Vision for Mathematics

"Mathematics is a subject which has its own unique place within our curriculum. It provides learners with powerful ways to describe and investigate an ever changing world.

Children can experience a sense of awe and wonder as they solve a problem for the first time; they will develop ways and means of looking at the patterns that make up our world, discover more sophisticated solutions and make links between different areas of Mathematics."

Mrs Swarbrick

Mathematics Subject Leader

MATHS CURRICULUM OVERVIEW
YEAR B: 2023-2024

	AUTUMN	SPRING	SUMMER
EYFS	**Number:** Early Learning Goal - *"Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing."* **Shape, Space and Measures** Early Learning Goal - *"Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them."*	**Number:** Early Learning Goal - *"Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing."* **Shape, Space and Measures** Early Learning Goal - *"Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them."*	**Number:** Early Learning Goal - *"Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing."* **Shape, Space and Measures** Early Learning Goal - *"Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them."*
CLASS 2 (Y1 / Y2)	**Number:** Read, write numbers to at least 100 Compare and order from 0-100; use < = > signs Round numbers to nearest 10 Count in steps of 2,3,5 from 0 and in 10s from any number, forward and backward	**Number:** Count in steps of 2,3,5 from 0 and in 10s from any number, forward and backward Recognise the place value of each digit in a 2 digit number (10s and 1s) Compare and order numbers from 0 up to 100; use < = > signs	**Number:** Count in steps of 2,3,5 from 0 and in 10s from any number, forward and backward Recognise the place value of each digit in a 2 digit number (10s and 1s) Compare and order numbers from 0 up to 100; use < = > signs

Partition numbers in different ways Show that addition can be done in any order and subtraction of 1 number from another cannot Recall addition and subtraction facts to 20 Add and subtract numbers – 2digit number and 1s; 2digit number and 10s; 2 2digit numbers; adding 3 1digit numbers Recognise and use the inverse relationship between addition and subtraction Multiplication – Show multiplication of 2 numbers can be done in any order and division can not Recall and use 2,5, 10 times tables Fractions – Understand and use the term numerator and denominator Understand fractions as part of a set Count on and back in steps of ½ and ¼	Find 1 or 10 more/less than a given number Round numbers to nearest 10 Show that addition can be done in any order and subtraction of 1 number from another cannot Add and subtract numbers – 2digit number and 1s; 2digit number and 10s; 2 2digit numbers; adding 3 1digit numbers Understand multiplication as repeated addition Multiplication – Show multiplication of 2 numbers can be done in any order and division can not Recall and use 2,5, 10 times tables Understand the connection between 10 times table and place value Understand division as grouping Understand fractions as part of a set Count on and back in steps of ½ and ¼	Find 1 or 10 more/less than a given number Partition numbers in different ways Show that addition can be done in any order and subtraction of 1 number from another cannot Add and subtract numbers – 2digit number and 1s; 2digit number and 10s; 2 2digit numbers; adding 3 1digit numbers Multiplication – Show multiplication of 2 numbers can be done in any order and division can not Understand multiplication as repeated addition Understand division as grouping Fractions – Understand and use the term numerator and denominator Write simple fractions eg, ½ of 6 =3 and recognise the equivalence of 2/4 and 1/2 Place value, addition and subtraction, multiplication, fractions
Measurement: Choose and use appropriate standard units to estimate and measure length, height in m/cm – use rulers. Compare and order mass	**Measurement:** Choose and use appropriate standard units to estimate and measure length, height in m/cm – use rulers. Compare and order lengths	**Measurement:** Choose and use appropriate standard units to estimate and measure capacity and volume (litres/ml) Choose and use appropriate standard units to estimate and measure length/height (m/cm) Choose and use appropriate standard units to estimate and measure mass (kg/g)

	Geometry: Identify and describe properties of 2-d shape, number of sides and lines of symmetry **Statistics:** Interpret and construct pictograms, tally charts, block diagrams and simple tables **Money:** Recognise and use £ and p Find different combinations of coins that equal the same amount of money	**Geometry**: Identify and describe properties of 2-d shape Identify 2-d shape on the surface of 3-d shapes Tell and write the time to 5 minutes, including quarter past/to the hour; draw hands on a clock face Know number of minutes in an hour and hours in a day **Money:** Recognise and use £ and p Find different combinations of coins that equal the same amount of money **Position and direction:** Use mathematical vocabulary to describe position, direction and movement; clockwise/ anti-clockwise	Choose and use appropriate standard units to estimate and measure temperature using thermometers (degress C) Tell and write the time to 5 minutes, including quarter past/to the hour; draw hands on a clock face Know number of minutes in an hour and hours in a day **Geometry**: Identify and describe properties of 2-d shape Identify 2-d shape on the surface of 3-d shapes; properties of 3-d shapes including number of edges, vertices and faces **Statistics:** Interpret and construct pictograms, tally charts, block diagrams and simple tables **Position and direction:** Use mathematical vocabulary to describe position, direction and movement; clockwise/ anti-clockwise
CLASS 3 (Y2 / Y3)	**Number:** Read and write numbers to at least 1000 Recognise the place value of each digit in a 3digit number (HTO)	**Number:** Find 1,10, 100 more or less Read and write numbers up to 5000 in words and figures. Add and subtract; 2 digit and 1s, 2 digit number	**Number:** Count from 0 in multiples of 4,8,50 and 100 Recall and use multiplication and division facts for 8x tables

Partitioning in different ways Find 1,10, 100 more or less Number line and a written method to add and subtract two and tree digit numbers. Estimate the answer to a calculation and use inverse operations to check Add and subtract; 2 digit and 1s, 2 digit number and 10s, 2 2 digit numbers, add 3 1 digit numbers Learn the 2, 3, 4, 5 and 10 times tables. Double and half given numbers Solve money and 'real life' problems. Read and write numbers up to 5000 in words and figures. Understand that finding a fraction of an amount relates to division Show practically or pictorially that a fraction is 1 whole number divided by another	and 10s, 2 2 digit numbers, add 3 1 digit numbers Count from 0 in multiples of 50 and 100 Written methods to add and subtract two and digit numbers. Subtract numbers up to 3 digits using formal written columnar subtraction Learn the 2, 3, 4, 5, 6, 7 and 10 times tables by heart. Recall and use multiplication and division facts for 8x tables Written methods to add and subtract two and digit numbers. Use written methods for multiplication & division. Understand that finding a fraction of an amount relates to division Show practically or pictorially that a fraction is 1 whole number divided by another Add and subtract fractions with the same denominator within 1 whole Understand how division statements can be represented using arrays Money and 'real life' problems.	Know the 2, 3, 4, 5, 6, 7, 8 and 10 times tables by heart, e.g. know facts like 7 x 5 and division facts 36 ÷ 4. Round numbers like 672 to the nearest 10 or 100. Add and subtract; 2 digit and 1s, 2 digit number and 10s, 2 2 digit numbers, add 3 1 digit numbers Work out calculations like 26 + 58 and 62 – 37 using mental methods in their heads. Work out calculations like 234 + 479 or 791 – 223 using pencil and paper and writing them in columns. Work out that a simple fraction like 2/6 is equivalent to 1/3. Recognise that tenths arise from dividing an object into 10 equal parts and in dividing 1digit numbers or quantities by 10 Identify the value of each digit to one decimal place Continue to recognise £ and p and understands a decimal point separates them Recognise that 10 10p coins are equivalent to £1 Show practically or pictorially that a fraction is 1 whole number divided by another Add and subtract fractions with the same

		denominator within 1 whole
Measurement: Measure, compare and subtract lengths (m/cm/mm) Understand that perimeter is a measure of distance around the boundary of a shape Measure, compare, add and subtract volumes, capacities and masses Tell and write the time from an analogue clock, including using Roman numerals Estimate and read the time with increasing accuracy to nearest minute Record/compare time in terms of seconds, minutes and hours. Use vocab o'clock, am, pm **Geometry**: Draw 2-d shapes and describe them Recognise angles as a property of shape Symmetry, 2d Shape, 3d shape Identify horizontal and vertical lines and pairs of perpendicular and parallel lines Fractions of shapes and whole numbers.	**Measurement:** Measure, compare and subtract lengths (m/cm/mm) Understand that perimeter is a measure of distance around the boundary of a shape Measure, compare, add and subtract volumes, capacities and masses Tell and write the time from an analogue clock, including using Roman numerals Estimate and read the time with increasing accuracy to nearest minute Record/compare time in terms of seconds, minutes and hours. Use vocab o'clock, am, pm **Geometry**: Draw 2-d shapes and describe them Recognise angles as a property of shape Symmetry, 2d Shape, 3d shape Identify horizontal and vertical lines and pairs of perpendicular and parallel lines Fractions of shapes and whole numbers. Symmetry, Know how many lines of symmetry different 2d shapes have and the properties of 3d shapes. Find fractions of shapes and whole numbers and the equivalents.	**Measurement:** Measure, compare, add and subtract lengths(m,cm,mm); mass (kg,g); capacity (l,mm) **Geometry**: Draw 2-d shapes and describe them Recognise angles as a property of shape Symmetry, 2d Shape, 3d shape Identify horizontal and vertical lines and pairs of perpendicular and parallel lines Fractions of shapes and whole numbers. Symmetry, Know how many lines of symmetry different 2d shapes have and the properties of 3d shapes.

	Statistics: Interpret and present data using Tally, bar charts, pictograms and graphs.	Statistics: Interpret and present data using Tally, bar charts, pictograms and graphs.	Statistics: Interpret and present data using Tally, bar charts, pictograms and graphs.
CLASS 4 (Y5 / Y6)	**Number:** Read, write, order, compare numbers to 10 000 000 Round any whole number to a required degree of accuracy Use negative numbers in context Count forwards and backwards in steps of integers, decimals or powers of 10 from any number Round decimals with 3 places to nearest whole number Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100, 1000 Mental and written addition, subtraction and Multiplication Adding and Subtracting Fractions Fractions, decimals and percentages Find simple percentages of amounts Express missing numbers algebraically **Measurement:** Use, read, write and convert between	**Number:** Count forwards and backwards in steps of integers, decimals or powers of 10 from any number Use simple formulae Generate and describe linear number sequences Add and subtract whole numbers and decimals using formal written methods Calculating with Fractions Mental and written Division and Multiplication Mental strategies for addition and subtraction Percentages **Algebra:** Sequences and Formulae **Measurement:**	**Number:** Count forwards and backwards in steps of integers, decimals or powers of 10 from any number Order and compare numbers including integers, decimals and negative numbers Place Value; Decimals; Rounding; Word Problems; Calculations; Mental Calculation; Multiplying and Dividing add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions Multiply simple pairs of proper fractions writing the answer in its simplest form Divide proper fractions by whole numbers **Algebra:** nth term **Measurement:**

standard units, converting measurements of length and mass Measurement-Length including perimeter and mass. Calculate the area of parallelograms and triangles Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic cm, cubic m **Geometry:** Draw 2D shapes using given dimensions and angles Recognise, describe and build 3-Shape including making nets Find unknown angles in any triangles, quadrilaterals and regular polygons **Statistics:** Interpret and construct pie charts and line graphs	Solve problems involving similar shapes where the scale factor is known or can be found Temperature Calculating with Fractions Recognise that shapes with the same areas can have different perimeters and vice versa Perimeter and Volume Convert between miles and kilometers **Geometry:** 2D and 3D Shape, Coordinates, Translation and Reflection **Statistics:** Interpret and construct pie charts and line graphs Mean **Ratio and Proportion:** Translation	Mass and Volume/Capacity ; Converting measures; Imperial and Metric **Geometry:** Translating and Reflecting Shape Co-ordinates; Drawing 2-D shapes, labelling parts of a circle **Statistics:** Line graphs, timetables