

Mathematics Developmental Continuum: Mapping the 'Indicators of progress'

	<i>Number</i>	<i>Space</i>	<i>Measurement, chance & data</i>	<i>Structure</i>	<i>Working Mathematically</i>
0.5	<ul style="list-style-type: none"> ▪ One to one correspondence ▪ Ordinal numbers 	<ul style="list-style-type: none"> ▪ Recognising, comparing, sorting and matching shapes 	<ul style="list-style-type: none"> ▪ Awareness of time 		<ul style="list-style-type: none"> ▪ Simple Patterns
Level 1	<ul style="list-style-type: none"> ▪ Counting groups of up to 20 objects 	<ul style="list-style-type: none"> ▪ Developing the everyday language of location 	<ul style="list-style-type: none"> ▪ Comparison of Length 		<ul style="list-style-type: none"> ▪ Making Better Estimates
1.25	<ul style="list-style-type: none"> ▪ Counting with two digit numbers 		<ul style="list-style-type: none"> ▪ First experiences with chance ▪ Reading the hour on a clock part 1 and part 2 		
1.5	<ul style="list-style-type: none"> ▪ Counting on ▪ Compliments to 10 	<ul style="list-style-type: none"> ▪ Folding and Symmetry 			<ul style="list-style-type: none"> ▪ Using a Calculator
1.75	<ul style="list-style-type: none"> ▪ Using a 100-chart for mental calculation ▪ Fact Families (Addition and Subtraction) 	<ul style="list-style-type: none"> ▪ Identifying shapes 	<ul style="list-style-type: none"> ▪ Pictographs and bar graphs ▪ Reading clocks to the half hour 		<ul style="list-style-type: none"> ▪ Recognising and using patterns
Level 2	<ul style="list-style-type: none"> ▪ Skip Counting ▪ Money ▪ Flexible addition & subtraction 	<ul style="list-style-type: none"> ▪ Simple transformations 	<ul style="list-style-type: none"> ▪ The idea of a unit 		
2.25	<ul style="list-style-type: none"> ▪ Renaming three-digit whole numbers ▪ Early division ideas 	<ul style="list-style-type: none"> ▪ Fitting shapes together 	<ul style="list-style-type: none"> ▪ Formal units for measuring 		
2.5	<ul style="list-style-type: none"> ▪ Early fraction ideas with models ▪ Advanced skip counting ▪ Fractions on number lines 	<ul style="list-style-type: none"> ▪ From Appearance to Properties: Classifying shapes 	<ul style="list-style-type: none"> ▪ Reading clocks to quarter hours 		<ul style="list-style-type: none"> ▪ The meaning of the equals sign ▪ Construction of Number Sentences
2.75	<ul style="list-style-type: none"> ▪ Developing better multiplication strategies ▪ Fact Families (Multiplication and Division) 		<ul style="list-style-type: none"> ▪ Measuring area 	<ul style="list-style-type: none"> ▪ Properties of operations: Spin, shuffle and split 	<ul style="list-style-type: none"> ▪ Using diagrams and models

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Level 3	<ul style="list-style-type: none"> ▪ Fluent recall of multiplication facts ▪ Algorithms for addition and subtraction of decimals 	<ul style="list-style-type: none"> ▪ Grid references and compass points 	<ul style="list-style-type: none"> ▪ Fairness relates to having an equal chance of winning 		
3.25	<ul style="list-style-type: none"> ▪ Understanding 'Order of Operations' ▪ Choosing multiplication and division for calculations ▪ Multiples and fractions of fractions 	<ul style="list-style-type: none"> ▪ Angles: static & dynamic ▪ Mental addition and subtraction with larger numbers ▪ Mental strategies for division 	<ul style="list-style-type: none"> ▪ Reading clocks to the nearest minute ▪ Extending work with formal units 	<ul style="list-style-type: none"> ▪ Missing Number Sentences 	
3.5	<ul style="list-style-type: none"> ▪ A fraction is a number ▪ Calculating with large numbers 	<ul style="list-style-type: none"> ▪ Shape: Classify 2D shapes using features ▪ Line Symmetry - also called Mirror Symmetry ▪ Visualisation in 2 and 3 dimensions 	<ul style="list-style-type: none"> ▪ Mental strategies for division 		<ul style="list-style-type: none"> ▪ Explain how Maths is useful
3.75	<ul style="list-style-type: none"> ▪ Identifying factors and relationship to multiplication ▪ Estimating large numbers 		<ul style="list-style-type: none"> ▪ Choosing Appropriate Graphical Displays ▪ Median as another central measure 	<ul style="list-style-type: none"> ▪ Venn Diagrams 	
Level 4	<ul style="list-style-type: none"> ▪ Comparing and ordering decimal numbers ▪ Partial products in multiplication 	<ul style="list-style-type: none"> ▪ Networks 	<ul style="list-style-type: none"> ▪ Perimeter and area are not the same ▪ Converting between measurement units ▪ Time Intervals 	<ul style="list-style-type: none"> ▪ Rules for Sequences ▪ Equivalence in Number Sentences 	<ul style="list-style-type: none"> ▪ Counter-examples ▪ Real world investigations
4.25	<ul style="list-style-type: none"> ▪ Which zeros matter? 	<ul style="list-style-type: none"> ▪ Changing conceptions of shapes 		<ul style="list-style-type: none"> ▪ The meaning of letters in algebra 	
4.5	<ul style="list-style-type: none"> ▪ Fractions for algebra and arithmetic ▪ Base 2 notation 	<ul style="list-style-type: none"> ▪ Congruence from rotations and reflections 	<ul style="list-style-type: none"> ▪ Dot plots and stem-and-leaf plots 	<ul style="list-style-type: none"> ▪ Structure of algebraic expressions 	<ul style="list-style-type: none"> ▪ Carrying out investigations
4.75	<ul style="list-style-type: none"> ▪ Subtracting negative numbers ▪ A negative multiplied by a negative 	<ul style="list-style-type: none"> ▪ Scales on maps 	<ul style="list-style-type: none"> ▪ Area of a circle ▪ Developing a critical approach to summary statistics and graphs 		

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Level 5	<ul style="list-style-type: none"> ▪ Conceptual obstacles when multiplying and dividing by numbers less than 1 	<ul style="list-style-type: none"> ▪ Understanding contour lines 	<ul style="list-style-type: none"> ▪ Short-run variation and long-run stability 	<ul style="list-style-type: none"> ▪ Sets ▪ Manipulating symbols 	<ul style="list-style-type: none"> ▪ Mathematical deductions
5.25	<ul style="list-style-type: none"> ▪ Adding and taking off a percentage 		<ul style="list-style-type: none"> ▪ Converting between derived units 	<ul style="list-style-type: none"> ▪ Conceptual growth for solving equations 	
5.5	<ul style="list-style-type: none"> ▪ Solving percentage problems ▪ Easy and hard ratio and proportion questions ▪ Surds 	<ul style="list-style-type: none"> ▪ Latitude and Longitude 	<ul style="list-style-type: none"> ▪ Calculations involving rates 	<ul style="list-style-type: none"> ▪ Exponential functions 	<ul style="list-style-type: none"> ▪ Verifying results from CAS
5.75	<ul style="list-style-type: none"> ▪ Rationalising Surds 		<ul style="list-style-type: none"> ▪ Deeper understanding of Pythagoras' theorem 		<ul style="list-style-type: none"> ▪ Effective and efficient use of a graphics calculator
Level 6	<ul style="list-style-type: none"> ▪ The Euclidean Algorithm 	<ul style="list-style-type: none"> ▪ Angles in circles 			<ul style="list-style-type: none"> ▪ Mathematical arguments