

## Mathematics Curriculum Map: Year 5 (Amended for spring and summer) Mastery

Number of unplanned weeks in spring: 2 Number of unplanned weeks in summer: 2

	Unit	Key Points	Considerations
Spring	Unit 6: Fractions and Decimals (3 weeks)	<ul> <li>Read, write, order and compare decimals</li> <li>Round decimals to the nearest whole number</li> <li>Represent, identify, name, write, order and compare fractions (including improper and mixed numbers)</li> <li>Calculate fractions of amounts</li> </ul>	<ul> <li>This unit is incredibly important in developing pupils' existing knowledge of fractions. Although static pictorial representations are useful, also consider how the videos provided on MyMastery on Reassigning Dienes, using Cuisenaire, Paper folding etc can be transferred to pupils.</li> <li>The use of interactive Dienes can be really useful for representing and manipulating decimals: mathsbot.com/manipulatives/blocks</li> <li>Pupils can make connections through pictorial representations, PV counters (create their own), interactive Cuisenaire rods (nrich.maths.org/4348) fairly successfully.</li> </ul>
	Unit 7: Angles (2 weeks)	<ul> <li>Classify, compare and order angles</li> <li>Measure a draw angles with a protractor</li> <li>Understand and use angle facts to calculate missing angles</li> </ul>	<ul> <li>It is difficult to teach the use of protractors virtually, particularly where pupils may not have access to them. These lessons might be held back and focus the unit on reasoning around types of angles and calculating missing angles.</li> <li>Online protractors do provide familiarity: www.visnos.com/demos/basic-angles</li> <li>Exploring, sorting and classifying angles can lend itself to teaching online: consider how angles around a point and on a straight line can be investigated.</li> </ul>
	Unit 8: Fractions and Percentages (3 weeks)	<ul> <li>Add, subtract fractions with denominators that are multiples of the same number</li> <li>Multiply fractions (and mixed numbers) by a whole number</li> <li>Explore percentage, decimal, fractions equivalence</li> </ul>	<ul> <li>As with previous fractions units, there should be consideration around how manipulatives and representations can be provided for pupils to use.</li> <li>When multiplying arrays, pupils can create their own arrays.</li> <li>Hundred squares &amp; online interactive bead strings can be used to help pupils to bring to life percentages and their equivalents.</li> <li>3 consolidation lessons can be used to solidify the more challenging concepts to teach online that require more practice as the unit progresses.</li> </ul>
	Unit 9: Transformations (2 weeks)	<ul> <li>Coordinates in all four quadrants</li> <li>Translation and reflection</li> <li>Calculate intervals across zero as a context for negative numbers</li> </ul>	<ul> <li>Geogebra is a great resource to help with modelling and exploring coordinates remotely. The Oak National Academy also has lessons that incrementally allow pupils to work alongside the lesson video using 'I do, we do, you do'.</li> <li>If pupils are working from a screen, it can be easy to make errors when counting (reflections and translation). Ideally, they would work on paper, but if not, consider how you will prompt them to self-check and review.</li> </ul>



The Dimensions of Depth - Conceptual Understanding, Language and Communication and Mathematical Thinking - underpin all aspects of the curriculum; problem solving is at the heart and is embedded in all units.



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Summer	Unit	Key Points	Considerations
	Unit 10: Converting units of measure (2 weeks)	<ul> <li>Convert between metric units of length, mass and capacity and units of time</li> <li>Know and use approximate conversion between imperial and metric</li> </ul>	<ul> <li>Consider the context being provided for pupils. If this can be adapted to engage pupils within their setting (or make it relevant to remote learning) it might be worth amending.</li> <li>Where possible, ensure that clear visual strategies accompany explanations or abstract strategies for conversions as this can be tricky to follow through oral descriptions. This is crucial when converting from imperial/metric. Encouraging reasoning such as 'If I know _, then I know _' also help to deepen knowledge.</li> </ul>
	Unit 11: Calculating with whole numbers and decimals (3 weeks)	<ul> <li>Mental strategies to add and subtract involving decimals</li> <li>Formal written strategies to add, subtract and multiply decimals</li> <li>Multiply and divide by 10, 100 and 1000 involving decimals</li> <li>Derive multiplication facts involving decimals</li> </ul>	<ul> <li>This unit builds upon the previous fractions, decimals and number units in Spring Term. Depending on coverage, you may want to use consolidation lessons prior to teaching to ensure confidence in decimals numbers.</li> <li>Interactive Dienes are useful (mathsbot.com/manipulatives/blocks) if teaching remotely.</li> <li>There are number of representations used in this unit. You will need to plan how these will be shown and modelled to pupils coherently. Area models are an accessible resource that all pupils will be able to use at home.</li> </ul>
	Unit 12: 2-D and 3- D shape (2 weeks)	<ul> <li>Classify 2-D shapes and reason about regular and irregular polygons</li> <li>Properties of diagonals of quadrilaterals</li> <li>Classify 3-D shapes</li> <li>2-D representations of 3-D shapes.</li> </ul>	<ul> <li>A large part of this unit focuses on comparisons, classification and pupils reasoning about properties of shapes. This can transfer itself well to remote learning opportunities provided they are given space and time to be able to form conjectures. Consider the resources that can facilitate this.</li> <li>Modelling remotely with 3-D shapes is tricky where pupils may not have them to hand. Try to use interactive 3-D shapes rather than static images if possible.</li> <li>If time is tight, a lot of this work focusing on shape can be re-distributed into Maths Meetings or Do Now activities.</li> </ul>
	Unit 13: Volume (1 week)	<ul> <li>Roman numerals up to 100</li> <li>Place value of other number systems</li> <li>Number sequences and patterns</li> </ul>	<ul> <li>Modelling PPTs with volume can be hard visually. Use of multilink cubes can support it, as can interactive isometric drawing tools (free online).</li> <li>Conversion of volume can be tricky when not explained clearly with examples. Accompanying videos might support with this.</li> <li>This unit could be moved elsewhere or cut up and join other units as needed.</li> </ul>
	Unit 14: Problem solving (2 weeks)	<ul> <li>Negative numbers and calculating intervals across zero</li> <li>Calculating the mean</li> <li>Interpret remainders</li> <li>Investigate numbers: consecutive, palindromic, multiples</li> </ul>	<ul> <li>This unit reviews and extends experiences of a number of concepts not given extensive coverage over the year (including negative numbers, average and patterns). With modelling, these may all be explained.</li> <li>Lessons 6-10 are all exploratory and could form a good investigative pack. Consider how you can support, steer and develop learning remotely (PPT with videoed 'tips' or 'clues').</li> </ul>



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