Parkside Primary Academy – Maths Curriculum Overview

2023/ 2024	Place Value	Addition and Subtraction	Multiplication and division	Fractions, decimals and percentages	Measurement	Geometry (properties of shape and angles)	Position and direction	Statistics	Ratio and Algebra
Year 1	• To count on in ones from any given number (Autumn = to 10, Spring = to 50, Summer = to 100) • To read and write numbers (Autumn = to 10, Spring = to 50, Summer = to 100) using digits • To read and write all numbers to 20 using words • To say the number that is one more or one less than a given number (Autumn = to 10, Spring = to 50, Summer = to 100) • To compare and order numbers (Autumn = to 10, Spring = to 50, Summer = to 100) • To partition 2-digit numbers into tens and ones • To use and label numberlines, including to make estimations • To identify and represent numbers using objects and pictoral representations (Autumn = to 10, Spring = to 50, Summer = to 100)	• To use +, - and = signs correctly • To recall and use number bonds to 10 • To recall and use number bonds to 20 • To add numbers to 20, including 0 • To subtract numbers to 20, including 0 • To solve one-step problems involving addition and subtraction, when they are represented pictorially or with objects	• To count in multiples of 2, 5 and 10 • To recognise odd and even numbers • To recognise, make and add equal groups • To demonstrate an understanding of sharing and grouping	• To understand that fractions represent equal parts of a whole • To recognise and find 1/2 or 1/4 of a shape • To recognise and find 1/2 or 1/4 of a set of objects or quantity	• To measure and record length, mass and capacity • To compare lengths, masses or capacities using mathematical vocabulary • To recognise all coins and notes • To compare and describe duration • To sequence events in the correct order • To recognise and talk about days, weeks, months and years • To tell the time to o'clock or half past	• To name and recognise 2D shapes (circle, triangle, square and rectangle) • To name and recognise 3D shapes (cuboid, cube, pyramid and sphere)	• To describe positions and turns using mathematical vocabulary		
Year 2	• To read and write numbers to 100 using numerals or words • To recognise the place value of two-digit numbers • To partition two-digit numbers into tens and ones, including flexible partitioning • To count in 10s from any number, forwards and backwards • To place numbers to 100 on a number line, estimating where appropriate • To compare and order numbers to 100	• To recall and use number facts to twenty fluently • To use known facts to derive and use related number facts to 100 • To add ones or tens to a 2-digit number • To subtract ones or tens from a 2-digit number • To add two 2-digit numbers together • To subtract a 2-digit number from another 2-digit number • To add three 1-digit numbers together • To use checking strategies such as using the inverse • To solve problems involving addition and subtraction	• To recognise, make and add equal groups • To recall and use multiplication and division facts in the 2-, 5- and 10 times tables • To count in steps of 3, forwards and backwards • To recognise if numbers are odd or even (up to 100) • To use x, ÷ and = symbols to write and calculate multiplication and division statements • To solve problems involving multiplication and division	• To understand that fractions represent equal parts of a whole • To count in fractions up to one whole • To identify and find 1/2, 1/3, 1/4 and 3/4 of a shape • To identify and find 1/2, 1/3, 1/4 and 3/4 of a set of objects • To identify and find 1/2, 1/3, 1/4 and 3/4 of an amount • To recognise that 1/2 is equivalent to 2/4	• To measure length using cm or m, mass using g or kg, and capacity using l or ml • To read and measure temperature accurately using a thermometer • To compare and order lengths, masses and capacities using <, > and = • To read scales in divisions of 1s, 2s, 5s and 10s • To use the symbols £ and p to represent pounds and pence • To find combinations of coins that equal the same amount • To compare amounts of money shown in the same units • To add and subtract money, including to give change • To tell the time to the nearest five minutes • To recall the number of minutes in an hour and number of hours in a day	• To describe the properties of 2D shapes • To describe the properties of 3D shapes • To identify lines of symmetry in 2D shapes • To compare and sort common 2D shapes • To order and arrange objects and shapes in patterns and sequences	• To describe position, movement and turns using mathematical language	• To present and interpret information in pictograms, tally charts, block diagrams or tables • To ask and answer questions simple questions around totalling and comparing data	
Year 3	• To read and write numbers to 1000, recognising the place value of each digit • To compare and order numbers to 1000 • To count in multiples of 50 and 100 • To find 100, 10 or 1 more or less than a given number • To place numbers to 1000 on a number line, estimating where appropriate	• To add ones, tens or hundreds to a 3-digit number mentally • To subtract ones, tens or hundreds to a 3-digit number mentally • To add numbers with up to 3-digits using formal written methods • To subtract numbers with up to 3-digits using formal written methods • To use checking strategies such as estimating and using the inverse	• To use arrays to derive and represent multiplication and division facts • To multiply and divide by 3, 4 and 8, writing the related multiplication and division sentences • To multiply 2-digits by 1-diigit using mental methods such as partitioning or known facts • To multiply 2-digits by 1-digit using formal written methods • To solve problems involving multiplication and division, including those with two steps	• To count up and down in tenths • To write and represent unit and non-unit fractions with small denominators • To find equivalent fractions for fractions with small denominators, supported by representations • To compare and order unit fractions • To compare and order fractions with the same denominator • To add and subtract fractions with the same denominators (less than one whole)	• To measure length, mass or capacity accurately using appropriate metric units of measure • To compare lengths, masses or capacities accurately • To add and subtract lengths, masses and capacities accurately, using appropriate metric units of measure • To calculate different intervals on simple scales • To measure the perimeter of simple 2D shapes	• To draw and name 2D shapes, describing their properties • To make and name 3D shapes, describing their properties, and recognising them in different orientations • To identify and draw horizontal and vertical lines • To identify and draw perpendicular and parallel lines • To identify right angles as a quarter of a turn and in shapes • To compare angles by stating if they are greater than or less than a right angle		•To present and interpret information in pictograms, bar charts or tables •To solve problems using information presented in bar charts, pictograms or tables, including those with two steps.	

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		• To solve problems involving addition and subtraction, including those with two steps		• To find fractions of a set of objects (Ready-to-progress criteria unit fractions only) • To solve problems involving fractions, including those with two steps	• To describe amounts of money in pounds or pence, including in practical contexts • To add or subtract amounts of money, including to give change • To read and write the time to the nearest minute, using an analogue clock • To compare times and durations recorded in seconds, minutes or hours • To know the number of days in a month, year and leap year				
Year 4	• To read and write four-digit numbers, recognising the place value of each digit • To order and compare numbers to 10,0000 • To find 10, 100 or 1000 more or less than a given number • To place numbers on various number lines accurately, or estimating where appropriate • To round any whole number to the nearest 10, 100 or 1000 • To read and write Roman numerals to 100 • To solve problems involving the place value of increasingly larger numbers (up to 10,000)	• To use mental methods where appropriate, including to add and subtract 1s, 10s, 100s and 1000s • To add numbers up to 4-digits using formal written methods • To subtract numbers up to 4-digits using formal written methods • To use checking strategies such as estimating and using the inverse to determine levels of accuracy • To solve problems involving addition and subtraction, including those with more than one step	• To count in multiples of 6, 7, 9, 25 and 100 • To recall all multiplication and division facts up to 12x12/144÷12 • To identify factor pairs for a given number • To multiply and divide by 10 and 100 • To multiply and divide by 0 and 1 • To apply known facts in order to multiply and divide mentally (commutativity, multiplying by multiples of 10, partitioning) • To multiply three numbers together • To multiply 2-digit and 3-digit numbers by 1-digit using formal written methods • To divide three-digit numbers by 1-digit using known facts and partitioning • To solve division calculations that involve remainders, interpreting them correctly • To solve problems involving multiplication and division, including those with more than one step	• To recognise and represent common equivalent fractions • To add and subtract fractions with the same denominator • To convert between mixed numbers and improper fractions • To subtract a fraction from a whole number • To find fractions of amounts • To count backwards and forwards in tenths or hundredths • To recognise and write decimal equivalents for any number of tenths or hundredths, recognising the place value of each digit • To recognise and write decimal equivalents of common fractions (1/4, 1/2, 3/4) • To divide 1-digit and 2-digit numbers by 10 or 100 • To round decimals with one decimal place to the nearest whole • To compare and order numbers with the same number of decimal places	• To convert between different metric units of measure (e.g km/m/mm, kg/g/mg) • To measure, calculate and compare the perimeter of rectilinear shapes, including finding missing lengths • To find and compare the area of rectilinear shapes by counting squares • To convert between analogue and digital times (both 12-hour and 24-hour) • To convert different units of time (hours to minutes; minutes to seconds; years to months; weeks to days) • To convert between pounds and pence • To compare and order amounts shown in pounds or pence • To add and subtract amounts of money, including to find change	• To compare and classify 2D shapes based on their properties, including different quadrilaterals and triangles • To recognise and identify right angles as 90°, acute angles as less than 90° and obtuse angles as greater than 90° (but less than 180°) • To compare and order angles up to 180° by size • To identify lines of symmetry in 2D shapes shown in different orientations • To complete a simple symmetric figure when given a specific line of symmetry	• To describe the position on a 2D grid as co-ordinates (first quadrant only) • To plot points on a 2D grid to complete a polygon • To describe and carry out translations on a 2D grid	•To present and interpret information in pictograms, bar charts or tables •To solve comparison, sum and difference problems using information in pictograms, bar charts or tables •To present and interpret information in simple line graphs	
Year 5	• To read and write numbers to 1,000,000, determining the value of each digit • To order and compare numbers to 1,000,000 • To identify the position of a number on various number lines (different start and end points, different intervals) • To count forwards and backwards in powers of 10 from any given number (up to 1,000,000) • To interpret negative numbers and count forwards and backwards through zero • To round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 or 100,000 • To read and write Roman numerals up to 1000	• To add whole numbers with more than four digits using formal written methods • To subtract whole numbers with more than four digits using formal written methods • To add and subtract mentally with increasingly larger numbers • To use checking strategies such as rounding, using the inverse and adjusting to determine levels of accuracy • To solve problems involving addition and subtraction, including those with more than one step	• To identify multiples of a number, including deriving multiples beyond 12 x __ • To identify factors of a number, and recognise common factors of two or more numbers • To recall the prime numbers up to 19, and be able to establish whether numbers up to 100 are prime or composite • To recognise, calculate and use square numbers, using correct notation (x2) • To recognise, calculate and use cube numbers, using correct notation (x3) • To multiply a 4-digit number by a 1-digit number using formal written methods • To multiply a 4-digit number by a 2-digit number using formal written methods • To divide numbers up to 4-digits by a 1-digit number using formal written methods, including calculations with remainders	• To identify, calculate and use fractions which are equivalent to a given fraction • To compare and order fractions where the numerators are the same • To compare and order fractions where the denominators are the same or one denominator is a multiple of the other • To add and subtract fractions where the denominators are the same or one denominator is a multiple of the other • To add and subtract mixed numbers where the denominators are the same or one denominator is a multiple of the other • To convert between mixed numbers and improper fractions • To find fractions of an amount, including calculating the whole when given • To multiply proper fractions and mixed numbers by whole numbers, understanding that	• To convert between different metric units of measurement (e.g. km/m/cm/mm or kg/g/mg) • To convert between common metric and imperial units of measurement • To convert between different units of time • To calculate, compare and estimate the volume of different shapes using cm3 cubes • To measure and calculate the perimeter of regular polygons, rectangles and other rectilinear shapes • To calculate and compare the area of squares, rectangles and other rectilinear shapes • To estimate the area of irregular shapes • To solve problems that involve measurement and converting between units of measure, including those with more than one step	• To name and recognise 3D shapes from different viewpoints and when shown as a 2D representation • To distinguish between regular and irregular polygons • To identify and compare acute, obtuse and reflex angles, being able to estimate their size • To draw and measure given angles accurately • To be able to calculate missing angles around a point and on a straight line (½ turn) • To recognise, draw and label parallel and perpendicular lines	•To read and plot co-ordinates on a grid •To identify, calculate and represent the position of a point or shape after a reflection •To identify, calculate and represent the position of a point or shape after a translation	•To draw simple line graphs accurately •To solve comparison, sum and difference problems using information presented in a line graph •To read, interpret and present information in tables (including timetables and two-way tables)	

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			• To multiply and divide larger numbers mentally, drawing on known facts and times tables up to 12x12 • To multiply and divide whole numbers by 10, 100 and 1000 • To solve problems involving multiplication and division, including those with more than one step	fractions can be used as operators • To solve problems involving fractions • To read and write numbers up to three decimal places, determining the value of each digit • To order and compare numbers up to three decimal places • To add and subtract decimal numbers, including when there are a different number of digits after the decimal point • To multiply and divide decimal numbers by 10, 100 and 1000 • To round decimals to the nearest whole number or to the nearest tenth/one decimal place • To recognise the % symbol and know that 'per cent' means 'out of one hundred' • To convert between decimals, percentages and fractions					
Year 6	• To read and write numbers up to 10,000,000, determining the value of each digit • To compare and order numbers up to 10,000,000 • To round any whole number accurately to the nearest multiple of different powers of 10 • To use negative numbers in context • To calculate intervals on a numberline, including across zero, in order to find/estimate the position of numbers • To solve problems involving number and place value, including those with more than one step	• To multiply numbers up to 4-digits by 2-digit numbers using formal written methods • To divide numbers up to 4-digits by a 1-digit number using formal written methods (short division) • To divide numbers up to 4-digits by a 2-digit number using formal written methods (long division) • To multiply and divide numbers by 10, 100 and 1000, giving answers with up to three decimal places • To complete division calculations where the answers have remainders, interpreting these remainders in various ways (e.g. fractions, rounding, decimals) • To carry out calculations involving all four operations in the correct order • To use checking strategies such as rounding, using the inverse and adjusting to determine levels of accuracy • To find and identify common factors and multiples of two or more given numbers • To identify, calculate and use prime, square and cube numbers • To solve problems involving the four operations, including those with more than one step	• To use common factors to simplify fractions, and use common multiples to express fractions in the same denomination • To compare and order fractions, including those greater than one • To add and subtract fractions with different denominators (using knowledge of equivalent fractions) • To add and subtract mixed numbers with different denominators (using knowledge of equivalent fractions) • To multiply any fraction by a whole number or by another fraction • To divide a proper fraction by a whole number • To solve problems involving adding, subtracting, multiplying or dividing fractions, including those with more than one step • To read and write numbers up to three decimal places, determining the value of each digit • To multiply one-digit numbers with up to two decimal places by a whole number. • To recall and use equivalences between simple fractions, decimals and percentages • To associate fractions with division to calculate decimal-fraction equivalents • To find percentages of given amounts, or find the whole amount when given a percentage of it	• To select the most appropriate metric unit of measurement to measure a given item • To convert between different metric measurements, using decimal notation where appropriate • To convert between metric and imperial units of measurement, using decimal notation where appropriate • To understand that shapes with the same area can have different perimeters and vice versa • To recall and use formulae to calculate the area and perimeter of a shape • To calculate the area of parallelograms and triangles • To calculate, estimate and compare the volume of cubes and cuboids	• To calculate unknown angles in shapes, on a line and around a point using known angle facts • To accurately draw 2D shapes using given dimensions and angles • To compare and classify geometric shapes based on their properties • To recognise, describe and build 3D shapes (including the use of nets) • To name and label parts of a circle (radius, diameter and circumference) • To calculate the radius of a circle from the diameter and vice versa	• To plot points and describe their position on the full co-ordinate grid (all four quadrants) • To draw and translate simple shapes on a co-ordinate grid • To reflect shapes in given lines of symmetry and in the axes	• To interpret and present information in a line graph • To interpret and construct pie charts • To calculate and interpret the mean of a set of data	• To identify ratios, and use them to calculate amounts • To identify, calculate and use scale factors to enlarge shapes • To identify shapes that are similar • To write, use and solve simple formulae and expressions, including where there are multiple possibilities • To generate and describe linear number sequences • To express and solve missing number problems algebraically • To find pairs of numbers that satisfy an equation with two unknowns