# Y6 Long Term Curriculum Map - Mathematics

| Week | Topic | Objectives | Vocabulary |
|---|---|---|---|
| Week 1 - 2 | Number - Place Value | Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit.<br>Round any whole number to a required degree of accuracy.<br>Use negative numbers in context and calculate intervals across zero.<br>Solve number and practical problems that involve all of the above. | numeral; represents; stands for; exchange; equal to; inequality sign; ascending / descendig order; estimate; approximately; exact; round; nearest; integer; positive; negative; minus; multiple of; digit; consecutive; sequence; predict; pair; rule; relationship; classify; divisible; factorise; factor; square number; prime factor |
| Week 3 - 6 | Number - Addition, Subtraction, Multiplication and Division | Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.<br>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.<br>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.<br>Perform mental calculations, including with mixed operations and large numbers.<br>Identify common factors, common multiples and prime numbers.<br>Use their knowledge of the order of operations to carry out calculations involving the four operations.<br>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.<br>Solve problems involving addition, subtraction, multiplication and division.<br>Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. | add; addition; more; plus; increase; sum; total; increase; total; altogether; score; double; halve; subtract; minus; decrease; leave; hw many are left; difference between; how many more/fewer; equals; sign; is the same as; tens boundary; hundreds boundary; units boundary; tenths boundary; inverse; lots of; groups of; times; multiply; multiplication; product; repeated addition; array; row; column; double; halve; share; divide; division; divisible; remainder; factor; quotient; divisible by inverse |
| Week 7 - 8 | ASSESSMENTS + Number - Decimals | Associate a fraction with division and calculate decimal fraction equivalents (for example 0.375).<br>Identify the value of each digit in numbers given to three decimal places and multiply and divide by 10, 100 and 1000 giving answers up to 3 decimal places.<br>Multiply one-digit numbers with up to 2 decimal places by whole numbers.<br>Use written division methods in cases where the answer has up to 2 decimal places.<br>Solve problems which require answers to be rounded to specified degrees of accuracy.<br>Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. | part; equal parts; fraction; improper fractions; mixed number; numerator; denominator; equivalent; reduced to; cancel; one whole; half; quarter; one whole; eighth; third; sixth; ninth; tenth; twelfth; eleventh; fifth; twentieth; hundreth; thousandth; proportion; ratio; in every; for every; to evry; as many as; decimal; decimal fraction; decimal point; decimal place; oercentage; percent; % |
| **October Half Term** | | | |

| | | | |
|---|---|---|---|
| Week 9 - 11 | Number - Fractions | Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.<br>Compare and order fractions, including fractions > 1.<br>Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.<br>Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, 4 1 × 2 1 = 8 1].<br>Divide proper fractions by whole numbers [for example, 3 1 ÷ 2 = 6 1].<br>Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 8 3].<br>Recall and use equivalances between simple fractions, decimals and percentages, including in different contexts. | part; equal parts; fraction; improper fractions; mixed number; numerator; denominator; equivalent; reduced to; cancel; one whole; half; quarter; one whole; eighth; third; sixth; ninth; tenth; twelfth; eleventh; fifth; twentieth; hundreth; thousandth; proportion; ratio; in every; for every; to evry; as many as; decimal; decimal fraction; decimal point; decimal place; oercentage; percent; % |
| Week 12 - 14 | Number - Percentages including assessments (week 13) | Recall and use equivalences between simple fractions, decimals and percentages. | part; equal parts; fraction; improper fractions; mixed number; numerator; denominator; equivalent; reduced to; cancel; one whole; half; quarter; one whole; eighth; third; sixth; ninth; tenth; twelfth; eleventh; fifth; twentieth; hundreth; thousandth; proportion; ratio; in every; for every; to evry; as many as; decimal; decimal fraction; decimal point; decimal place; oercentage; percent; % |
| Week 15 | **Consolidation of fractions and percentages from assessments** | | |
| **Christmas Holidays** | | | |
| Week 16 - 17 | Number - Algebra | Use simple formulae.<br>Generate and describe linear number sequences.<br>Express missing number peoblems algebraically.<br>Find pairs of numbers that satisfy an equation with two unknowns.<br>Enumerate possibilities of combinations of two variables. | algebra; ascending order; commutative property; descending order; enumerate; equation; expression; formula; formulae; integer; linear; pattern; puzzle; rule; sequence; symbol; term; triangular number; unknown; variable; sort; classify; relationship; property; factor; factorise; prime number; pair; sequence; equivalwent expression; generalisations of number patterns |
| Week 18 | Geometry - Position and Direction | Describe positions on the full coordinate grid (all 4 quadrants)<br>Draw and translate simple shapes on the coordinate plane and reflect them in the axes | Over, underneath, above, below, top, bottom, side, out, in, outside, inside, around, infront, behind, before, after, beside, next to, opposite, apart, between, middle, edge, centre, corner, direction, journey, route, map, plan, higher, lower, sideways, across, close, far, near, along, through, to, from, towards, away, ascend, descend, grid, row, column, origin, coordinates, clockwise, anti-clockwise; compass point; north; south; east; west; horizontal; vertical; diagonal; parallel; perpendicular; x-axis; y-axis; |
| Week 19 | Measurement - Converting Units | Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.<br>Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places.<br>Convert between miles and kilometres. | measurement; standard unit; unit; metric; imperial; scale; nearly; roughly; approximately; length; width; height; depth; breadth; wide; narrow; deep; shallow; furthest; nearest; distance; perimeter; kilometre; metre; centimetre; millimetre; mass; weight; balances; kilogram; half-kilogram; scales; capacity; holds; contains; full; empty; litre; half-litre; millilitre; pint; gallon; measuring cylinder; hour; minute; second; half past; quarter to; quarter past; dialogue; analogue; Greenwich Mean Time |
| Week 20 | **Consolidation before assessments - checking up-to-date** | | |
| Week 21 | **Assessments** | | |
| **February Half Term** | | | |

| | | | |
|---|---|---|---|
| Week 22 - 23 | Measurement - Area / Volume / Perimeter | Recognise that shapes with the same areas can have different perimeters and vice versa.<br>Recognise when it is possible to use formulae for area and volume of shapes.<br>Calculate the area of parallelograms and triangles.<br>Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units [for example, mm3 and km3]. | area; covers; surface; square centimetre (cm2); square metre (m2); square millimetre (mm2); cubed; cubic centimetre (cm3); cubic metre (m3); cubic millimetre (mm3); cubic kilometre (km3); |
| Week 24 - 25 | Number - Ratio & Proportion | Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.<br>Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison.<br>Solve problems involving similar shapes where the scale factor is known or can be found.<br>Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. | proportion; ratio; for every; to every; as many as; fraction; proper/improper; mixed number; numerator; denominator; equivalent; reduced to; cancel; one whole; half; quarter; decimal; decimal fraction; decimal point; decimal place; percentage; per cent; % |
| Week 26 - 27 | Shape - Comparing / Classification / Properties / Angles | Draw 2-D shapes using given dimensions and angles.<br>Recognise, describe and build simple 3-D shapes, including making nets.<br>Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.<br>Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.<br>Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. | two-dimensional; three dimensional; equilateral; isosceles; scalene; rhombus; parallelogram; trapezium; raduis; diameter; circumference; right angle; acute; obtuse; reflex; hollow; solid; concave; pointed; construct; draw; sketch; centre; concentric; arc; net; surface; congruent; intersecting; intersection; plane; base; certex; vertices; layer; diagram; regular; irregular; convex; tangram; hemi-sphere; sphere; cylindrical; spherical; prism; tetrahedron; polyhedron; octahedron; dodecahedron; symmetrical; reflective symmetry; line symmetry; translation; repeating pattern; |
| **Easter Holidays** | | | |
| Week 28 | **Consolidation and filling of gaps - circles, statistics etc.** | | |
| Week 29 - 30 | **SATS REVISION** | | |
| 31 | **SATS WEEK** | | |
| 32 | Number - Problem Solving / Investigations / QLA | | |
| **May Half Term** | | | |
| Week 33 - 37 | Number - Problem Solving / Investigations / QLA | | |

| | | |
|---|---|---|
| 38 | **Sports Week** | |
| 39 | **Transition Week:** Measurement - Time | days of the week; months of the year; seasons; fortnight; month; year; leap year; century; millenium; calendar; date; date of birth; morning; afternoon; evening; night; am; pm; noon; midnight; today; yesterday; tomorrow; before; after; next; last; now; soon; early; late; quick; quicker; quickest; quickly; fast; fastest; faster; slow; slower; slowest; old; older; oldest; new; newer; newest; takes longer; takes less time; how long ago?; how long will it be to?; how long will it take to?; timetable; arrive; depart; hour; minute; second; watch; hands; digital; analogue; 24-hour; 12-hour; GMT; BST; how often?; always; never; often; sometimes; usually |

| **Statistics to be taught through topic:** | |
|---|---|
| Interpret and construct pie charts and line graphs and use these to solve problems<br>Calculate and interpret the mean as an average | Pupis connect work on angles, fractions and percentages to the interpretation of pie charts. Encounter and draw graphs relating to 2 variables, arising from their own enquiry and in other subjects. Connect conversion from km to m in measurement to its graphical representation. Know when it is appropriate to find the mean of a data set. |