ROOSE COMMUNITY PRIMARY SCHOOL

Whole School Mathematics Curriculum Map

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	**Number and Place Value:** Place Value (numbers 1 to 5) **Addition and Subtraction:** Sorting into groups of colour, size or shape.	**Number and Place Value:** Comparing quantities of identical and non-identical objects. **Addition and Subtraction:** Change within 5 (1 more than, 1 less than).	**Addition and Subtraction:** Number bonds to 5. **Number and Place Value:** Counting to 6, 7 and 8; counting to 9 and 10; comparing groups up to 10.	**Addition and Subtraction:** Combining two groups to find the whole; number bonds to 10 using a tens frame and part-whole model. **Geometry:** Shape and	**Geometry:** Making simple patterns; exploring more complex patterns. **Addition and Subtraction:** Adding by counting on; taking away by counting back.	**Multiplication and Division:** Doubling, halving and sharing; odds and evens. **Measurement:** Measure length, height and distance, weight, capacity using non-

		Measurement: Time (my day)		Space – spatial awareness; 2-D and 3-D shapes.	**Number and Place Value:** Counting to 20.	standard units. Develop language to describe and compare measurement.
Year 1	**Number:** Place Value (within 10) Sort, count and represent objects. Count, read and write forwards and backwards (0 to 10), Count one more or less; One to one correspondence to compare groups; Introduce = , > and < , Compare and order numbers and objects; Ordinal numbers (1st, 2nd, 3rd ….). **Number:** Addition and Subtraction (within 10); Number bonds to 10; add together; add more; find a part (missing numbers); Subtraction: Taking away, how many left?	**Geometry:** Shape - Recognise and name 3D shapes; Sort 3D shapes; Recognise and name 2D shapes; Sort 2D shapes; Patterns with 3D and 2D shapes. **Number:** Place Value (within 20) - Count forwards and backwards; write numbers to 20 in numerals and words; Represent numbers from 11 to 20;	**Number:** Addition and Subtraction (within 20) Add by counting on; Find & make number bonds; Add by making 10. Subtraction – Not crossing 10; Subtraction – Crossing 10; Compare Number Sentences. **Number:** Place Value (within 50) Count forwards and backwards within to 50; Identify Tens and ones;	**Measurement:** Compare lengths and heights using mathematical language; Measure length using non-standard units and cm. **Measurement:** Weight and Volume - Introduce weight and mass; Measure mass using non-standard units; Compare mass. Introduce capacity; Measure capacity using	**Number:** Count in 10s; Make equal groups; Add equal groups; Make arrays; Make doubles; Make equal groups – grouping; Make equal groups – sharing. **Number: Fractions** Halve shapes or objects; Halve a quantity; Find a quarter of a shape or object; Find a quarter of a quantity.	**Number:** Place Value (within 100) - Count forwards and backwards within 100; Partition numbers into 10s and 1s; use the language less than, more than equal to and <, > and = to compare and order numbers; Find one more or less than given numbers to 100. **Measurement:** money -

	Introducing the subtraction symbol; Fact families – The 8 facts (linking addition and subtraction) Subtraction: Counting back; Find the difference; Compare addition and subtraction statements.	Tens and ones; Count one more and one less; Compare and order groups of objects; Compare and order numbers.	Represent numbers to 50; One more one less; Compare objects within 50; Compare and order numbers within 50; Count in 2s; Count in 5s.	non-standard units; Compare capacity.	**Geometry:** Position and direction - Describe quarter, half, three quarter and full turns; Describe the position of an object or shape.	Recognise coins; Recognise notes; Count in coins. Time – tell the time to o'clock and half-past.
Year 2	**Number:** Place value in numbers to 100; read and write numbers; represent numbers; partition numbers; compare and order numbers; count in 2s, 3s 5s and 10s. **Number:** Addition and Subtraction - Bonds to 100 (tens); Add and subtract 1s; 10 more and 10 less; Add and subtract 10s; Add a 2-digit and 1-digit number;	**Measurement:** Count money – pence and pounds (notes and coins); Select money; Make the same amount; Compare money; Find the total; Find the difference; Find change. **Multiplication and Division** Recognise, make and add equal groups;	**Number:** Multiplication and Division - Make equal groups – sharing; make equal groups – grouping; divide by 2; recognise odd & even numbers by halving; divide by 5; divide by 10. **Statistics:** Make tally charts; draw and interpret pictograms and block diagrams. **Geometry: Properties of Shape**	**Number: Fractions** Make equal parts; recognise and find halves, thirds and quarters; recognise unit and non-unit fractions; equivalence of one half and two quarters; find three quarters; count in fractions. M**easurement:** length and height - Measure length in cm and m; compare and order lengths;	**Position and direction:** use language 'forwards', 'backwards', 'up', 'down', 'left' and 'right' to describe movement in a straight line; write directions for a given route; describe quarter, half, three-quarter and full turns; use the terms clockwise and anti-clockwise; make patterns with shapes involving directions and turns.	**Measurement:** Time – recap telling the time to o'clock and half-past; read and draw the time to quarter to and quarter past; read and show analogue time in 5 minute intervals (number: count in 5s to 60); hours in a day and minutes in an hour; convert minutes to hours and vice versa; find and compare durations of time. **Measurement:** Mass – compare

	Subtract a 1-digit number from a 2-digit number; add two 2-digit numbers; subtract a 2-digit number from a 2-digit number.	Write multiplication sentences using the × symbol; write multiplication sentences from pictures. Use arrays; 2 times-table; 5 times-table; 10 times-table.	Recognise 2D and 3D shapes; recognise and describe properties of 2D shapes; recognise and describe properties of 3D shapes; draw 2D shapes; Lines of Symmetry; make patterns with 2D and 3D shapes.	four operations with lengths.	**Problem solving** – own activities for 2 weeks.	mass using < and >; order mass; measure mass in grams and kg; estimate mass. Capacity – compare capacity and volume; use the language of quarter, half and three quarters full; measure capacity and volume in ml and litres. Temperature – recognise degrees Celsius as a measure of temperature; read thermometers labelled in multiples of 2, 5 and 10.
Year 3	**Number** – Place Value - Represent numbers to 1,000; Understand place value in numbers to 1,000; Find 1, 10, 100 more or less than a given number;	**Number – addition and subtraction** Add and subtract hundreds; Add and subtract numbers with up to 3-digit numbers using formal written methods including crossing 10s and 100s and	**Number** – Write and calculate mathematical statements for multiplication and division using the multiplication table facts including for two-digit numbers times one-digit numbers;	**Measurement: length** – measure length using mm and cm; find equivalent lengths cm and m; find equivalent lengths mm and cm; compare lengths; add and subtract lengths.	**Number** – **fractions** equivalent fractions (quarters/eighths; thirds/sixths/twelfths; thirds/ninths); compare fractions using < and >; order fractions;	**Geometry** – recognise angles as a turn; identify right angles in shapes; compare angles; draw and measure lines accurately; identify horizontal and vertical lines;

	Compare objects to 1,000; Compare and order numbers to 1,000; Count in 50s. **Number – addition and subtraction** add and subtract multiples of 100.	exchanging; estimate and check answers to calculations. **Number** – Multiplication and Division – 3, 4 and 8 times tables; solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts; show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.	multiplication and division of 2-digits by 1-digit; solve problems involving scaling. **Measurement:** Money – convert between pounds and pence; add and subtract money; give change. **Statistics** – Interpret and present data using bar charts, pictograms and tables.	**Perimeter** – measure and calculate the perimeter of simple 2-D shapes using cm. **Number - Fractions** – recognise unit and non-unit fractions; recognise and make a whole; count in tenths; relate tenths to decimals; place fractions on a number line; find fractions of objects.	add and subtract fractions with the same denominator. **Measurement: Time** – months and years; hours in a day; days in a week/month; tell the time to 5 minute intervals; am/pm; 24 hour clock; find and compare time durations; measure seconds.	identify parallel and perpendicular lines; recognise and describe the properties of 2-D and 3-D shapes; construct 3-D shapes. **Measurement:** measure, compare (< and >), add and subtract mass (g,kg); measure, compare, add and subtract capacity (l,ml).
Year 4	**Number – Place Value** Recognise Roman Numerals to 100; Round to 10, 100 and 1000;	**Measurement- Length and Perimeter** Convert between m and km; compare km and m; Calculate Perimeter on a	**Number- Multiplication and Division** Recall and Use Multiplication and Division Facts for the 11 and 12 Times Tables; Multiply 3	**Fractions** Add and Subtract 2 or More Fractions; Subtract from Whole Amounts; Calculate	**Number – Decimals** Make a Whole; Compare and Order Decimals; Round Decimals, Write Halves and Quarters as decimals. **Measurement- Money**	**Statistics** Interpret Bar Charts, pictograms and tables; gather own data; Solve Comparison, Sum and

	Count in 1000s, 1000s, 100s, 10s and 1s; Partition numbers in different ways; Place numbers to 10000 on Number Lines; Find 1,000 more or less; Compare and Order Numbers; Count in 25s; Use Negative Numbers in context; count back through zero. **Number-Addition and Subtraction** Add and Subtract 1s, 10s, 100s and 1000s; Add and Subtract Two 4-digit Numbers; estimate and check answers.	Grid by counting squares; Calculate the Perimeter of Rectangles and Rectilinear Shapes. **Number-Multiplication and Division** Multiply and Divide by 10 and 100; Multiply by 0 and 1; Divide by 1 and Itself; Recall and Use Multiplication and Division Facts for the 6, 7 and 9 Times Tables.	Numbers; Identify Factor Pairs for a given number; Multiply 2 and 3 digit numbers by 1-digit; Divide 2 and 3-digit numbers by 1-digit. **Measurement-Area** What is area?; Undertsand area is how much space is taken up; Count Squares to measure and compare area; Make Shapes using a given number of squares. **Fractions** What is a Fraction?; explore fractions in different representations; Find Equivalent Fractions; Explore	Fractions of a Quantity. **Decimals** Recognise Tenths and Hundredths; Write tenths as decimals and fractions; Divide 1 and 2-digits by 10 and 100.	Write money as £.p; convert money; Order Money; Estimate Money; Solve problems, involving all Four Operations, with money. **Measurement - Time** Convert between Hours, Minutes and Seconds; convert between Years, Months, Weeks and Days; Convert Analogue to digital – 12 hour clock; convert Analogue to digital – 24 hour clock.	Difference problems; Read Line Graphs in the context of time. **Geometry-Properties of Shape** Identify angles; compare and order angles; name, identify, sort and draw triangles; name, describe and draw quadrilaterals; find lines of symmetry in 2-D shapes; complete a symmetric pattern. **Geometry-Position and Direction**

			Fractions Greater than 1; Count in Fractions (objectives may move between Spring 1 & 2).			Describe Position in the first quadrant; Draw and plot on a Grid; Describe a translation on a Grid.
Year 5	**Number – Place Value** Read, write, order and compare numbers to at least 1000000 and determine the value of each digit; count forwards or backwards in steps of powers of 10 for any given number up to 1000000; interpret negative numbers in context; count forwards and backwards with positive and negative whole numbers including through zero; round any number up to 1000000; read Roman numerals to 1000 (M) and recognise	**Number – Multiplication and Division** Multiply and divide numbers mentally drawing upon known facts; Multiply and divide whole numbers by 10, 100 and 1000; Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers; Recognise and use square numbers and cube numbers. **Measures - Perimeter and Area** Measure and calculate the perimeter of composite	**Number – Multiplication and Division** Multiply numbers up to 4 digits by a one or two digit number using a formal written method; 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. **Number – Fractions** Compare and order fractions; Identify, name and write equivalent fractions; Recognise mixed numbers and improper fractions and convert from one form to the	**Number – Decimals** Read and write decimal numbers as fractions; Read, write, order and compare numbers with up to three decimal places; Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents; Round decimals with two decimal places to the nearest whole number and to one decimal place. **Number – Percentages**	**Number – Decimals** Add and subtract decimals; Multiply and divide decimals by 10, 100 and 1000. **Geometry - Angle** Know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles; Draw and measure given angles; Calculate angles at a point and on a straight line. **Geometry - Properties of Shapes** Identify 3D shapes, including cubes and other	**Measurement- Converting Units** Convert between different units of metric measure (for example, km and m; cm and m; cm and mm; g and kg; l and ml); Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints; Solve problems involving converting between units of time; use and interpret timetables. **Measures - Volume**

	years written in Roman numerals. **Number – Addition and Subtraction** Add and subtract numbers mentally; Add and subtract whole numbers with more than 4 digits, including using formal written methods; Use rounding to check answers to calculations; Solve addition and subtraction multi-step problems in context. **Statistics** Solve comparison, sum and difference problems using information presented in a line graph; complete, read and interpret information in tables including timetables.	rectilinear shapes in cm and m; Calculate and compare the area of rectangles (including squares), and including using standard units, cm2, m2; estimate the area of irregular shapes.	other; Add and subtract fractions with the same denominator and denominators that are multiples of the same number; Multiply proper fractions and mixed numbers by whole numbers; Solve problems involving multiplication and division, including scaling by simple fractions.	Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred'; write percentages as a fraction with denominator 100, and as a decimal; Solve problems which require knowing percentage, fraction and decimal equivalents.	cuboids, from 2D representations; Reason about shapes; Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. **Geometry- Position and Direction** Identify, describe and represent the position of a shape following a reflection or translation in the first quadrant.	Understand that volume is the amount of space something takes up and how this differs from capacity; use cm cubes to make solids; Compare volume; Estimate volume; estimate capacity using practical equipment.
Year 6	**Number**- Read, write, order and compare numbers	**Fractions -** Recognise equivalent	**Number- Decimals** Identify the value of each digit in numbers	**Measurement Converting units**	**Geometry- Properties of Shapes**	Problem solving – Location,

	up to 10 000 000 and determine the value of each digit; Round any whole number to a required degree of accuracy; Use negative numbers in context, and calculate intervals across zero. **Number- Addition, Subtraction, Multiplication and Division** Use the formal written method for addition, subtraction, multiplication and division (including remainders in context and as fractions or decimals); Perform mental calculations, including with mixed operations and large numbers; Identify common factors, common multiples and prime numbers;	fractions; Simplify fractions; express fractions in the same denomination; Compare and order fractions; Add and subtract fractions and mixed numbers; Multiply fractions; Divide fractions; Find fractions of numbers and quantities. **Geometry**- Position and Direction 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.	given to three decimal places; multiply numbers by 10, 100 and 1000; Multiply one digit numbers with up to 2dp by whole numbers; Use written division methods in cases where the answer has up to two decimal places; Recall and use equivalences between simple fractions, decimals and percentages. **Number- Percentages** Solve problems involving the calculation of percentages. **Number- Algebra** 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	Solve problems involving the calculation and conversion of units of measure; Use, read, write and convert between standard units, converting measurements of length, mass, volume and time using decimal notation to up to 3dp; Convert between miles and kilometres. **Measurement Perimeter, Area and Volume** Recognise that shapes with the same areas can have different perimeters and vice versa; Recognise when it is possible to use formulae for area and volume of shapes; Calculate the area of parallelograms and triangles;	Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius; Draw 2D shapes using given dimensions and angles; Compare and classify geometric shapes based on their properties and sizes; find unknown angles in any triangles, quadrilaterals and regular polygons; Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. **Statistics** Interpret and construct pie charts and line graphs and use these to solve problems;	Location, Location; Design a Zoo; Create a Scarborough Monopoly Board.

	Use the order of operations to carry out calculations involving the four operations; Use estimation to check answers to calculations.		combinations of two variables.	Calculate, estimate and compare volume of cubes and cuboids using standard units. **Number- Ratio** Solve problems involving the relative sizes of two quantities; Solve problems involving similar shapes where the scale factor is known or can be found; Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.	Calculate the mean as an average. **SATs revision**	