

Oak Class Mathematics Long Term Plan

Oak class Maths	Maths/Learning Pathway	Key Vocabulary	Links to wider curriculum
Long Term Plan	Year 5	Year 5	English- Mathematical
Autumn 1	Wk 1 – Place Value and addition Understand place value in 5-digit numbers; place 5-digit numbers on a line; order and compare 5-digit numbers; add and subtract 1s, 10s, 100s, 100os and 10,000s; use written addition to add pairs of 4-digit numbers and pairs of 5-digit numbers. Wk 2 – Decimals and written addition Understand place value in numbers with 2 decimal places; Divide by 10 and 100 to give answers with 2 decimal places; Multiply numbers with 2 decimal places by 10 and by 100; Place 2-place decimal numbers on a number line; Compare and order numbers with 2 decimal places; Add amounts of money using column addition; Use rounding to check answers. Wk 3 - Subtraction Find change from £20, £50 and £100 using counting up (Frog); find a difference between two amounts of money by counting up (Frog); use column subtraction (decomposition) to subtract pairs of 4-digit numbers and to subtract 3-digit numbers from 4-digit numbers; choose whether to use counting up (Frog) or column subtraction (decomposition) to subtract pairs of 4-digit numbers. Wk 4 - 2D Shape and mental multiplication Recognise and describe properties of polygons; Classify quadrilaterals; Recognise multiples; Use rules of divisibility; Find factors of 2-digit numbers. Wk 5 - Mental multiplication and fractions Use knowledge of times tables facts to help find common multiples; Find factors of 2-digit numbers; Find prime numbers less than 50; Find equivalent fractions; Compare fractions with related denominators; Simplify fractions using factors; Find unit and non-unit fractions of amounts Wk 6 - Place value and written multiplication Place 4-digit numbers on a line and round to the nearest 10, 100, 1000 or 1000; place 5-digit numbers on a line and round to the nearest 10, 100, 1000 or 1000; revise using grid multiplication to multiply 3-digit numbers by single-digit numbers.	Ones, tens, hundreds, thousands, million, more than, less than, equal, rounding, counting, subtract, take away, minus, difference, polygons	Vocabulary PE- compound shapes, word problems PSHE – Life skills



Oak class Maths Long Term Plan

Maths/Learning Pathway

Year 6

Key Vocabulary

Ones, tens, hundreds,

than, less than, equal,

factors, polygons.

thousands, millions, more

rounding, counting, radius, circumference,

quadrilaterals, prime numbers, multiples and

English- Mathematical Vocabulary PE- Distance, numerical PSHE - Life skills

Links to wider curriculum

Year 6

Wk 1 - Place Value and addition

Understand place value in 6-digit numbers; place 6-digit numbers on a line; order and compare 6-digit numbers; add and subtract 1s, 10s, 100s, 100os, 10,000s and 100,000s; use written addition to add pairs of 5-digit numbers.

Wk 2 - Decimals and written addition

Understand place value in numbers with 3 decimal places; Divide by 10, 100 and 1000 to give answers with 3 decimal places; Multiply numbers with 3 decimal places by 10, 100 and 1000; Place 3-place decimal numbers on a number line and begin to round to the nearest whole, 0.1 or 0.01; Compare numbers with 3 decimal places; Add 2 or 3 amounts of money using column addition; Add 2 or 3 numbers with two decimal places in a measures context, e.g. metres; use rounding to check answers.

Wk 3 - Subtraction

Add several prices, then find change from £20, £50 and £100 using counting up (Frog); find a difference between two amounts of money by counting up (Frog); use column subtraction (decomposition) to subtract pairs of 5-digit numbers and to subtract 3-digit and 4-digit numbers from 5-digit numbers; choose whether to use counting up (Frog) or column subtraction (decomposition) to subtract pairs of 5-digit numbers.

Wk 4 – 2D Shape and mental multiplication

Classify and sort quadrilaterals; Name parts of circles (radius, diameter, circumference) and know that the diameter is twice the radius; Find unknown angles in any triangle, quadrilaterals, and regular polygons; Find unknown angles around a point, on a straight line or vertically opposite.

WK 5 – Mental multiplication and fractions

Find common multiples and factors; Identify prime numbers, find numbers which have a pair of prime factors; Find equivalent fractions; Simplify fractions using multiples and factors; Compare and order fractions with unrelated denominators; Find unit and non-unit fractions of amounts.

Wk 6 – Place value and written multiplication

Place 5-digit numbers on a line and round to the nearest 10, 100 or 1000; place 6digit numbers on a line and round to the nearest 10, 100, 1000, 10,000 or 100,000; use short multiplication to multiply 4-digit numbers by single-digit numbers; use rounding to approximate; use short multiplication to multiply 4digit amounts of money by single-digit numbers.



Oak class Maths Long Term Plan	Maths/Learning Pathway	Key Vocabulary	Links to wider curriculum
Autumn 2	Wk 7 – Fractions, multiplication and division Write improper fractions as mixed numbers and vice versa; Use a written method to divide numbers above the times tables; Solve division word problems; Round up or down after division according to the context; Use multiplication to check division. Wk 8 – Place value and subtraction Understand place value in numbers with two decimal places; Count on and back in steps of 0.1 and 0.01; Add and subtract multiples of 0.1 or 0.01 without crossing multiples of 0.1 or 1; Find a difference between a number with one or two decimal places and whole number by counting up (Frog), e.g. 5 – 3.6 or 5 – 3.65; Subtract numbers with one or two decimal places by counting up from the smaller to the larger number (Frog), e.g. 4.2 – 2.65. Wk 9 – Measures and data Convert between grams and kilograms, millilitres and litres (mainly to one decimal place); Convert between metres and kilometres; Know approximate conversions between common imperial units used in daily life and metric units; Begin to draw line graphs and read intermediate points; Read timetables using the 24-hour clock; Calculate time intervals. Wk 10 – Shape and fractions Identify, visualise and describe properties of 3D shapes; Use these properties to sort 3D shapes; Compare and order fractions with related denominators; Add and subtract fractions with related denominators. Wk 11 – Mental and written calculation	subtract, take away, divide, share, multiples, multiplication, factors, prime numbers, square numbers, cube numbers, division, divide, share, multiples, Measurement, length, perimeter, area, KM, M, CM, MM, width, calculate	English- Mathematical Vocabulary Geography- kilometres, miles PSHE -Life skills



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Use place value to add and subtract; Add and subtract near multiples; Add pairs of 5-digit numbers (5-digit answers); Use rounding to check; Subtract pairs of 5-digit numbers; Use short multiplication to multiply 3-digit numbers by single-digit numbers including amounts of money, e.g. $3 \times £4.56$;

Year 6

Wk 7 - Fractions, multiplication and division

Recognise fraction and decimal equivalents; Use short division to divide 3-digit and 4-digit numbers by 1-digt numbers and by 11 and 12; Use short division to divide 4-digit numbers by 1-digt numbers and by 11 and 12, with fraction parts of answers, e.g. 23%, Simplify fractions or write as decimals, e.g. 23.75; Solve division word problems (including answers with fractions); Round up or down after division.

Wk 8 - Place value and subtraction

Understand place value in numbers with three decimal places; Count on and back in steps of 0.001 and 0.01; Add and subtract multiples of 0.1, 0.01 or 0.001; Add/subtract multiples of 0.01 to/from numbers with two decimal places, crossing multiples of 0.1 and 1; Subtract numbers with one or two decimal places by counting up from the smaller to the larger number (Frog), e.g. 2.76-0.83 or 13.4-2.76.

Wk 9 – Measures and data

Convert between grams and kilograms, millilitres and litres (up to 3 decimal places); Convert between metres and kilometres; Know approximate conversions between common imperial units used in daily life and metric units; Draw line graphs and read intermediate points; Read timetables using the 24-hour clock; Calculate time intervals and add lengths of time.

Wk 10 - Shape and fractions

Identify, describe and build 3D shapes using nets; compare and order fractions with unrelated denominators; Use common multiples to express fractions in the same denomination; Add and subtract fractions and mixed numbers with unrelated denominators.

Wk 11 - Mental and written calculation

Use grid multiplication to multiply 3-digit numbers by 2-digit numbers; Use long multiplication to multiply 3-digit numbers by numbers between 10 and 20, then between 20 and 30; Solve a mix of +, -, \times and \div mental and written calculations; Choose which operations are necessary to solve single-step and multi-step word problems.

Key Vocabulary

Fraction, equal, parts, half, quarter, third, fifth, equivalent, simplify, improper, mixed numbers, counting, larger, smaller, greater, less than, add, subtract, multiply, divide, amount, Ratio, fraction, symbol, to, calculate, scale, factors, proportion

English- Mathematical Vocabulary PE- Distance, numerical values

Links to wider curriculum





Oak class Maths Long Term Plan	Maths/Learning Pathway	Key Vocabulary	Links to wider curriculum
	Find lowest common multiples and highest common factors; Use mental strategies to multiply and divide by 5, 20, 6, 4 and 8; Use short multiplication to multiply 4-digit numbers by 1-digit numbers; Use rounding to approximate products; Use factors and multiples in mental multiplication; Understand that multiplication is commutative. Wk 6 – Fractions, decimals, percentages and mean Compare fractions with related denominators using equivalence; Know decimal equivalents for halves, quarters, fifths, tenths and hundredths; Find unit and non-unit fractions of amounts; Find fractions, multiply and divide to solve word problems Year 6 Wk 1 – Place value and negative numbers Know what each digit represents in 7-digit numbers; Use place value to add and subtract; Compare nos up to 10 million, Use < and > signs; Place 7-digit nos on number lines; Round 7-digit numbers to the nearest 10,000, 100,000 or 1,000,000; Use negative nos in context of temperature; Calculate rises and falls in temperature; Calculate intervals across zero. Wk 2 – Mental addition and subtraction including money Add and subtract near multiples of powers of ten including decimals (e.g. +/- 0 2.99, 3.02); Use knowledge of the order of operations and brackets to carry out calculations; Solve addition and subtraction multi-step word problems, including finding change Wk 3 – Place value and addition of decimals Use place value to add and subtract numbers with 3 decimal places; Multiply and divide by 10, 100 and 1000; Round numbers with 3 decimal places; Multiply and divide by 10, 100 and 1000; Round numbers with 3 decimal places to the nearest whole, tenth and hundredth; Use written addition to add numbers with 3 decimal	Mean, mode, median, negative, coordinates, statistics, equivalent, polygons, quadrants, amounts.	PSHE – Life skills



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	places in context of measures (litres, km, kg); Use rounding to estimate totals Wk 4 – Co-ordinates and statistics Plot points and draw polygons in all four quadrants; Work out new co-ordinates after a translation or reflection; Construct and interpret pie charts; Draw a line graph and read intermediate points; Draw a conversion graph of imperial to metric units and use it to read off equivalent measures; Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. Wk 5 – Multiplication and division Solve problems involving rate; Use mental strategies to multiply and divide by 5, 20, 6, 4 and 8; Solve problems by scaling up or down; Multiply and divide numbers with up to 2dp, e.g. 0.4 × 6, 3.5 ÷ 7, 5 × 0.03, 0.15 ÷ 3; Use long multiplication to multiply 3-digit then 4-digit numbers by numbers between 10 and 35; Use rounding to approximate. Wk 6 – Fractions, decimals, percentages and mean. Compare fractions with unrelated denominators using equivalence; Know decimal equivalents for halves, quarters, fifths, eighths, tenths and hundredths; Recognise equivalent fractions, decimals and percentages; Find percentages of amounts; Use mental division strategies to find non-unit fractions of amounts; Calculate and interpret the mean as an average.		
Spring 2	Year 5 Wk 7 – Written division, multiplying and dividing fractions Multiply unit and non- unit fractions by whole numbers, writing any improper fractions as mixed numbers; Use short division to divide 3-digit numbers by single-digit numbers; Wk 8 – Perimeter, area and volume	Million, column addition/subtraction, decimal places, ratio, perimeter, area, algebra, scaling, percentages, improper fractions, mixed numbers, volume.	PSHE – Life skills



Dak class Maths ong Term Plan	Maths/Learning Pathway	Key Vocabulary	Links to wider curriculum
	Find the perimeters of rectangles and composite shapes; Work		
	out the missing lengths of sides in order to find perimeters; Find		
	the area of rectangles including squares; Estimate then count to		
	find the area of irregular shapes; Calculate the area from scale		
	drawings; Estimate and find the volume of shapes by making it with cm cubes.		
	Wk 9 - Place value, subtraction, scaling, ratio and percentages		
	Understand place value in 6-digit numbers; Use place value to		
	add and subtract; Place 6-digit numbers on a line; Order and		
	compare 6-digit numbers; Find a number between two 6-digit		
	numbers; Round 6-digit numbers to the nearest 10, 100, 1000,		
	10,000 or 100,000; Use decomposition to subtract pairs of 5-digit		
	numbers and 4-digit numbers from 5-digit numbers; Solve word		
	problems.		
	Wk 10 - Number, subtraction and algebra		
	Multiply and divide whole numbers and those involving decimals		
	by 10, 100 and 1000; Place numbers with two decimal places on		
	a line, round to the nearest tenth or whole; Use counting up to		
	subtract pairs of numbers with the same number of decimal		
	places, then different numbers of places; Use counting up to find		
	change and differences in prices; Solve subtraction word		
	problems.		
	Wk 11 – Written Multiplication and division, mental and		
	written addition and subtraction		
	Use short multiplication to multiply 4-digit numbers (including		
	amounts of money) by single-digit numbers; Use short division to		
	divide 4-digit numbers by single-digit numbers; Use column		
	addition to add and subtract 4-digit and 5-digit numbers; Add		
	and subtract numbers mentally with increasingly large numbers.		



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	Year 6	Million, column addition/subtraction,	PSHE – Life skills
	Wk 7 – Written division, multiplying and dividing fractions	decimal places, ratio, perimeter, area,	
	Multiply pairs of fractions together; Divide fractions by whole	algebra, scaling, rounding, percentages,	
	numbers; Use long division to divide 3-digit numbers by 2-digit	improper fractions, mixed numbers,	
	numbers.	volume.	
	Wk 8 – Perimeter, area and volume		
	Find the area of triangles and parallelograms, beginning to use		
	formulae; Recognise that shapes with the same areas can have		
	different perimeters and vice versa; Find volumes of cubes and		
	cuboids.		
	Wk 9 - Place value, subtraction, scaling, ratio and percentages		
	Solve problems involving similar shapes where the scale factor is		
	known or can be found; Find areas of triangles, rectangles and		
	parallelograms; Describe ratios between unequal quantities, e.g.		
	paint, solve ratio problems, e.g. in context of recipes; Solve		
	problems involving unequal quantities; Use fractions &		
	percentages to describe proportions		
	Wk 10 - Number, subtraction and algebra		
	Multiply and divide whole numbers by 10, 100 and 1000;		
	Understand and use simple formulae; Express missing number		
	problems algebraically; Find pairs of numbers that satisfy an		
	equation with two unknowns, enumerate possibilities of		
	combinations of two variables; Generate and describe linear		
	number sequences, possibilities of combinations of two		
	variables; Generate and describe linear number sequences.		
	Wk 11 – Written Multiplication and division, mental and		
	written addition and subtraction		
	Use short multiplication to multiply 4-digit numbers by single-		
	digit numbers; Use short division to divide 4-digit numbers by		
	single-digit numbers; divide any remainders to give		
	fractions/decimals/round up or down; Use long multiplication to		
	multiply 3-digit numbers, then 4-digit numbers by numbers		



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	between 10 and 35; Use rounding to approximate; Use long division to divide 3-digit numbers, then 4-digit numbers by 2-digit numbers		
Summer 1	Year 5 Wk 1 – Number, place value, addition and subtraction Compare and order negative numbers; Count back in steps through zero; Add and subtract 1, 10, 100, 1000, 10,000 and 100,000 to/from 6-digit numbers; Place 6-digit numbers on landmarked lines and empty lines; Round 6-digit numbers to the nearest 1000, 10,000, and 100,000. Wk 2 – Number, place value and calculation Read Roman numerals to 1000 (M) and recognise years written in Roman numerals; Revise 2-place decimals; Introduce 3-place decimals; Multiply/divide by 10, 100, 1000. Wk 3 – Multiplication, division, fractions and percentages Multiply and divide nos mentally using known facts; Express remainders as fractions; Solve word problems; Understand percentages as parts of 100; Find simple percentages. Wk 4 – Geometry, data, area, perimeter and algebra Measure and draw angles using a protractor; Recognise acute, obtuse and reflex angles; Know that angles on a straight line add up to 180° and use this to find missing angles; Know that angles around a point add up to 360° and use this to find missing angles; Draw polygons with given dimensions and angles. Wk 5 – SATS week Wk 6 – Fractions and subtraction. Use equivalence to compare and order fractions; Convert improper fractions to mixed numbers; Add and subtract fractions with related denominators; Add and subtract mixed numbers; Use column subtraction to subtract pairs of 5-digit numbers; Choose when to use counting up (Frog) or column subtraction.	Negative, calculation, geometry, data, algebra, remainders, Roman numerals, angles.	PSHE – Life skills



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Long Term Plan			
	Year 6	Negative, calculation, geometry, data,	PSHE – Life skills
	Wk 1 – Number, place value, addition and subtraction	algebra, remainders, Roman numerals,	
	Place negative numbers on lines, find intervals which cross zero;	angles.	
	Use column addition and subtraction; Estimate answers; Solve		
	multi-step word problems; Use knowledge of four operations to		
	reason and solve puzzles; Understand and use place value in		
	numbers with up to 7 digits; Round numbers up to 10,000,000.		
	Wk 2 – Number, place value and calculation		
	Multiply and divide decimals by whole numbers; Use the written		
	methods of short and long multiplication, short and long division;		
	Understand and use place value in numbers with 3 decimal		
	places, multiply and divide by 10, 100 and 1000; Convert		
	between metric units of measurement		
	Wk 3 – Multiplication, division, fractions and percentages		
	Use place value and number facts to multiply and divide		
	mentally; Solve ratio problems; Solve problems involving similar		
	shapes where the scale factor is known; Add and subtract		
	fractions including mixed numbers; Multiply and divide fractions;		
	Find percentages and fractions of amounts.		
	Wk 4 – Geometry, data, area, perimeter and algebra		
	Interpret pie charts and line graphs; Find areas of irregular and		
	rectilinear shapes; Calculate perimeters of rectangles and find		
	perimeters of rectilinear shapes; Know that shapes with the		
	same area can have different perimeters; Extend and describe		
	linear number sequences and use the rule to find later terms;		
	Find missing angles round a point, line, vertically opposite and in		
	triangles; Make reflections and translations		
	Wk 5 – SATS week		
	Wk 6 – Fractions and subtraction.		
	Use equivalence to compare and order fraction; Convert		
	improper fractions to mixed numbers; Add and subtract		



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-	fractions with related denominators; Add and subtract mixed numbers; Use column subtraction to subtract pairs of 5-digit then 6-digit numbers; Choose when to use counting up (Frog) or column subtraction.		
Summer 2	Year 5 Wk 7 – Multiplication, division and ratio Find common multiples and common factors; Solve problems requiring scaling by simple fractions; Recognise and use square numbers and cube numbers; Use short division to divide 4-digit numbers by 1-digit numbers, including those which leave a remainder; Use short division to divide 4-digit numbers by 1-digit numbers, expressing the remainders as a fraction. Wk 8 – Written multiplication and division Use short multiplication to multiply 4-digit numbers by single-digit numbers; Use grid method to multiply 2-digit numbers and 3-digit numbers by 2-digit numbers and 3-digit numbers by 2-digit numbers (one number less than 20). Wk 9 – Time, line graphs and rate Read timetables using the 24-hour clock; Calculate time intervals and find a given number of minutes or hours and minutes later; Draw and interpret line graphs and read intermediate points; Solve problems involving rate. Wk 10 – Decimals and subtraction : Understand place value in numbers with 3 decimal places; Convert between kilograms and grams, litres and millilitres, metres and kilometres; Compare and order numbers with 3 decimal places and place on a line; Use counting up (Frog) to subtract numbers with 1 or 2 decimal places including money; Solve word problems; Check subtraction by using addition.	Calculation, operations, timetables, millimetres, metres, kilometres, litres, grams, kilograms, multiples, factors, inverse.	PSHE – Life skills



Oak class Maths	Maths/Learning Pathway	Key Vocabulary	Links to wider curriculum
Long Term Plan	Mile 44 - Baultinitiantian of colories wound and and fire attacks		
	Wk 11 – Multiplication of whole numbers and fractions		
	Use long multiplication to multiply pairs of 2-digit numbers		
	together where one number is less than 40; Use long		
	multiplication to multiply a 3-digit number by a 2-digit number		
	less than 40; Use rounding to estimate products; Multiply		
	fractions by whole numbers, simplifying answers; Multiply mixed		
	numbers by whole numbers.		
	Wk 12 – Calculation; All four operations		
	Use column addition to add 4- and 5-digit whole numbers,		
	decimals and money; Use column subtraction of whole numbers		
	and counting up (Frog) to subtract decimals including money;		
	Choose a method to subtract; Use short division to divide 4-digit numbers, expressing remainders as fractions; Solve single and		
	multi-step word problems, working out which calculation(s) are		
	necessary; Understand and use equivalence.		
	necessary, onderstand and use equivalence.		
	Year 6		
	Wk 7 – Multiplication, division and ratio	Calculation, operations, timetables,	2012 15 111
	Find common multiples and common factors; Solve problems	patterns, sequences, millimetres,	PSHE – Life skills
	requiring scaling by simple fractions; Recognise and use square	metres, kilometres, litres, grams,	
	numbers and cube numbers; Make general statements about	kilograms, multiples, factors, inverse.	
	patterns and relationships; Use a calculator in solving problems,		
	interpreting decimals answers in context; Use ratio to describe		
	the relationship between pairs of quantities.		
	Wk 8 – Written multiplication and division		
	Use short multiplication to multiply 4-digit numbers by single-		
	digit numbers; Use grid method to multiply 2-digit numbers by 2-		
	digit numbers; Use long division to divide 3-digit numbers by 2-		
	digit numbers; Make and test general statements.		
	Wk 9 – Time, line graphs and rate		
	Read timetables using the 24-hour clock; Calculate time intervals		
	and find a given number of minutes or hours and minutes later;		



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	Begin to draw scatter graphs; draw and interpret line graphs and read intermediate points; Solve problems involving rate.		
	Wk 10 – Decimals and subtraction Understand place value in numbers with 3 decimal places; Convert between kg and g, I and ml, m and km; Order numbers with 1, 2 or 3 decimal places; Use a calculator to convert fractions to decimals, place decimals on a line; Use counting up (Frog) to subtract numbers with 1 or 2 decimal places including money; Solve word problems; Check subtraction by using addition.		
	Wk 11 – Multiplication of whole numbers and fractions Describe and predict patterns; Read recurring displays on a calculator; Know common fraction and decimal equivalents; Convert fractions to decimals using a calculator. Wk 12 – Calculation; All four operations		
	Use column addition to add 4- and 5-digit whole numbers, decimals and money; Use column subtraction of whole numbers and counting up (Frog) to subtract decimals including money; Solve single and multi-step word problems, working out which calculation(s) are necessary; Choose a method to subtract; Interpret a rounding error, e.g. 6.9999999 as 7, and read recurring displays, e.g. 0.3333333 and know that it represents a third; Know how to clear a calculation and how to clear the last entry on a calculator; Begin to use the memory buttons.		