

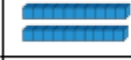







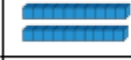





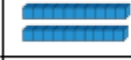





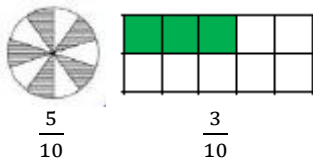
## Godmanchester Community Academy Maths Progression

Year 3										
Place Value	Addition and Subtraction	Multiplication and Division								
<p>Count forward starting at 0 and backward in 2s to 100, 3s to 36, and 5s to 100, 4s to 48, 8s, to 96, 50s to 1000 and 100s to 1200 e.g. 0,3,6,9,12,15,18,21... 50,100,150,200,250...</p> <p>Find 10 or 100 more and less than a given number. (This does not including those numbers which would result in a negative number)</p> <p>Read and write numbers to at least 1000 in numbers and words. e.g. 656 six hundred and fifty six</p> <p>Know the value of each digit in a 3 digit number (hundreds (h), tens (t) and ones (o)) e.g. 826 has 8 hundreds, 2 tens and 6 ones The value of the 8 is 800, the value of the 2 is 20 and the value of the 6 is 6.</p> <p>Compare and order numbers from 0 up to 1000 using the signs &lt; (less than) &gt; (greater than) and = (equal to). e.g. 345&lt;767 (345 is less than 767) Order these numbers from smallest to biggest 873, 103, 131, 356, 325 becomes 103,131, 325, 356, 873</p>	<p>Use addition to check subtraction calculations and subtraction to check addition calculations. e.g. <math>352 + 118 = 470</math> then check the answer by solving <math>470 - 118 = 352</math></p> <p>Mentally (in your head): add and subtract a three-digit numbers and ones e.g. <math>245 + 8 = 253</math>, <math>187 - 8 = 179</math> add and subtract a three-digit numbers and multiples of ten e.g. <math>438 + 10 =</math> <math>576 + 30 =</math> <math>728 - 10 =</math> <math>526 - 30 =</math> add and subtract a three-digit numbers and multiples of a hundred e.g. <math>438 + 100 =</math>, <math>576 + 300 =</math>, <math>728 - 100 =</math>, <math>526 - 300 =</math></p> <p>Using column written method (<b>more detail on methods in calculation policy</b>): add and subtract numbers with up to three-digits e.g. <math>425 + 123 =</math>, <math>362 - 174 =</math>, <math>487 - 134 =</math></p> <p>Solve calculations which include an unknown/missing number. e.g. <math>176 + ? = 224</math></p>	<p>Know multiplication and division facts for 2 5 and 10 and 3, 4, and 8 multiplication tables. e.g. <math>2 \times 7 = 14</math> and <math>14 \div 2 = 7</math></p> <p>Solve <math>\times</math> and <math>\div</math> for two-digit number <math>\times</math> a known multiplication table (know <math>\times</math> tables are <math>\times 2, \times 5, \times 10, \times 3, \times 4, \times 8</math>) e.g. <math>21 \times 3</math> (<b>more detail on methods in calculation policy</b>)</p> <p>There are 21 coloured balls on a snooker table. How many coloured balls on 3 snooker tables? This could be shown using tens and ones as in the table below</p> <table border="1" style="margin: 10px auto;"> <thead> <tr> <th style="background-color: #4b0082; color: white;">Tens</th> <th style="background-color: #4b0082; color: white;">Ones</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table> <p>Solve scaling problems that use the term ‘times as many’ In a playground, there are three <b>times as many</b> girls as boys. There are 30 boys. How many girls are there?</p> <p>boys </p> <p>girls </p> <p>Each box is worth 30 so there are 90 girls</p>	Tens	Ones						
Tens	Ones									
										
										
										

### Fractions (Recognise, Compare and Calculate)

Count up and down in tenths.

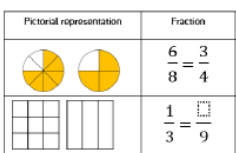
Know that tenths are a result of dividing an object into ten equal parts or by dividing a one-digit number or quantities by ten



Use unit fractions (the top number is one) and non-unit fractions (the top number is more than one)

**Please note:** For unit fractions, children's natural tendency might be to say that  $\frac{1}{2}$  is smaller than  $\frac{1}{4}$  as 2 is smaller than 4. Discuss how dividing something into more equal parts makes each part smaller.

Recognise and use diagrams to show equivalent fractions



Compare and order unit fractions and fractions with the same denominator (the bottom number)



Add and subtract fractions with the same denominator (bottom number) with answers no larger than 1 whole. e.g.

$$\frac{2}{7} + \frac{3}{7} + \frac{1}{7} =$$

$$\frac{5}{7} - \frac{2}{7} = \frac{3}{7}$$

### Measurement – Measures and Money

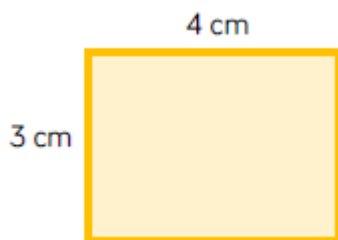
Measure, compare, and add and subtract lengths using metres(m), centimetres (cm) and millimetres (mm)

Measure, compare, and add and subtract weights using kilograms (kg) and grams (g)

Measure, compare, and add and subtract volume and capacity using litres(l) and millilitres (ml)

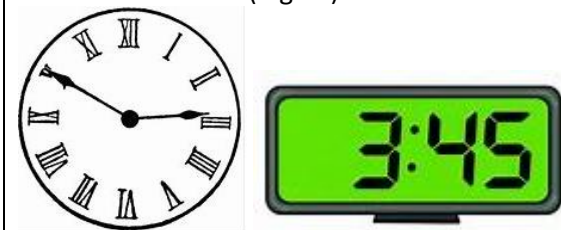
Add and subtract amounts of money to give change using both £ and p.

Measure the perimeter of a simple 2d shape  
e.g. The perimeter of this shape is 14cm.  
 $4\text{cm} + 4\text{cm} + 3\text{cm} + 3\text{cm} = 14\text{cm}$



### Measurement - Time

Tell and write the time from analogue (clock face), including roman numeral from 1 to 12 (I to XII) and 12 and 24 hour clocks (digital)



Read time to the nearest minute on an analogue clock

Compare time in terms of seconds, minutes, and hours and use the words: o'clock, a.m, p.m, morning, afternoon, evening, noon and midnight

Know the number of seconds in a minute, minutes in an hour, the number of hours in a day, and how many days in each month, (including for a leap year)

Calculate the time taken/durations of events

e.g.

TV Programme	Start Time	Finish Time	Duration
Pals	06:30	07:30	
Dennis the explorer	15:15	18:15	
The football show	12:00	14:00	
An adventure	10:40	12:40	

### Geometry - Shapes and Lines

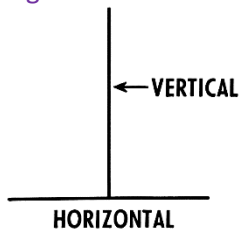
Draw 2d shapes

Make 3d shape using modelling materials

Recognise 3d shape sin different orientations and describe them.

Identify horizontal and vertical lines

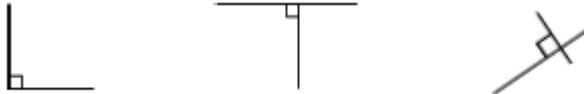
e.g.



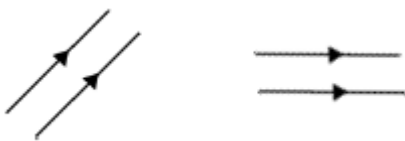
Identify pairs of perpendicular and parallel lines

e.g.

Perpendicular lines meet at a right angle



Parallel Lines never meet



### Geometry – Angles

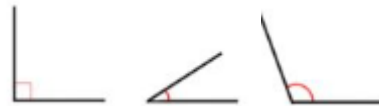
Know that angles can be a property of a shape or a description of a turn

Recognise a right angle

Know that 2 right angles make a half turn, three right angles make a three quarter turn and four make a complete turn

Identify if angle are greater than or less than a right angle.

e.g.



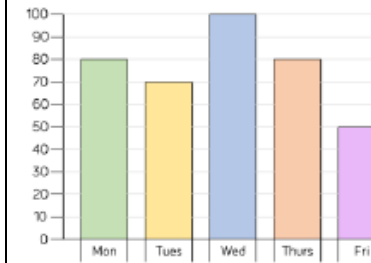
Right angle    less than    greater than

### Statistics

Understand and make bar charts, pictograms and tables

e.g.

Bar Charts



Pictogram

Class	Books read
Class 1	
Class 2	
Class 3	
Class 4	

**Key**

 = 5 books

Tables

The table shows which sports children play.

	Whitney	Jack	Eva	Mo	Teddy	Annie
Football	✓		✓	✓		✓
Rugby			✓		✓	
Tennis	✓	✓		✓		✓
Cricket			✓		✓	
Basketball		✓	✓	✓		✓