

Chenies School Maths Overview

Years: 5 & 6 Class: Hepworth

Autumn Term	Strand	Year 5 Objectives	Year 6 Objectives
Week 1	Number and place value	Read, write and determine the value of each digit to at least 1,000,000 Solve number problems and practical problems that involve the above	Read, write and determine the value of each digit to at least 10,000,000 Solve number problems and practical problems that involve the above
Week 2	Number and place value	Order and compare numbers to at least 1,000,000 Interpret negative numbers in context, count forwards and backwards with positive and negative numbers including through zero. Solve number problems and practical problems that involve the above	Order and compare numbers to at least 10,000,000 Use negative numbers in context and calculate intervals across zero. Solve number problems and practical problems that involve the above
Week 3	Number and place value Number – multiplication and division	Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000, 100,000 Solve number problems and practical problems that involve the above Recognise and use square numbers and cube numbers and the notation for squared and cubed Know and use the vocabulary of prime numbers, prime factors and composite numbers. Establish whether a number up to 100 is prime and recall prime numbers up to 19	Round any whole number to a required degree of accuracy Solve number problems and practical problems that involve the above Recognise and use square numbers and cube numbers and the notation for squared and cubed (<i>revision from year 5</i>) Identify factors and prime numbers
Week 4	Number and place value	Read Roman numerals to 1000 (M) and recognise years written in Roman numerals Solve number problems and practical problems that involve the above	Read Roman numerals to 1000 (M) and recognise years written in Roman numerals (<i>revision from Year 5</i>) Solve number problems and practical problems that involve the above

	<p>Number – multiplication and division</p> <p>Number – fractions (including decimals and percentages)</p>	<p>Multiply and divide whole numbers and those involving decimals by 10, 100, 1000</p>	<p>Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers to three decimal places</p>
Week 5	<p>Number – addition and subtraction</p> <p>Number – multiplication and division</p> <p>Number – fractions (including decimals and percentages)</p>	<p>Add and subtract numbers mentally with increasingly large numbers</p> <p>Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy</p> <p>Multiply and divide whole numbers and those involving decimals by 10, 100, 1000</p>	<p>Perform mental calculations including large numbers</p> <p>Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy</p> <p>Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers to three decimal places</p>
Week 6	<p>Number – addition</p> <p>Number – multiplication and division</p>	<p>Add whole numbers with more than 4 digits, including using formal written methods (columnar addition)</p> <p>Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy</p> <p>Recognise and use square numbers and cube numbers, and the notation for squared and cubed.</p> <p>Solve problems involving multiplication and division including using their knowledge of squares and cubes</p>	<p>Add whole numbers with more than 4 digits, including using formal written methods (columnar addition)</p> <p>Solve problems involving addition</p> <p>Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.</p> <p>Recognise and use square numbers and cube numbers and the notation for squared and cubed <i>(revision from year 5)</i></p> <p>Solve problems involving multiplication and division including using their knowledge of squares and cubes</p>
Week 7		<p>Assessment and Consolidation</p>	<p>Assessment and Consolidation</p>

Week 8	Number – addition and subtraction	<p>Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)</p> <p>Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy</p> <p>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</p>	<p>Solve problems involving addition and subtraction</p> <p>Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.</p> <p>Solve addition and subtraction multi-step problems in contexts, deciding which operations to use and why.</p>
Week 9	Number – addition and subtraction	<p>Subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)</p> <p>Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy</p> <p>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</p>	<p>Subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)</p> <p>Solve problems involving subtraction</p> <p>Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.</p> <p>Solve addition and subtraction multi-step problems in contexts, deciding which operations to use and why.</p>
Week 10	Number - multiplication	<p>Multiply numbers up to 4 digits by a one-digit number using a formal written method</p> <p>Multiply numbers mentally drawing upon known facts</p> <p>Solve problems involving multiplication</p>	<p>Multiply numbers up to 4 digits by a one-digit number using a formal written method</p> <p>Multiply numbers mentally drawing upon known facts</p> <p>Solve problems involving multiplication</p>
Week 11	Number – multiplication	<p>Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers</p> <p>Multiply numbers mentally drawing upon known facts</p> <p>Solve problems involving multiplication</p>	<p>Multiply multi-digit numbers up to 4 digits by a two-digit number using the formal written method of long multiplication</p> <p>Solve problems involving multiplication</p>

	Number – fractions (including decimals and percentages)		Multiply one-digit numbers with up to two decimal places by whole numbers
Week 12	Number – multiplication and division Number – fractions (including decimals and percentages)	Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context. Multiply and divide numbers mentally drawing upon known facts Solve problems involving multiplication and division and a combination of these	Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context. Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context. Solve problems involving multiplication and division Use written division methods in cases where the answer has up to two decimal places Solve problems which require answers to be rounded to specified degrees of accuracy
Week 13	Number and place value Number – multiplication and division	Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context. Multiply and divide numbers mentally drawing upon known facts Solve problems involving multiplication and division and a combination of these	Assessment
Week 14	Number – addition, subtraction, multiplication and division	Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.	Solve problems involving addition, subtraction, multiplication and division

Spring Term	Strand	Year 5 Objectives	Year 6 Objectives
Week 1	Number – multiplication and division	<p>Multiply and divide numbers mentally drawing upon known facts</p> <p>Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.</p>	<p>Multiply and divide numbers mentally drawing upon known facts</p> <p>Perform mental calculations</p> <p>Identify common factors and common multiples</p>
Week 2	Number – addition, subtraction, multiplication and division	<p>Solve problems involving addition, subtraction, multiplication and division and a combination of these, including the meaning of the equals sign.</p> <p>Interpret remainders appropriately</p>	<p>Use their knowledge of the order of operations to carry out calculations involving the four operations.</p> <p>Interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.</p>
Week 3	Number – fractions (including decimals and percentages)	<p>Compare and order fractions whose denominators are all multiples of the same number</p> <p>Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths</p> <p>Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements</p> <p>Add and subtract fractions with the same denominator and denominators that are multiples of the same number</p>	<p>Compare and order fractions, including fractions > 1</p> <p>Use common factors to simplify fractions; use common multiples to express fractions in the same denomination</p> <p>Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</p>
Week 4	Number – fractions (including decimals and percentages)	<p>Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements</p>	<p>Use common factors to simplify fractions; use common multiples to express fractions in the same denomination</p>

		<p>Add and subtract fractions with the same denominator and denominators that are multiples of the same number</p> <p>Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams</p>	<p>Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</p> <p>Multiply proper fractions and mixed numbers by whole numbers</p> <p>Divide proper fractions by whole numbers</p> <p>Multiply simple pairs of proper fractions, writing the answer in its simplest form</p>
Week 5	<p>Number – fractions (including decimals and percentages)</p> <p>Ratio and proportion</p>	<p>Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</p> <p>Recognise the per cent symbol and understand that per cent relates to ‘number of parts per hundred’, and write percentages as a fraction with denominator 100, and as a decimal</p> <p>Solve problems which require knowing percentage and decimal equivalents and those fractions with a denominator of a multiple of 10 or 25</p>	<p>Recall and use equivalents between simple fractions, decimals and percentages including in different context</p> <p>Associate a fraction with division and calculate decimal fractions equivalents for a simple fraction</p> <p>Solve problems involving the calculation of percentages and the use of percentages for comparison</p>
Week 6	<p>Number – fractions (including decimals and percentages)</p>	<p>Read and write decimal numbers as fractions</p> <p>Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</p> <p>Round decimals with two decimal places to the nearest whole number and to one decimal place</p> <p>Read, write, order and compare numbers with up to three decimal places</p> <p>Solve problems which require knowing percentage and decimal equivalents and those fractions with a denominator of a multiple of 10 or 25</p>	<p>Consolidation</p>

Week 7		Assessment and Consolidation	Assessment and Consolidation
Week 8	<p>Ratio and Proportion</p> <p>Geometry – properties of shapes</p>	<p>Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts</p> <p>Solve problems involving similar shapes where the scale factor is known or can be found</p> <p>Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples</p> <p>Identify 3D shapes, including cubes and other cuboids, from 2D representations</p>	<p>Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts</p> <p>Solve problems involving similar shapes where the scale factor is known or can be found</p> <p>Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples</p> <p>Recognise, describe and build simple 3D shapes, including nets</p>
Week 9	<p>Measurement</p> <p>Geometry – properties of shapes</p>	<p>Convert between different units of metric measurement</p> <p>Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints</p> <p>Use all four operations to solve problems involving measure using decimal notation</p> <p>Use the properties of rectangles to deduce related facts and find missing lengths and angles</p> <p>Distinguish between regular and irregular polygons based on reasoning about equal sides and angles</p>	<p>Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal place where appropriate</p> <p>Use, read, write and convert between standard units, converting measurements of length, mass, volume from a smaller unit of measure to a larger unit, and vice versa, using decimal notation up to three decimal places</p> <p>Convert between miles and kilometres</p> <p>Compare and classify geometric shapes based on their properties and sizes and find unknown angles in quadrilaterals and regular polygons</p> <p>Draw 2D shapes using given dimensions and angles</p>
Week 10	Measurement	<p>Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres</p> <p>Calculate and compare area of rectangles, including using standard units, square centimetres</p>	<p>Recognise that shapes with the same areas can have different perimeters and vice versa</p> <p>Recognise when it is possible to use formulae for area and volumes of shapes</p>

	Geometry – properties of shapes	<p>and square metres and estimate the area of irregular shapes</p> <p>Use all four operations to solve problems involving measures</p> <p>Use the properties of rectangles to deduce related facts and find missing lengths and angles</p> <p>Distinguish between regular and irregular polygons based on reasoning about equal sides and angles</p>	<p>Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres and cubic metres, and extending to other units</p> <p>Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius</p>
Week 11	Measurement Geometry – properties of shapes	<p>Estimate volume and capacity</p> <p>Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles</p> <p>Draw given angles and measure them in degrees</p> <p>Identify: Angles at a point and one whole turn Angles at a point on a straight line and half a turn Other multiples of 90 degrees</p>	<p>Calculate the area of parallelograms and triangles</p> <p>Recognise that shapes with the same areas can have different perimeters and vice versa</p> <p>Recognise when it is possible to use formulae for area and volumes of shapes</p> <p>Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres and cubic metres, and extending to other units</p> <p>Recognise angles where they meet a point, are on a straight line, or are vertically opposite, and find missing angles</p>
Week 12		<p>Consolidation</p> <p>Use all four operations to solve problems involving measures</p>	Assessment and Consolidation

Summer Term	Strand	Year 5 Objectives	Year 6 Objectives
Week 1	Measurement Geometry – position and direction	Solve problems involving converting between units of time Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	Use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit, and vice versa Describe positions on the full coordinate grid (all four quadrants) Draw and translate simple shapes on the coordinate plane, and reflect them in the axes
Week 2	Statistics Geometry – position and direction	Solve comparison, sum and difference problems using information presented in a line graph Complete, read and interpret information in tables, including timetables Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	Interpret and construct pie charts and line graphs and use these to solve problems Calculate and interpret the mean as an average Describe positions on the full coordinate grid (all four quadrants) Draw and translate simple shapes on the coordinate plane, and reflect them in the axes
Week 3	Statistics Algebra	Solve comparison, sum and difference problems using information presented in a line graph Complete, read and interpret information in tables, including timetables	Use simple formulae Generate and describe linear number sequences Express missing number problems algebraically Find pairs of numbers that satisfy an equation with two unknowns

			Enumerate possibilities of combinations of two variables
Week 4		Consolidation	Consolidation
Week 5		Assessment and Consolidation	Assessment and Consolidation KS2 Statutory Tests
Week 6		Investigations and problem solving	Investigations and problem solving
Week 7		Investigations and problem solving	Investigations and problem solving
Week 8		Investigations and problem solving	Investigations and problem solving
Week 9		Investigations and problem solving	Investigations and problem solving
Week 10		Investigations and problem solving	Investigations and problem solving
Week 11		Investigations and problem solving	Investigations and problem solving
Week 12		Investigations and problem solving	Investigations and problem solving