

Matching chart: Year 6 Mathematics

Using and applying mathematics

2006 objectives	Autumn lessons	Spring lessons	Summer lessons
<ul style="list-style-type: none"> Solve multi-step problems, and problems involving fractions, decimals and percentages; choose and use appropriate calculation strategies at each stage, including calculator use 		A2.2 Using doubling and halving to multiply E2.3 Percentages of quantities	E3.2 Using a calculator
<ul style="list-style-type: none"> Tabulate systematically the information in a problem or puzzle; identify and record the steps or calculations needed to solve it, using symbols where appropriate; interpret solutions in the original context and check their accuracy 			B3.1 Sequences – triangular numbers
<ul style="list-style-type: none"> Suggest, plan and develop lines of enquiry; collect, organise and represent information, interpret results and review methods; identify and answer related questions 	C1.1 Bar charts for grouped data		
<ul style="list-style-type: none"> Represent and interpret sequences, patterns and relationships involving numbers and shapes; suggest and test hypotheses; construct and use simple expressions and formulae in words then symbols (e.g. the cost of c pens at 15 pence each is $15c$ pence) 	B1.2 Sequences and formulae	B2.1 Multiples and divisibility	B3.1 Sequences – triangular numbers
<ul style="list-style-type: none"> Explain reasoning and conclusions, using words, symbols or diagrams as appropriate 	A1.1 Negative numbers		

Counting and understanding number

2006 objectives	Autumn lessons	Spring lessons	Summer lessons
<ul style="list-style-type: none"> Find the difference between a positive and a negative integer, or two negative integers, in context 	A1.1 Negative numbers		
<ul style="list-style-type: none"> Use decimal notation for tenths, hundredths and thousandths; partition, round and order decimals with up to three places, and position them on the number line 		A2.1 Understanding and ordering decimals	A3.1 Rounding
<ul style="list-style-type: none"> Express a larger whole number as a fraction of a smaller one (e. g. recognise that 8 slices of a 5-slice pizza represents $\frac{8}{5}$ or $1\frac{3}{5}$ pizzas); simplify fractions by cancelling common factors; order a set of fractions by converting them to 	E1.2 Equivalent fractions and cancelling E1.3 Comparing and ordering fractions		

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fractions with a common denominator			
<ul style="list-style-type: none"> <i>Express one quantity as a percentage of another (e.g. express £400 as a percentage of £1000); find equivalent percentages, decimals and fractions</i> 		E2.2 Equivalent percentages, decimals and fractions	
<ul style="list-style-type: none"> Solve simple problems involving direct proportion by scaling quantities up or down 			E3.3 Direct proportion

Knowing and using number facts

2006 objectives	Autumn lessons	Spring lessons	Summer lessons
<ul style="list-style-type: none"> <i>Use knowledge of place value and multiplication facts to 10×10 to derive related multiplication and division facts involving decimal numbers (e.g. 0.8×7, $4.8 \div 6$)</i> 	D1.1 Mental multiplication and division methods		
<ul style="list-style-type: none"> Use knowledge of multiplication facts to derive quickly squares of numbers to 12×12 and the corresponding squares of multiples of 10 	B1.1 Square numbers		
<ul style="list-style-type: none"> Recognise that prime numbers have only two factors and identify prime numbers less than 100; find the prime factors of two-digit numbers 		B2.2 Factors and primes	
<ul style="list-style-type: none"> Use approximations, inverse operations and tests of divisibility to estimate and check results 		B2.1 Multiples and divisibility B2.3 Short multiplication	

Calculating

2006 objectives	Autumn lessons	Spring lessons	Summer lessons
<ul style="list-style-type: none"> Calculate mentally with integers and decimals: $U.t \pm U.t$, $TU \times U$, $TU \div U$, $U.t \times U$, $U.t \div U$ 	A1.2 Mental methods of addition and subtraction D1.1 Mental multiplication and division methods	A2.2 Using doubling and halving to multiply	
<ul style="list-style-type: none"> <i>Use efficient written methods to add and subtract integers and decimals, to multiply and divide integers and decimals by a one-digit integer, and to multiply two- and three-digit integers by a two-digit integer</i> 	A1.2 Mental methods of addition and subtraction E1.1 Written methods of addition and subtraction	B2.3 Short multiplication	E3.1 Long multiplication A3.2 Short division
<ul style="list-style-type: none"> Relate fractions to multiplication and division (e.g. $6 \div 2 = \frac{1}{2}$ of $6 = 6 \times \frac{1}{2}$); express a quotient as a fraction or decimal (e.g. $67 \div 5 = 13.4$ or $13\frac{2}{5}$); find fractions and percentages of whole-number quantities (e.g. $\frac{5}{8}$ of 		E2.1 Fractions of quantities E2.3 Percentages of quantities	

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96, 65% of £260)			
• Use a calculator to solve problems involving multi-step calculations		E2.3 Percentages of quantities	E3.2 Using a calculator

Understanding shape

2006 objectives	Autumn lessons	Spring lessons	Summer lessons
• Describe, identify and visualise parallel and perpendicular edges or faces and use these properties to classify 2-D shapes and 3-D solids	B1.3 Quadrilaterals		B3.2 3-D shapes B3.3 Nets of 3-D shapes
• Make and draw shapes with increasing accuracy and apply knowledge of their properties	B1.3 Quadrilaterals		B3.2 3-D shapes B3.3 Nets of 3-D shapes
• <i>Visualise and draw on grids of different types where a shape will be after reflection, after translations or after rotation through 90° or 180° about its centre or one of its vertices</i>		D2.2 Co-ordinates and transformations	
• Use coordinates in the first quadrant to draw, locate and complete shapes that meet given properties		D2.2 Co-ordinates and transformations	
• Estimate angles, and use a protractor to measure and draw them, on their own and in shapes; calculate angles in a triangle or around a point		D2.1 Drawing and measuring angles	D3.1 Calculating angles

Measuring

2006 objectives	Autumn lessons	Spring lessons	Summer lessons
• <i>Select and use standard metric units of measure and convert between units using decimals to two places (e.g. change 2.75 litres to 2750 ml, or vice versa)</i>			D3.2 Converting metric units
• Read and interpret scales on a range of measuring instruments, recognising that the measurement made is approximate and recording results to a required degree of accuracy; compare readings on different scales, for example when using different instruments			C3.1 Reading scales
• Calculate the perimeter and area of rectilinear shapes; estimate the area of an irregular shape by counting squares	D1.2 Perimeter and area		

Handling data

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• Describe and predict outcomes from		C2.1 Probability	

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data using the language of chance or likelihood			
<ul style="list-style-type: none"> <i>Solve problems by collecting, selecting, processing, presenting and interpreting data, using ICT where appropriate; draw conclusions and identify further questions to ask</i> 	C1.1 Bar charts for grouped data		
<ul style="list-style-type: none"> Construct and interpret frequency tables, bar charts with grouped discrete data, and line graphs; interpret pie charts 	C1.1 Bar charts for grouped data	C2.2 Pie charts	C3.2 Line graphs
<ul style="list-style-type: none"> Describe and interpret results and solutions to problems using the mode, range, median and mean 	C1.2 Averages and range		

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