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|  | 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 | Place value (4 weeks)Addition and subtraction (3 weeks) | Place value (1 week)Multiplication and division (4 weeks)Property of shapes (2 weeks) | Place values and calculations (1 week)Fractions (3 weeks)Applying calculation methods (2 weeks) | Place value and calculations word problems in context of money (3 weeks)Assessment week (1 week)Fractions word problems  | SATs – MayStatistics | Measurement Children also covering areas identified in QLA from SATs tests |
| Time |  |  | Give watchesTelling time – quarter past, half past, quarter to and o’clock | Time facts – minutes in an hour, minutes in half an hour | Ordering of amounts of time using conversion | Reinforcing telling time to nearest 5 minutes |
| Essential prior knowledge | * Counting forwards and backwards
* Know what number before and number after is
* Modelling number
* Correct number formation for 0-9 digits
* Touch, move and count from a group
* Subitising for representations of number
* Know what number bonds are
* Movement along a number line
* Quantity to numerals e.g. five dots = 5
 | * Able to count in pairs
* Understand what 2 looks like
* Confident in using numicon
* Able to add single-digit numbers
* Able to count in ones and tens
* Understand terms sides, corners, edges and faces
* Curved, straight, flat, not straight, not curved
* 3D shapes linked to given objects e.g. a cylinder is a can
 | * Vocabulary for measurements – full, empty, half full
* Can order amounts in comparable beakers / measures
* Understand taller, shorter
* Understand heavier and lighter
* Able to split a bar or circle in half, quarters, thirds
* Can add, subtract and multiply using concrete and appropriate written methods

Vocabulary for calculation – left, altogether, total, how much, how many  | * Secure with tens and ones
* Able to use all Y2 written methods
* Understands what is meant by ‘change’ in context of money
* Knowledge that coins have a particular value
 | * Understand what data is
* Can make a simple tally or collect values in a table
* Need to understand how to sort data and categorise objects
 | * Strong knowledge of values of money
* Can make comparisons between different sizes of measures e.g. cm with metres
* Vocabulary understanding on measures e.g. hotter, warmer, lighter, heavier etc.
* Counting up in amounts likely to be in a scale e.g. 2s, 5s
* Recognise number lines when shown vertically and horizontally
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| Key facts non negotiables | * Understanding of tens and ones
* Can add and subtract single digit numbers to one and two-digit numbers
* Number bonds to 10, 20 and 100
 | * 2x, 5x and 10x multiplication tables (and starting others where possible)
* Know corresponding division facts
* Use written methods using representation of base 10 and other concrete resources
* Defines symmetry accurately
* Explains properties of 2D and 3D shapes when able to look at them
 | * Can split a bar model into appropriate parts
* Able to express multiplication and division facts using array or other model
* Use doubling and halving to identify equivalent fractions
 | * Able to add multiples of 20, 10, 5, 2s and 1s to a given number
* Use of mental and written strategies to add / subtract amounts of money below £1.
* Use of related amounts of money to add / subtract e.g. 10p instead of two 5p
 | * Count up in numbers or parts of numbers (linked to pictograms)
 | * Know what we measure things in e.g. temperature is celcius, weight is grams and kg etc.
* Know appropriate units to measure items in e.g. pencil in cm, playground in metres
* Can tell the time with increasing accuracy
* Can mentally calculate length of time to another event within the hour
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| KPIs | * Counts in steps of two, three and five from zero and in tens from any number, forward and backward.
* Compares and orders numbers from zero up to one hundred. Uses < > and = signs correctly.
* Uses place value and number facts to solve problems.
* Solves problems with addition and subtraction by:

Using concrete objects and pictorial representations, including those involving numbers, quantities and measures. Applying an increasing knowledge of mental and written methods. * Recalls and uses addition and subtraction facts to twenty and one hundred: 1. Fluently up to twenty.
 | * Revision of PV objectives
* Recalls and uses multiplication and division facts for the two, five and ten multiplication tables, including recognising odd and even numbers.
* Solves problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.
* Compares and sorts common 2-D and 3-D shape and everyday objects.
 | * Recognises, finds, names and writes fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity.
* Solves problems with addition and subtraction by:

Using concrete objects and pictorial representations, including those involving numbers, quantities and measures. * Applying an increasing knowledge of mental and written methods.
* Solves problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.
 | * Solves simple problems in a practical context involving addition and subtraction of money of the same unit including giving change.
* Fraction questions relating to previous objectives covered
 | * Asks and answers questions about totalling and comparing categorical data.
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| * choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels
* compare and order lengths, mass, volume/capacity and record the results using >, < and =
* recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value
* find different combinations of coins that equal the same amounts of money
* compare and sequence intervals of time
* tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times
* know the number of minutes in an hour and the number of hours in a day.
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| Additional objectives | • recognise the place value of each digit in a two-digit number (tens, ones)• identify, represent and estimate numbers using different representations, including the number line• read and write numbers to at least 100 in numerals and in words• applying their increasing knowledge of mental and written methods• add and subtract numbers using concrete objects, pictorial representations, and mentally, including:a two-digit number and onesa two-digit number and tenstwo two-digit numbersadding three one-digit numbers• show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot• recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. | * Revision of PV objectives
* calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs
* show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot
* identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line
* identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces
* identify 2-D shapes on the surface of 3-D shapes [for example, a circle on a cylinder and a triangle on a pyramid]
 | * write simple fractions for example, ½ of 6 = 3 and recognise the equivalence of 2/4 and 1/2.
* applying their increasing knowledge of mental and written methods
* recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.
 | * recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value
* find different combinations of coins that equal the same amounts of money
* show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot
 | * interpret and construct simple pictograms, tally charts, block diagrams and simple tables
* ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity
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| Explicit teaching of problem solving | Trial and errorAlgebra | Trial by improvement  | Lists and tables | Act it out | Working backwardsPattern | Simplify  |
| Vocabulary | Two hundred, one thousand, Threes, fours etc.Sequence, continue, hundreds, predict, rule, greater than, less than, two-digit, three-digit, place value, stands for, represents, exchange, twenty-first, twenty-second…Exact, exactlyOne hundred more / less, number facts, tens boundary,  | Groups of, times, once, twice, three times… ten times, repeated addition, divide, divided by, divided into, share, share equally, left, left over, one each, two each… ten each, group in pairs, threes… tens, equal groups of, row, column, multiplication table, multiplication fact, division fact | Equivalent fraction, mixed number, numerator, denominator, two halves, two quarters, three quarters, one third, two thirds, one of three equal partsShow how you, explain your method, describe the pattern, describe the rule, investigate, mental calculation, written calculation  | Bought, sold, cheaper, costs, money, coin | Tally, graph, block graph, pictogram, represent, label, title, most popular, most common, least popular, least common,  | Measuring scale, further, furthest, tape measure, gram , milliletre, 5, 10, 15… minutes past, fortnight, temperature, degree, contains, digital, analogue clock, clock / watch, timer, seconds |
| Application of all Year 1 and 2 key vocabulary in context of reasoning and problem solving contexts |