><th>Total</th></tr><tr><td>football</td><td> </td><td>15</td></tr><tr><td>tennis</td><td> </td><td></td></tr><tr><td>rugby</td><td> </td><td></td></tr><tr><td>cricket</td><td> </td><td></td></tr><tr><td>basketball</td><td> </td><td></td></tr></table></div><div><table><tr><th>Group</th><th>Number of cupcakes eaten</th></tr><tr><td>1</td><td>   </td></tr><tr><td>2</td><td>   </td></tr><tr><td>3</td><td>   </td></tr><tr><td>4</td><td>   </td></tr></table><div><div>Key</div><div> = 5 cupcakes</div></div></div><div><div><div>60</div><div>55</div><div>50</div><div>45</div><div>40</div><div>35</div><div>30</div><div>25</div><div>20</div><div>15</div><div>10</div><div>5</div><div>0</div></div><div><div>dog</div><div>cat</div><div>rabbit</div><div>fish</div><div>snake</div></div><div><div>number of children</div><div>type of pet</div></div></div></div>	Sport	Tally	Total	football		15	tennis			rugby			cricket			basketball			Group	Number of cupcakes eaten	1	   	2	   	3	   	4	   														
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Year 4																																														



Autumn	Place value	<ul style="list-style-type: none"> - place value - place holder - ones - tens - hundreds - thousands - estimate - partition - whole - part - number line - intervals - exchange - value - digit - equal to - more than/greater than - less than - smallest - greatest 	<ul style="list-style-type: none"> • To be able to represent numbers to 10,000 • To be able to find up to 1,000 more or less • To be able to compare and order numbers to 10,000 • To understand Roman numerals • To be able to round to the nearest 10, 100 or 1,000 	
	Addition and subtraction	(see key vocab for 'place value autumn') <ul style="list-style-type: none"> - column - addition - subtraction - plus - minus - sum - minuend - subtrahend - addend - difference - inverse 	<ul style="list-style-type: none"> • To be able to add and subtract two, 4 digit numbers with at least one exchange. • To be able to estimate answers 	

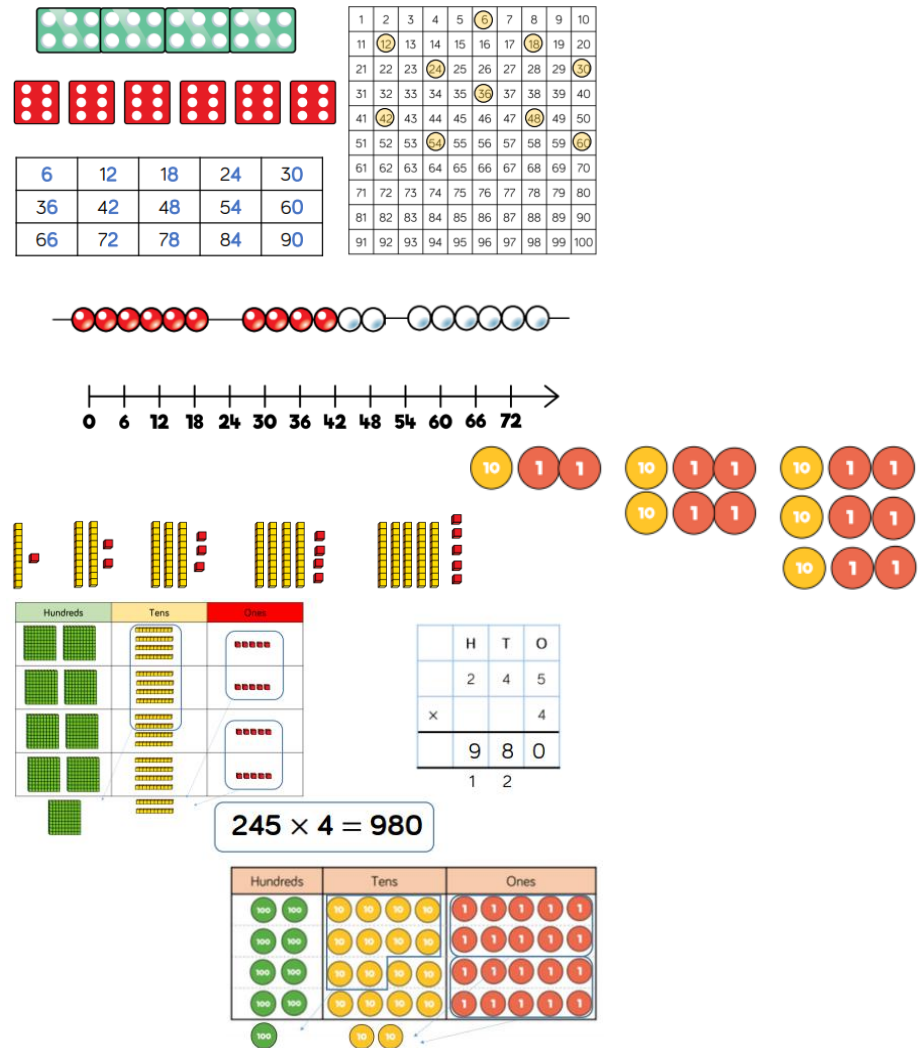


		- multiple		
	Measurement	<ul style="list-style-type: none"> - area - unit of measure - surface - rhombus - systematically 	<ul style="list-style-type: none"> • To understand area by count squares. • To be able to make shapes • To be able to compare areas 	  



- Odd
- Even
- multiplier
- multiplicand
- product
- equal groups
- multiply
- repeated addition
- times
- multiple
- lots of
- divide
- dividend
- quotient
- divisor
- share
- commutative

- To know the multiples of 3, 6 and 9
- To be able to multiply and divide by 7
- To be able to multiply and divide by 11
- To be able to multiply and divide by 12
- To be able to divide by 1 and the number itself
- To be able to multiply by 3 numbers





Spring	Multiplication and division	(see Multiplication and division – Autumn) <ul style="list-style-type: none"> - factor - factor pair 	<ul style="list-style-type: none"> • To be able to use factor pairs • To be able to multiply and divide by 10 and 100 • To understand informal written methods for multiplication • To be able to multiply a 3-digit number by a 1-digit number • To be able to divide a 2-digit number by a 1-digit number • To understand combinations • To know efficient methods 	
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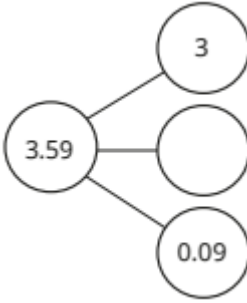


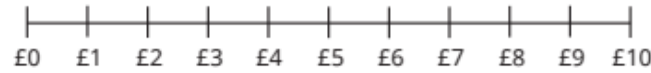
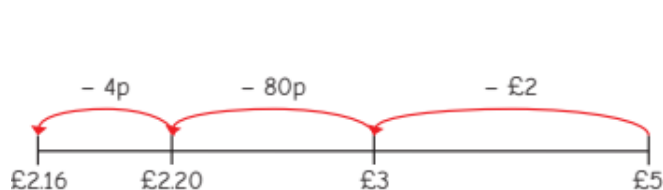
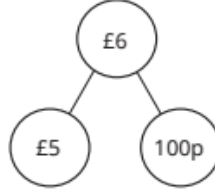


	<p>Length and perimeter</p>	<ul style="list-style-type: none"> - equivalent - measure - centimetre - millimetre - meter - perimeter - sides - length - meter stick - trundle wheel - ruler - distance - intervals - unit of measurement - regular polygon 	<ul style="list-style-type: none"> • To be able to measure in KM an M • To be able to find equivalent lengths • To be able to measure perimeter including missing lengths 	
	<p>Fractions</p>	<ul style="list-style-type: none"> - fraction - denominator - numerator - equal parts - whole - half - quarter - third - fifth - unit fraction - non- unit fraction - divide - scale - intervals - equivalent - fractional part - mixed number 	<ul style="list-style-type: none"> • To be able to partition a mixed number • To understand number lines with mixed numbers • To be able to compare and order mixed numbers • To be able to convert between mixed numbers and improper fractions • To be able to find equivalent fractions • To be able to add and subtract fractions including mixed numbers. 	



		<ul style="list-style-type: none"> - improper fraction - integer - tenth - hundredth 		
	Decimals	<ul style="list-style-type: none"> - tenths - hundredth - place value - value - decimal point - interval - partition - part - whole 	<ul style="list-style-type: none"> • To understand tenths and hundredths as decimals and fractions • To be able to divide a 2 digit number by 10 and 100 	



Summer	Decimals	<ul style="list-style-type: none"> - tenths - hundredth - place value - value - decimal point - interval - partition - part - whole - round 	<ul style="list-style-type: none"> • To be able to make a whole with tenths and hundredths • To be able to compare and order decimals • To be able to round to the nearest whole number • To understand halves and quarters as decimals 	 <p>See representations for 'Year 4 Decimals Spring'</p>
	Money	<ul style="list-style-type: none"> - pounds - pence - hundredths - decimals - total - partition - convert - ascending - descending - estimate - approximately 	<ul style="list-style-type: none"> • To be able to write money using decimals • To be able to convert between pounds and pence • To be able to estimate with money • To be able to calculate with money • To be able to problem solve with money 	 <p>£48</p>    



	<div>Time</div> <div><ul style="list-style-type: none">- digital- analogue- am- pm- leap year- approximately- start time- end time- duration-</div>	<div><ul style="list-style-type: none">• To know years, weeks, days, months• To know hours, minutes, seconds• To be able to convert between analogue and digital times• To be able to convert to and from the 24 hour clock</div>	<div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div></div><table><thead><tr><th>12-hour time</th><th>24-hour time</th></tr></thead><tbody><tr><td>1:45 pm</td><td>13:45</td></tr><tr><td>10:17 am</td><td>22:17</td></tr><tr><td>8:39 pm</td><td>20:39</td></tr><tr><td>5:09 am</td><td>17:09</td></tr></tbody></table></div>	12-hour time	24-hour time	1:45 pm	13:45	10:17 am	22:17	8:39 pm	20:39	5:09 am	17:09
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1:45 pm	13:45												
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	<div>Shape</div> <div><ul style="list-style-type: none">- full turn- half turn- quarter turn- clockwise- anti-clockwise- right angle- obtuse angle- acute angle- equilateral- isosceles- scalene- quadrilaterals- polygons- parallel lines- regular- irregular- symmetry</div>	<div><ul style="list-style-type: none">• To understand angles and turns• To be able to identify, compare and order angles• To know the properties of shapes including quadrilaterals and polygons• To understand lines of symmetry</div>	<div><div><div></div><div></div><div></div><div></div><div></div></div><div><div><div>start</div><div></div><div>quarter of an hour later</div><div></div></div></div><table><thead><tr><th></th><th>1 line of symmetry</th><th>More than 1 line of symmetry</th></tr></thead><tbody><tr><td>Up to 4 sides</td><td></td><td></td></tr><tr><td>More than 4 sides</td><td></td><td></td></tr></tbody></table><div></div></div>		1 line of symmetry	More than 1 line of symmetry	Up to 4 sides			More than 4 sides			
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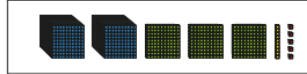
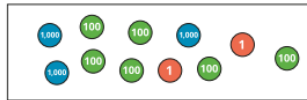
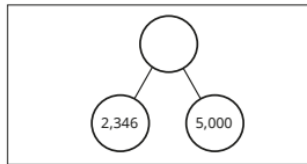
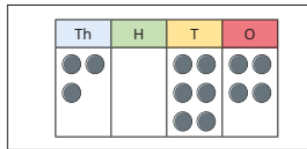
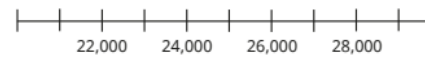
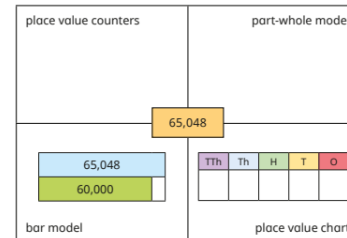
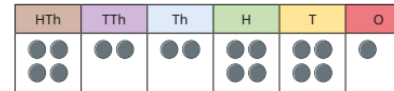
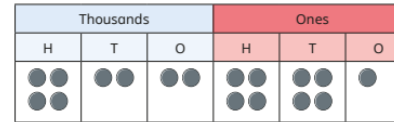


		<ul style="list-style-type: none">- horizontal- vertical- vertex-		<p>The top row of the grid contains four empty cells. The first cell is empty. The second cell contains a list of geometric terms: horizontal, vertical, vertex, and a dash. The third cell is empty. The fourth cell contains three diagrams: a horizontal line with four rays originating from a point on it, forming angles labeled a, b, c, and d; a square with a smaller square inside it; and three quadrilaterals: a rectangle, a parallelogram, and a trapezoid.</p>																																											
Statistics	<ul style="list-style-type: none">- data- scale- pictogram- represent- difference- sum- estimate- axis	<ul style="list-style-type: none">• To be able to interpret charts• To understand comparison, sum and difference• To be able to interpret and draw line graphs	<table><thead><tr><th>Day</th><th>Number of children</th></tr></thead><tbody><tr><td>Monday</td><td>●●●●●</td></tr><tr><td>Tuesday</td><td>●●</td></tr><tr><td>Wednesday</td><td>●●</td></tr><tr><td>Thursday</td><td>●●●●</td></tr><tr><td>Friday</td><td></td></tr></tbody></table> <p>Key ● = 10 children</p> <p>The bottom row of the grid contains four cells. The first cell contains the word 'Statistics'. The second cell contains a list of statistical terms: data, scale, pictogram, represent, difference, sum, estimate, and axis. The third cell contains a list of skills: To be able to interpret charts, To understand comparison, sum and difference, and To be able to interpret and draw line graphs. The fourth cell contains a table, a key, and a bar chart. The table shows the number of children for each day of the week. The key indicates that one dot represents 10 children. The bar chart shows the number of children for each type of transport.</p> <table><thead><tr><th>Day</th><th>Number of children</th></tr></thead><tbody><tr><td>Monday</td><td>50</td></tr><tr><td>Tuesday</td><td>20</td></tr><tr><td>Wednesday</td><td>20</td></tr><tr><td>Thursday</td><td>40</td></tr><tr><td>Friday</td><td>0</td></tr></tbody></table> <p>Key ● = 10 children</p> <p>The bar chart shows the number of children for each type of transport. The y-axis is labeled 'number of children' and ranges from 0 to 16. The x-axis is labeled 'type of transport' and has four categories: car, walk, bus, and bicycle. The bars are colored yellow, blue, pink, and blue respectively.</p> <table><thead><tr><th>type of transport</th><th>number of children</th></tr></thead><tbody><tr><td>car</td><td>12</td></tr><tr><td>walk</td><td>10</td></tr><tr><td>bus</td><td>15</td></tr><tr><td>bicycle</td><td>12</td></tr></tbody></table> <p>The line graph shows mass (kg) over 4 months. The y-axis is labeled 'mass (kg)' and ranges from 0 to 16. The x-axis is labeled 'month' and ranges from 0 to 4. The line is dashed and passes through the points (1, 2), (2, 4), (3, 10), and (4, 16).</p> <table><thead><tr><th>month</th><th>mass (kg)</th></tr></thead><tbody><tr><td>1</td><td>2</td></tr><tr><td>2</td><td>4</td></tr><tr><td>3</td><td>10</td></tr><tr><td>4</td><td>16</td></tr></tbody></table>	Day	Number of children	Monday	●●●●●	Tuesday	●●	Wednesday	●●	Thursday	●●●●	Friday		Day	Number of children	Monday	50	Tuesday	20	Wednesday	20	Thursday	40	Friday	0	type of transport	number of children	car	12	walk	10	bus	15	bicycle	12	month	mass (kg)	1	2	2	4	3	10	4	16
Day	Number of children																																														
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walk	10																																														
bus	15																																														
bicycle	12																																														
month	mass (kg)																																														
1	2																																														
2	4																																														
3	10																																														
4	16																																														



	Position and direction	<ul style="list-style-type: none"> - Translations - Coordinates - Axis - X axis - Y axis - Vertex - Pair of coordinates 	<ul style="list-style-type: none"> • To be able to describe position using coordinates • To be able to plot coordinates • To be able to draw 2D shapes on a grid • To be able to translate and describe translations 	
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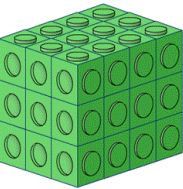

Year 5

Autumn	Place value	<ul style="list-style-type: none">- place value- place holder- ones- tens- hundreds- thousands- ten thousand- hundred thousand- million- estimate- partition- whole- part- number line- intervals- exchange- value- digit- equal to- more than/greater than- less than- smallest	<ul style="list-style-type: none">• To know Roman numerals to 1,000• To know and represent numbers to 1,000,000• To be able to round to the nearest 10, 100 or 1,000	<div></div> <div></div> <div></div> <div></div> <table><tr><td>100,000</td><td>200,000</td><td>300,000</td><td>400,000</td><td>500,000</td><td>600,000</td><td>700,000</td><td>800,000</td><td>900,000</td></tr><tr><td>10,000</td><td>20,000</td><td>30,000</td><td>40,000</td><td>50,000</td><td>60,000</td><td>70,000</td><td>80,000</td><td>90,000</td></tr><tr><td>1,000</td><td>2,000</td><td>3,000</td><td>4,000</td><td>5,000</td><td>6,000</td><td>7,000</td><td>8,000</td><td>9,000</td></tr><tr><td>100</td><td>200</td><td>300</td><td>400</td><td>500</td><td>600</td><td>700</td><td>800</td><td>900</td></tr><tr><td>10</td><td>20</td><td>30</td><td>40</td><td>50</td><td>60</td><td>70</td><td>80</td><td>90</td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr></table>	100,000	200,000	300,000	400,000	500,000	600,000	700,000	800,000	900,000	10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000	1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000	100	200	300	400	500	600	700	800	900	10	20	30	40	50	60	70	80	90	1	2	3	4	5	6	7	8	9	<div></div> <div></div> <div></div> <div></div>
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		<ul style="list-style-type: none"> - greatest - roman numeral - power of 10 - intervals 		
	Addition and subtraction	<p>(see key vocab for 'place value autumn')</p> <ul style="list-style-type: none"> - Inverse - Total - Difference 	<ul style="list-style-type: none"> • To be able to use mental strategies • To be able to add and subtract numbers with more than 4 digits • To be able to round to check answers • To understand inverse • To be able to find missing numbers 	



	Multiplication and division	<ul style="list-style-type: none">- multiplicator- multiplicand- product- equal groups- multiply- repeated addition- times- multiple- lots of- divide- dividend- quotient- divisor- share- commutative- factor- factor pair- prime number- square number- cube number	<ul style="list-style-type: none">• To know multiples and common multiples• To know factors and common factors• To know prime numbers• To know square numbers• To know cube numbers• To be able to multiply and divide by 10, 100 and 1,000• To know multiples of 10, 100 and 1,000	<div></div> <table><tr><td>100,000</td><td>200,000</td><td>300,000</td><td>400,000</td><td>500,000</td><td>600,000</td><td>700,000</td><td>800,000</td><td>900,000</td></tr><tr><td>10,000</td><td>20,000</td><td>30,000</td><td>40,000</td><td>50,000</td><td>60,000</td><td>70,000</td><td>80,000</td><td>90,000</td></tr><tr><td>1,000</td><td>2,000</td><td>3,000</td><td>4,000</td><td>5,000</td><td>6,000</td><td>7,000</td><td>8,000</td><td>9,000</td></tr><tr><td>100</td><td>200</td><td>300</td><td>400</td><td>500</td><td>600</td><td>700</td><td>800</td><td>900</td></tr><tr><td>10</td><td>20</td><td>30</td><td>40</td><td>50</td><td>60</td><td>70</td><td>80</td><td>90</td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr></table> <table><tr><td>HTh</td><td>TTh</td><td>Th</td><td>H</td><td>T</td><td>O</td></tr><tr><td></td><td>●</td><td>●●</td><td>●●●</td><td></td><td></td></tr></table>	100,000	200,000	300,000	400,000	500,000	600,000	700,000	800,000	900,000	10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000	1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000	100	200	300	400	500	600	700	800	900	10	20	30	40	50	60	70	80	90	1	2	3	4	5	6	7	8	9	HTh	TTh	Th	H	T	O		●	●●	●●●		
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	Fractions	<ul style="list-style-type: none"> - fraction - denominator - numerator - equal parts - whole - unit fraction - non- unit fraction - divide - scale - intervals - equivalent - fractional part - mixed number - improper fraction - integer - tenth - hundredth - common denominator 	<ul style="list-style-type: none"> • To be able to find and recognise equivalent fractions • To be able to convert between improper and mixed fractions • To be able to compare and order fractions • To be able to add and subtract fractions same denominators • To be able to add and subtract fractions different denominators • To be able to add and subtract fractions from a mixed number 	
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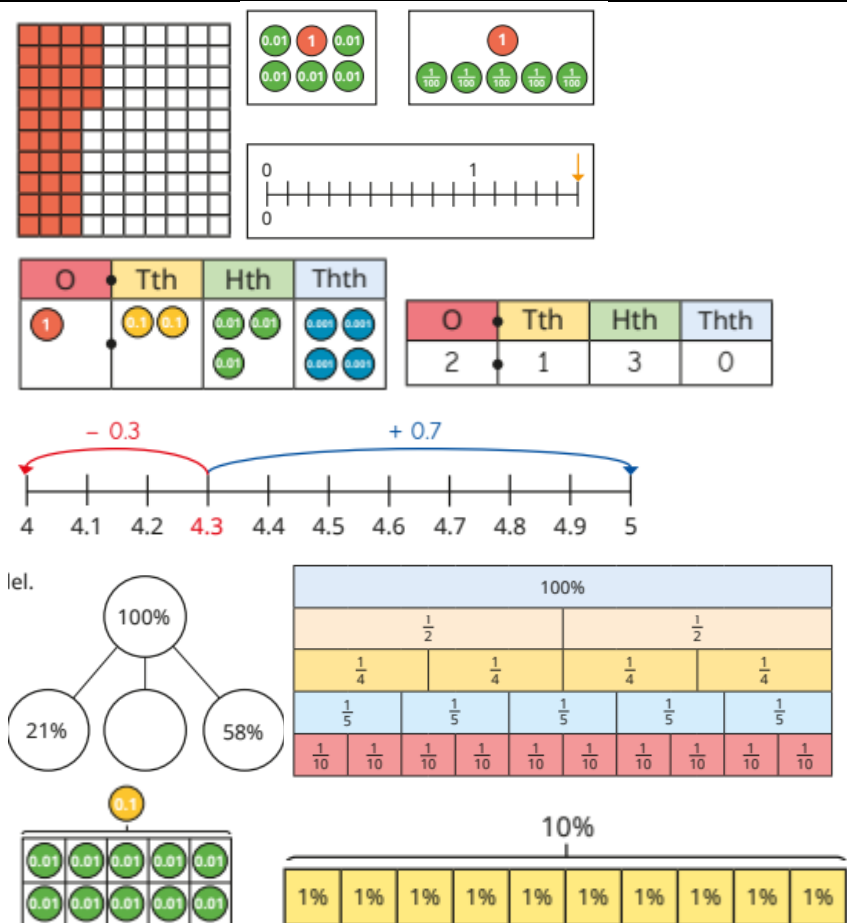
Spring	<p>Multiplication and division</p>	<p>(See autumn – multiplication and division vocabulary)</p> <ul style="list-style-type: none"> - short division - remainder 	<ul style="list-style-type: none"> • To be able to multiply a 4-digit number by a 2-digit number. • To be able to complete short division with and without remainders • To be able to divide a 4-digit number by a 1-digit number 	
	Fractions	<p>(See autumn – fractions vocabulary)</p> <p>(see autumn and spring – multiplication and division vocabulary)</p>	<ul style="list-style-type: none"> • To be able to multiply fractions by integers • To be able to multiply mixed numbers by integers • To be able to calculate fractions of amounts • To be able to use fractions as operators 	



Decimals and percentages

- tenths
- hundredth
- thousandth
- place value
- value
- decimal point
- interval
- partition
- part
- whole
- round
- percentages
- fraction
- equivalent


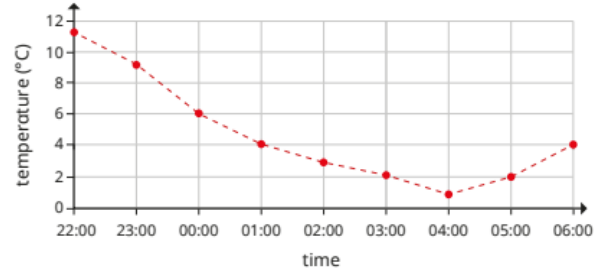
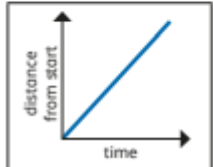
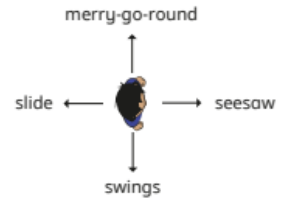



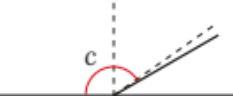
- To understand decimals up to 2 decimal places
- To understand equivalent fractions and decimals (tenths, hundredths)
- To understand thousandths as fractions, decimals and on a place value chart
- To be able to order and compare decimals
- To be able to round to the nearest whole number
- To be able to round to 1 decimal place
- To understands percentages
- To understand percentages as fractions and decimals
- To understand equivalent fractions, decimals and percentages





	Perimeter and area	<ul style="list-style-type: none"> - Perimeter - Length - Width - Area - Estimate - Rectangle - Polygon - Compound shape - Rectilinear shape - Square - Properties - Approximate 	<ul style="list-style-type: none"> • To be able to work out the perimeter of rectangles • To be able to work out the perimeter of rectilinear shapes • To be able to work out the perimeter of polygons • To be able to calculate the area of rectangles • To be able to calculate the areas of compound shapes • To be able to estimate area 	
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	Statistics	<ul style="list-style-type: none">- Line graph- Axis- Vertical- Horizontal- Scale- Intervals- Data- Table- Difference- Column- Row- Value- Two-way table	<ul style="list-style-type: none">• To be able to draw and interpret line graphs• To be able to read and interpret tables• To understand two way tables• To be able to read and interpret timetables	<table><tr><th>Month</th><th>Rainfall (mm)</th><th>Month</th><th>Rainfall (mm)</th></tr><tr><td>Jan</td><td>55</td><td>Jul</td><td>69</td></tr><tr><td>Feb</td><td>45</td><td>Aug</td><td>64</td></tr><tr><td>Mar</td><td>49</td><td>Sep</td><td>58</td></tr><tr><td>Apr</td><td>57</td><td>Oct</td><td>63</td></tr><tr><td>May</td><td>60</td><td>Nov</td><td>61</td></tr><tr><td>Jun</td><td>66</td><td>Dec</td><td>60</td></tr></table> <table><tr><td></td><td>1 09:15-09:55</td><td>2 09:55-10:45</td><td>3 11:05-11:55</td><td>4 11:55-12:45</td><td>5 13:45-14:35</td><td>6 14:35-15:25</td></tr><tr><td>Mon</td><td>Literacy</td><td>English</td><td>Maths</td><td>ICT</td><td>PSHCE</td><td>Geog</td></tr><tr><td>Tue</td><td>English</td><td>Art</td><td>French</td><td>Science</td><td colspan="2">DT</td></tr><tr><td>Wed</td><td>Literacy</td><td>DT</td><td>Art</td><td>Drama</td><td>ICT</td><td>Science</td></tr><tr><td>Thur</td><td>PE</td><td>Maths</td><td>RE</td><td>English</td><td>History</td><td>PSHCE</td></tr><tr><td>Fri</td><td>Literacy</td><td>Maths</td><td>Art</td><td>Science</td><td colspan="2">PE</td></tr></table> <table><tr><td></td><td>Male</td><td>Female</td><td>Total</td></tr><tr><td>Dogs</td><td></td><td>44</td><td></td></tr><tr><td>Cats</td><td>38</td><td></td><td></td></tr><tr><td>Total</td><td>125</td><td></td><td>245</td></tr></table>   	Month	Rainfall (mm)	Month	Rainfall (mm)	Jan	55	Jul	69	Feb	45	Aug	64	Mar	49	Sep	58	Apr	57	Oct	63	May	60	Nov	61	Jun	66	Dec	60		1 09:15-09:55	2 09:55-10:45	3 11:05-11:55	4 11:55-12:45	5 13:45-14:35	6 14:35-15:25	Mon	Literacy	English	Maths	ICT	PSHCE	Geog	Tue	English	Art	French	Science	DT		Wed	Literacy	DT	Art	Drama	ICT	Science	Thur	PE	Maths	RE	English	History	PSHCE	Fri	Literacy	Maths	Art	Science	PE			Male	Female	Total	Dogs		44		Cats	38			Total	125		245
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Summer	Shape	<ul style="list-style-type: none">- full turn- half turn- quarter turn- clockwise- anti-clockwise- right angle- obtuse angle- acute angle- equilateral- isosceles- scalene- quadrilaterals	<ul style="list-style-type: none">• To understand and use degrees• To be able to classify and estimate angles• To be able to measure angles up to 180• To be able to calculate angles around a point and on a straight line	    																																																																																						



		<ul style="list-style-type: none"> - polygons - parallel lines - regular - irregular - symmetry - horizontal - vertical - vertex - protractor 	<ul style="list-style-type: none"> • To be able to draw lines and angles accurately • To understand length and angles in shape • To understand regular and irregular polygons • To understand 3D shapes 	
	Position and direction	(see key vocab for – summer – shape) <ul style="list-style-type: none"> - Coordinates - Translation - Plot - Diagonal - Vertex 	<ul style="list-style-type: none"> • To be able to read, plot and problem solve with coordinates • To understand translations • To understand translations with coordinates • To understand lines of symmetry • To understand reflection in horizontal and vertical lines 	



<p>Decimals</p>	<p>(see spring – decimals and percentages key vocabulary)</p> <ul style="list-style-type: none"> - Sequence - Complements - term 	<ul style="list-style-type: none"> • To be able to add and subtract decimals • To know complements to 1 • To understand decimal sequences • To be able to multiply and divide by 10, 100 or 1,000 • To be able to multiply and divide decimals (missing numbers) 	
<p>Negative numbers</p>	<p>(see autumn – place value key vocab)</p> <ul style="list-style-type: none"> - Negative number 	<ul style="list-style-type: none"> • To understand negative numbers • To be able to count through zero • To be able to compare and order • To be able to find the difference 	



Converting units	<ul style="list-style-type: none">- Kilogram- Kilometre- Millilitre- Millimetre- Imperial- Metric- Inches- Pounds- Pints- Seconds- Minutes- Hours	<ul style="list-style-type: none">• To understand kilogram and kilometres• To understand millimetres and millilitres• To be able to convert units of length and time• To be able to convert between imperial and metric units• To be able to calculate with timetables	<p>Timeline: 07:51 → + 9 minutes → 08:00 → + 1 hour → 09:00 → + 17 minutes → 09:17</p> <p>Unit conversion boxes for length (mm, cm, m) and weight (g, kg).</p> <table><tr><td>1,000 g</td><td>1,000 g</td><td>1,000 g</td><td>1,000 g</td></tr><tr><td>kg</td><td>kg</td><td>kg</td><td>kg</td></tr></table> <p>4,000 g = 4 kg</p>	1,000 g	1,000 g	1,000 g	1,000 g	kg	kg	kg	kg
1,000 g	1,000 g	1,000 g	1,000 g								
kg	kg	kg	kg								
Volume	<ul style="list-style-type: none">- capacity- volume- scales- litres- millilitre- intervals- equivalent- cubic centimetre	<ul style="list-style-type: none">• To know Cubic centimetres• To be able to compare volume• To be able to estimate volume• To be able to estimate capacity	<p>Top row: A stack of 4 blue blocks, a stack of 4 green blocks, a stack of 4 red blocks, a red apple, and a 3x3x3 stack of red blocks.</p> <p>Bottom row: Two rectangular containers with orange liquid, two conical flasks with orange liquid, and a measuring jug labeled '250 ml' filled with blue liquid.</p>								

Year 6



Autumn	Place value	<ul style="list-style-type: none">- ones- tens- hundreds- thousands- ten thousand- hundred thousand- millions- Gattegno chart- place value column- placeholders- estimate- partition- whole- part- number line- intervals- exchange- value- digit- equal to- more than/greater than- less than- smallest- greatest	<ul style="list-style-type: none">- To know numbers to 10,000,000- To understand powers of 10- To be able to compare and order integers- To be able to round any integer- To understand and use negative numbers	<table><tr><td>1,000,000</td><td>2,000,000</td><td>3,000,000</td><td>4,000,000</td><td>5,000,000</td><td>6,000,000</td><td>7,000,000</td><td>8,000,000</td><td>9,000,000</td></tr><tr><td>100,000</td><td>200,000</td><td>300,000</td><td>400,000</td><td>500,000</td><td>600,000</td><td>700,000</td><td>800,000</td><td>900,000</td></tr><tr><td>10,000</td><td>20,000</td><td>30,000</td><td>40,000</td><td>50,000</td><td>60,000</td><td>70,000</td><td>80,000</td><td>90,000</td></tr><tr><td>1,000</td><td>2,000</td><td>3,000</td><td>4,000</td><td>5,000</td><td>6,000</td><td>7,000</td><td>8,000</td><td>9,000</td></tr><tr><td>100</td><td>200</td><td>300</td><td>400</td><td>500</td><td>600</td><td>700</td><td>800</td><td>900</td></tr><tr><td>10</td><td>20</td><td>30</td><td>40</td><td>50</td><td>60</td><td>70</td><td>80</td><td>90</td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr></table> <p>0 1 2 3 4 5 6 7 8 9 10 million million million million million million million million million</p> <p>4,326,509</p> <p>4,000,000 326,000 509</p> <p>410,000 1,000,312</p> <p>100,000 100,000 100,000 10,000 10,000 1,000 1,000 100 100 10 10 1 1 1,000 1,000 100 100 10 1,000 100 100</p> <table><tr><th>Millions</th><th colspan="3">Thousands</th><th colspan="3">Ones</th></tr><tr><th>O</th><th>H</th><th>T</th><th>O</th><th>H</th><th>T</th><th>O</th></tr><tr><td>4</td><td>2</td><td>8</td><td>7</td><td>2</td><td>9</td><td>5</td></tr></table>	1,000,000	2,000,000	3,000,000	4,000,000	5,000,000	6,000,000	7,000,000	8,000,000	9,000,000	100,000	200,000	300,000	400,000	500,000	600,000	700,000	800,000	900,000	10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000	1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000	100	200	300	400	500	600	700	800	900	10	20	30	40	50	60	70	80	90	1	2	3	4	5	6	7	8	9	Millions	Thousands			Ones			O	H	T	O	H	T	O	4	2	8	7	2	9	5
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	<p>Addition, Subtraction, Multiplication and Division</p>	<p>(see key vocab for 'place value autumn')</p> <ul style="list-style-type: none"> - Inverse - Total - Difference - multiplier - multiplicand - product - equal groups - multiply - repeated addition - times - multiple - lots of - divide - dividend - quotient - divisor - share - commutative - factor - factor pair - prime number - square number - cube number 	<ul style="list-style-type: none"> - To be able to add and subtract integers - To be able to find common multiples and common factors - To know prime numbers - To know square and cube numbers - To understand the rules of divisibility - To be able to multiply up to a 4x2 digit number - To be able to complete short and long division with remainders - To know the order of operations - To be able to make mental calculations and estimations 	<p>g out $840 \div 4$ $\div 2 = 420$</p> <p>840 420 420</p> <p>B</p> <p>C C C C C</p> <p>A B 631,255</p> <p>Th H T O 100 100 100 100 10 10 10 10 1 1 1 1</p> <p>2 1 3 1 4 8 5 2 4</p> <p>503 168 335</p> <p>222 37 37 37 37 37 37</p> <p>0 2 4 r 12 15 3 7 2 3 0 0 7 2 6 0 1 2</p> <p>Multiples of 15: $15 \times 1 = 15$ $15 \times 2 = 30$ $15 \times 3 = 45$ $15 \times 4 = 60$</p>
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	Fractions A	<ul style="list-style-type: none"> - fractions - denominator - numerator - equal parts - whole - unit fraction - non-unit fraction - divide - scale - intervals - equivalent - mixed number - compare - order - addition - subtraction - exchange - improper fraction - partition - common multiple - simplest form - common denominator 	<ul style="list-style-type: none"> - To be able to find equivalent fractions - To be able to compare and order fractions - To be able to add and subtract any 2 fractions or mixed numbers 	
	Fractions B	(see Fractions A) <ul style="list-style-type: none"> - multiply - divide - integer - part - whole - split 	<ul style="list-style-type: none"> - To be able to multiply and divide fractions by integers - To be able to multiply fractions by fractions - To be able to find fractions of an amount 	



	<p>Converting Units</p>	<ul style="list-style-type: none"> - length - mass - capacity - volume - grams - kilograms - tonnes - millimetres - centimetres - metres - kilometres - millilitres - litres - centimetres cubed - multiply - divide - addition - subtraction - convert - units - approximate - metric - imperial - inches - feet - pound - stone - ounces - pints - gallons - pints 	<ul style="list-style-type: none"> - To understand, convert and calculate metric measures - To understand miles and kilometres - To be able to convert imperial measures 	<div> </div> <div> <table border="1"> <tr> <td>1 litre</td> <td>1 litre</td> <td>1 litre</td> <td>1 litre</td> <td>$\frac{1}{2}$ litre</td> </tr> <tr> <td>1,000 mL</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> </div> <div> </div>	1 litre	1 litre	1 litre	1 litre	$\frac{1}{2}$ litre	1,000 mL				
1 litre	1 litre	1 litre	1 litre	$\frac{1}{2}$ litre										
1,000 mL														



Spring	Ratio	<ul style="list-style-type: none"> - ration - multiplication - division - multiplicative value - common factor - ration symbol - simplify - fractions - compare - represent - scale diagram - scale factor - enlargement 	<ul style="list-style-type: none"> - To know and use ratio language - To be able to compare rations and fractions - To understand scale drawings and use scale factors - To be able to solve ration and proportion problems 	<p> </p> <p>For every _____ red counters, there is _____ yellow counter.</p> <p> </p> <p>For every 16 yellow cubes, there are _____ blue cubes. For every 8 yellow cubes, there are _____ blue cubes. For every 1 blue cube, there are _____ yellow cubes.</p> <p>The bar model shows the ratio 2 : 3 : 4</p> <p> </p> <p>Rectangles P and Q are similar. The perimeter of rectangle P is 14 cm.</p> <p> </p>
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	Algebra	<ul style="list-style-type: none"> - input - output - function - rule - algebraic expression - substitute - value - formulae - equation 	<ul style="list-style-type: none"> - To understand 1 and 2 step function machines - To be able to form expressions - To understand substitution - To be able to use formulae - To be able to form and solve up to 2 step equations 	<p>input → $\times 3$ → output: 21, 0.6</p> <p>input → $+ 0.5$ → output: 5.5, 20.6</p> <p>input → $\times 4$ → $+ 5$ → output: 13, 45</p> <p>input → $\times 2$ → $+ 3$ → output: 0</p> <p>$x \rightarrow 2x \rightarrow 2x + 3$</p> <p>9: x, x, x</p> <p>11: $a, a, 5$</p> <p>3: $y, 4$</p> <p>19: $b, 7, b$</p> <p>Work out the values of the expressions.</p> <p>$\square = 3, \triangle = 4, \bigcirc = 5$</p> <p>$\square + \bigcirc, \bigcirc - \square, 2 \times \square, \triangle \times \bigcirc$</p> <p>$2y + 3 = 7$</p> <p>$x, y$ bar model: 12</p>
	Decimals	<ul style="list-style-type: none"> - tenths - hundredth - thousandth - place value - value - decimal point - interval - partition - part - whole - round 	<ul style="list-style-type: none"> - To be able to round decimals - To be able to add and subtract decimals - To be able to multiply and divide by 10, 100 and 1000 - To be able to multiply and divide decimals by integers 	<p>Place value chart: O, Tth, Hth, Thth</p> <p>Number line: 0 to 0.3, 0.04 to 0.06</p> <p>Grids for multiplication and division</p>



10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0,1	0,2	0,3	0,4	0,5	0,6	0,7	0,8	0,9
0,01	0,02	0,03	0,04	0,05	0,06	0,07	0,08	0,09

Fractions, decimals and percentages

(see previous vocabulary for decimals and percentages in spring and autumn)

- per cent
- percentage
-

- To be able to find equivalent fractions, decimals and percentages
- To understand fractions as division
- To be able to order fractions, decimals and percentages
- To be able to find a percentage of an amount

$$\frac{3}{4} = 0.75$$

100%									
20%	20%	20%	20%	20%					
10%	10%	10%	10%	10%	10%	10%	10%	10%	10%

$$60\% \text{ of } \underline{\hspace{2cm}} = 1,254$$

$$75\% \text{ of } \underline{\hspace{2cm}} = 8.46$$



	Area, perimeter and volume	<ul style="list-style-type: none"> - length - width - height - dimension - compound shape - area - perimeter - volume - formula 	<ul style="list-style-type: none"> - to understand area and perimeter - To be able to find the area of any triangle - To be able to find the area of a parallelogram - To be able to find the volume of a cuboid 	
	Statistics	<ul style="list-style-type: none"> - line graph - dual bar chart - pie chart - mean - average - scale - approximate data - percentage - angle - degrees 	<ul style="list-style-type: none"> - To be able to use line graphs - To be able to use dual bar charts - To be able to read and interpret pie charts including with percentages - To be able to draw pie charts - To be able to find the mean 	
Summer	Shape	<ul style="list-style-type: none"> - full turn - half turn - quarter turn - right angle - obtuse angle - acute angle - interior angles - exterior angles - equilateral - isosceles - scalene 	<ul style="list-style-type: none"> - To be able to measure and classify angles - To be able to calculate angles in a straight line and around a point - To know the angles in a triangle - To know the angles in quadrilaterals 	



		<ul style="list-style-type: none">- quadrilaterals- rhombus- trapezium- kite- parallelogram- polygons- parallel lines- regular- irregular- symmetry- horizontal- vertical- vertex	<ul style="list-style-type: none">- To understand the angles in polygons- To be able to identify the radius and diameter of a circle- To be able to draw shapes accurately- To understand a draw nets of 3D shapes	<p>The radius is ____ The diameter is ____ I know this because ...</p>
Position and direction	<ul style="list-style-type: none">- translations- reflections- quadrants- coordinates- Axis- X axis- Y axis- vertex	<ul style="list-style-type: none">- To be able to read and plot points in four quadrants- To be able to translate and reflect shapes in four quadrants		
Themed projects, consolidation and problem solving				