|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| Duration of term | 7 weeks 3 days | 7 weeks | 7 weeks | 6 weeks | 3 weeks 4 days | 8 weeks |
| Unit(s) taught | Core skills and presentation expectations (3 days)Place value (3 weeks)Addition and subtraction (3 weeks)Statistics (1 week) | Multiplication and division (4 weeks)Area and perimeter (2 weeks) linked with geometry (properties of shapes)Test week (2 days approximately)  | Place value (mult and div by 10, 100, 1000) - (1 week)Fractions (3 weeks)Decimals and money (2 weeks) | Measurements (with context of fractions and decimals) – 3 weeksStatistics (1 week)Geometry – position and direction – (1 week) | Revision of key areas for Y4: place value, calculations but main focus on fractionsUse of reasoning strategies across Y4 maths curriculum | Test week (2 days)Remainder of term – using QLA to address gaps (prior to transition meetings) |
| Essential prior knowledge | Understand hundreds, tens and onesCan count forwards or backwards from a given number below 1000 in 1s and 10s (and can apply to mental addition and subtraction)Children able to draw a place value grid independently Column subtraction and addition methods for HTO | Must know at speed the multiplication and division facts for 2x, 3x, 4x, 5x, 6x, 8x, 10x tablesCounting up in single digit numbers to 10x their multiple | Use of place value grids for hundredths, tenths, thousands, hundreds, tens and onesUnderstanding of other mental / written methods for multiplication and divisionKnowledge of value of coinsAbility to count up from given numbers in the values shown in coins (1, 2, 5, 10, 20, 50 and 100) | Vocabulary and key facts linked to measure from Y3 curriculumKnowledge of 2D shape namesUnderstanding of key vocabulary such as horizontal and vertical, right and left, axis and coordinates | All Year 4 knowledge and calculation strategiesNB: During this unit, children will be using and applying knowledge and understanding from across the Y3 and 4 curriculum. They will be taught how to use common strategies in a range of contexts | Decided based on the QLA – teachers to assess existing knowledge and use this to address areas not yet secure. |
| Key facts non negotiables | Must recall multiplication and division facts for 2x, 3x, 4x, 5x, 6x, 8x, 10x tablesCan count up in single digit numbersMental strategies for near multiples of 10 e.g. adding 19, subtracting 31 | 25, 50, 75 and 100 as a part of 100 (link to fractions and decimals later in the term)  | Counting up and down in whole numbers including 1s, 2s, 3s, 4s, 5s, 6s, 8s, 10s, 25s and 50sMental strategies for calculating unit fractions e.g. quarter, halves | Key conversions at speed – cm to metres, seconds to minutes, minutes to hours, pence to poundsChildren can recall fractions of measures e.g. ½ metre = 50cm | Children can recall all key facts expected of Y4 childThis term to focus on final preparation for the multiplication tables check |
| KPIs | * Counts in multiples of six, seven, nine, twenty five and one thousands.
* Counts backwards through zero to include negative numbers.
* Orders and compares number beyond one thousand.
* Rounds any number to the nearest ten, one hundred or one thousand.
* Solves addition and subtraction two-step problems in context, deciding which operations and methods to use and why.
* Solves comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.
 | * Recalls multiplication and division facts for

multiplication tables up to twelve times twelve.* Compares and classifies geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.
* Identifies lines of symmetry in two dimensional shapes presented in different orientations.
 | * Recognises and shows, using diagrams, families

of common equivalent fractions.* Counts up and down in hundredths; recognises that hundredths arise when dividing an object by one hundred and dividing tenths by ten.
* Rounds decimals with one decimal place to the nearest whole number.
* Solves simple measure and money problems involving fractions and decimals to two decimal places.
 | * Converts between different units of measure; eg, kilometre to metre; hour to minute.
* Plots specified points and draws sides to complete a given polygon.
 | * Recalls multiplication and division facts for

multiplication tables up to twelve times twelve.Revision of key objectives but particularly focused on transferring skill between problem solving objectives including:* Solves addition and subtraction two-step problems in context, deciding which operations and methods to use and why.
* Solves simple measure and money problems involving fractions and decimals to two decimal places.
* Solves comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.
* Solves simple measure and money problems involving fractions and decimals to two decimal places.
 |
| Additional objectives | * find 1000 more or less than a given number
* recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)
* solve number and practical problems that involve all of the above and with increasingly large positive numbers
* read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.
* add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate
* estimate and use inverse operations to check answers to a calculation
 | * use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers
* recognise and use factor pairs and commutativity in mental calculations
* multiply two-digit and three-digit numbers by a one-digit number using formal written layout
* solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.
* identify acute and obtuse angles and compare and order angles up to two right angles by size
* complete a simple symmetric figure with respect to a specific line of symmetry.
 | * solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number
* add and subtract fractions with the same denominator
* recognise and write decimal equivalents of any number of tenths or hundredths
* recognise and write decimal equivalents to ¼. ½. ¾
* find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths
* compare numbers with the same number of decimal places up to two decimal places
 | * measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
* find the area of rectilinear shapes by counting squares
* estimate, compare and calculate different measures, including money in pounds and pence
* read, write and convert time between analogue and digital 12- and 24-hour clocks
* solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.
* describe positions on a 2-D grid as coordinates in the first quadrant
* describe movements between positions as translations of a given unit to the left/right and up/down
 | Revision of key objectives but particularly focused on transferring skill between problem solving objectives including:* solve number and practical problems that involve all of the above and with increasingly large positive numbers
* solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.
* solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number
* solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.
 |
| Explicit teaching of problem solving | Act it outTrial and error | Algebra | Working backwards | PatternSimplify | List or table | Trial by improvement |
| Vocabulary | Tenths, hundredthsDecimal (places)Round (to nearest)Thousand more/less thanNegative integersCount through zeroRoman numerals (I to C) | Factors, factor pairsMultiplicationfacts (up to12x12)Division factsInverseDeriveQuadrilateralsTrianglesRight angle, acuteand obtuse angles | Equivalent decimalsand fractions | ConvertContinuous dataLine graphCoordinatesTranslationQuadrantx-axis, y-axisPerimeter and area | Application of all Year 3 and 4 key vocabulary in context of reasoning and problem solving contexts |