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| **MATHS LONG TERM PLAN**  |
| **Maths****Pupils should be taught to:** **EYFS****Mathematics ELG: Number** Children at the expected level of development will: - Have a deep understanding of number to 10, including the composition of each number; 14 - Subitise (recognise quantities without counting) up to 5; - Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. ELG: Numerical Patterns Children at the expected level of development will: - Verbally count beyond 20, recognising the pattern of the counting system; - Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity; - Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.**Key Stage 1 and 2**Aims The national curriculum for mathematics aims to ensure that all pupils: become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language can solve problems by applying their mathematics to a variety of routine and nonroutine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions. |
|  | **Autumn**  | **Spring**  | **Summer**  |
| **1st half term** | **2nd half term** | **1st half term** | **2nd half term** | **1st half term** | **2nd half term** |
| **EYFS** | Getting to know you.Just like me. | It’s me 1,2,3!Light and dark. | Alive in 5!Growing 6,7,8. | Building 9 and 10.Consolidation | To 20 and beyond.First, then, now. | Find my pattern.On the move. |
| **Year 1**  | Place value within 10Addition within 10 (introduce part whole – language of fractions)Place value within 20Geometry: Properties of 2D and 3D shapeFractions – shape finding 1/2 | Subtraction within 10Place value within 20Multiplication and divisionMeasure: Length and height, mass or weight, capacity/volume,  | Addition within 20Subtraction within 20Multiplication and divisionMeasure: time-chronological order, days of the week, months of the year, length and heights, mass/weight,  | Subtraction within 20Place value within 50Shape, Fractions – shape finding ¼. Position and movement:capacity/volume | Multiplication and division.Number fractionsMeasuring: length and height, mass/weight, capacity and volume, time – hours, minutes and secondsMoney | Number fractionsPlace value within 100Position and direction: half turns, quarter, three quarter turns,Time: telling the time.Geometry: properties of 2D and 3D shape. |
| **Year 2**  | Number: Place Value Number: Addition and SubtractionMeasure: LengthGeometry: Properties of 2D and 3D shape. | Measure: Money Fractions of shape.Number: Multiplication and DivisionGeometry: Properties of 2D and 3D shape.Geometry: Position, direction,Measure: Time. | Number: Place ValueNumber: Addition and Subtraction Measure: Money Measure: capacity.Measure: Mass. | Number: Multiplication and Division.Fractions of numbers.Geometry: Properties of 2D and 3D shape Measure: Time. | Number: Place Value, Addition and Subtraction, Multiplication and Division, FractionsMeasure: Length, mass, capacity.Geometry: Position, direction, motionMeasure: Time | Number:Place Value, addition and Subtraction, Multiplication and Division.FractionsMeasure: MoneyGeometry: Properties of 2D and 3D shape Statistics |
| **Year 3**  | Baseline assessmentPlace ValueAddition and SubtractionMultiplication and Division | FractionsTimeMeasure-mm/cm/mGeometry- 2D and 3D shapes-linesStatistics-pictograms and tablesAssessment | Place ValueAddition and Subtraction-columnsMultiplication and Division | FractionsMeasure-money-g/kgGeometry-right angles-2D and 3D shape-linesStatistics-bar chartsAssessment | Place valueAddition and SubtractionMultiplication and Division- problemsFractions | Fractions- equivalence, addition and subtraction, tenthsShape-right angles-2D and 3D shape-linesMeasure-ml/lTimeStatistics- bar charts inc scalesAssessment |
| **Year 4**  | Place valueAddition and subtraction MeasurementMeasurement: Length and perimeterMultiplication and division | Multiplication and divisionFractionsGeometry: properties of shapeData handling and time | Place valueAddition and subtractionMultiplication and divisionFractionsFractions and decimals | Fractions and decimalsTimeGeometryData handling and measurementMultiplication and division | Place valueAddition and subtraction- measures for contextMultiplication and divisionFractionsArea and perimeterShape and capacity | StatsMeasuresMultiplication and division2D shapes, angles and coordinates |
| **Year 5**  | **Number*** Number To 5 digits
* Roman Numerals
* Prime numbers
* Roman numerals – up to thousands

**Calculations*** Mental +/ -
* Column + / - to 5 digits
* Calculations with money
* Recall grid mult: To xTO
* Intro formal TO xTO
* Bus stop division

**Geometry**Position and direction* Position in 1st quadrant
* Translations
* Coordinates

**Measure/ statistics** | **Number*** Fractions: compare/ order, equivalent, im/proper, +/- fractions

**Calculations*** Mental x / - strategies - factors/ factor pairs
* Multiply/ divide by multiples of 10

**Geometry*** Properties of rectangles
* Properties of 3D shapes

**Measure/ Statistics**Complete, read and interpret information in tables, including timetables | **Number**Number to 6 digitsCount f’wads/ bk wds in powers 10/ 100. 1000 etcRounding, interpret negative no.sRoman numerals – yearsFractions: Round dec with 2 places to nearest whole* Read & write decs as fractions, eg 0.72=72/100
* Read, write & compare no.s with up to 2/3 dec. places.
* problems involving number up to 3 decimal places
* Add and subtract a mix of whole numbers and decimals
* Add and subtract decimals with different numbers of decimal place

**Calculations*** Subtract whole numbers with 5 digits using formal written method (estimate answer) x2

+/- decimals to 2 places using formal methods* Multiply TO x TO formal

**Geometry****Measure/ statistics*** Read & interpret line graphs
* Draw line graphs
* Use line graphs to solve problems
 | **Number*** Write %s as a fraction with denominator of 100.
* Write %s as a fraction with denominator of 100.
* Write %s as a decimal to 2 places
* Know % equivalent of certain fractions
* Calculate % of a quantity
* Solve problems involving %s

**Calculations**Problem solving with %s and fractions,,division, +/ -**Geometry*** Name and sort acute, obtuse and reflex angles
* Measure and draw angles to the nearest 5 ͦ.
* Identify angles at a point on a straight line and other multiples of 90 ͦ

**Measure/ statistics**Use a ruler and* protractor to make accurate drawings of angles. X2
 | **Number**Percentages- revise links with fractions/ decimalsPercentage of an amount – multiples of 10.Problem solving* *write percentages as a fraction with denominator 100, and as a decimal*
* Revise +/- fractions & mixed/improper fractions
* Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
* cube numbers
* Inverse operations x /divide by 10, 100, 1000

**Calculations*** *Solve problems which require knowing percentage and decimal equivalents*

**Geometry****Measure/statistics*** Measurement: length

*Convert between different units of metric* *Revise 24 hr clock**Read timetables** *Convert between secs/ mins/ hrs/days/wks/yrs etc*
 | **Number*** Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents
* Read, write, order and compare numbers with up to 3 decimal places
* Solve problems involving number up to 3 decimal places

**Calculations***Solve problems involving +, -, × and ÷, and a combination of these, i***Geometry**Area/ perimeterAngles in 360 ͦ**Measure/statistics***gram and kilogram; litre/ml* |
| **Year 6**  | **Number and place value:** No. sequences, negative numbers, factors, primes, square numbers, BIDMAS and rounding.**Four operations**: daily**Geometry**: Properties and classification of 2D shapes.**Measure**: Reading scales.**Fractions**: Addition, subtraction and multiplying.**Statistics**: Reading and interpreting charts. | **Number**: long multiplication and division.**Four operations**: daily**Measure**: area and perimeter of shapes (incl. compound shapes.)**Fractions**: Addition, subtraction and multiplying.**Statistics**: Averages. | **Number and place value**: use of inverse operations, rounding, no. sequences, factors and primes.**Four operations**: daily**Geometry**: types of angles. Properties of 2D and 3D shapes.**Measure**: measuring angles. Areas of complex shapes, include triangles and parallelograms.**Fractions**: Addition, subtraction and multiplying.Mental maths strategies and puzzles. | **Number and place value**: No. sequences, factors and primes.**Four operations**: daily**Geometry**: Properties and classification of 2D and 3D shapes. Co-ordinates. To calculate missing angles in shapes. Translations and reflections of shapes. **Measure**: conversions of measure (metric and imperial)**Fractions**: Addition, subtraction, multiplying and dividing. Equivalent FDP..**Statistics**: use, interpret and draw pie charts. Revisit averages.**Ratio and proportion**.Multi-step word problems. | Consolidation of all previous areas. Arithmetic and reasoning daily.Volume. | Consolidation and extension of all topic areas. Transition Maths to cover those areas highlighted by DLS – e.g. Time, fractions, word problems, ratio/proportion and algebra.KS3 topics:Circle theories, volume, Pythagoras, scatter graphs, surface area, square and cube roots.Mini-Enterprise programme – basic accounts. |