Dosthill Primary Academy Mathematics Long Term Plan 2021-22

Key:

Green – expected steps   **Red** – Steps from year below   **Blue** – New steps.

		Year One	Year Two	Year Three	Year Four	Year Five	Year Six
Autumn 1 (Week 1-7)		**Number:** Place value within 10 • Count objects to 10 • Count forwards to 10 • Count backwards from 10 • Count one more for numbers within 10 • Count one less for numbers within 10 • Count one more one less Compare up to 10 objects • Introduce and = for numbers within 10 • Compare numbers within 10 • Order up to 10 objects • Order numbers up to 10 • Ordinal numbers • The number line from 0 to 10	**Number :** Place Value within 100 Count forwards and backwards within 20 Tens and Ones within 20 Counting forwards and backwards within 50. Tens and Ones with 50. Compare numbers within 50. Count objects to 100 and read and write numbers in numerals and words. Represent numbers to 100. Tens and ones with a part whole Model. Tens and ones with a part-whole model Tens and ones using addition Use a place value chart Compare Objects Compare numbers Order objects and numbers. Count in 2s, Count in 5s Count in 10s Count in 3s	**Number:** Place Value within 1000 Represent numbers to 100 Tens and ones using addition Hundreds Represent numbers to 1000 100's, 10's and 1's Number line to 1000 Find 1, 10, 100 more or less Compare objects Compare numbers Order numbers Count in 50's	**Number:** Place Value within 10,000 Numbers to 1000 Find 1, 10, 100 more or less Roman Numerals to 100 Round to the nearest 10, 100 & 1000 Count in 25s Negative numbers	**Number:** Place Value within 100,000 Rounding to nearest 10 and 100 Roman numerals to 1000 Count ,order and round Numbers to 10,000, 100,000 and 1 million. Counting in 10s, 100s, 1000s, 10,000s and 100,000s. Negative numbers	**Number:** Place value within 10,000,000 Numbers to 100,000 Numbers to ten million Compare and order any number Round numbers to 10, 100 and 1000 Round any number Negative numbers
							Number: Four Operations Inverse operations Multi- step addition and subtraction problems Multiply 2 and 3- digits by 2- digits Multiply up to a 4- digit number by a 2- digit number Divide 4- digits by 1- digit Division with remainders Short division Long division Common factors and multiples Primes to 100 Squares and cubes Order of operations

			Number: Addition and Subtraction Number bonds to 100 10 more/less Add subtract 2 digit numbers from a 2 digit number	**Number:** Addition and Subtraction: Add and subtract multiples of 100 Add a 2 and 1- digit number – crossing 10 Add and subtract 2 digit from a 3 digit Add and subtract 3 digit numbers from 3 digit numbers. Subtract 1- digit number from a 2- digit number- crossing 10. Estimate answers to calculations. Check answers.	**Number:** Addition and Subtraction Add and subtract 1s, 10s, 100s and 1000s. Add and subtract 4 digit numbers Efficient subtraction	**Number:** Addition and Subtraction Add and subtract 4 digits or more using column method. Inverse operations Multi-step addition and subtraction problems	**Position and Direction** The first quadrant Four quadrants Translations Reflections
Autumn (1-7)		**Number:** Addition and Subtraction within 10 **Arithmetic focus:** **Number bonds to 10**			**Measurement:** Length and Perimeter Equivalent lengths	Statistics Interpret charts Comparison, sum and difference	**Number:** Fractions Equivalent fractions Improper fractions and mixed numbers

		• Fact families - addition facts • Find number bonds for numbers within 10 • Systematic methods for number bonds within 10 • Number bonds to 10 • Compare number bonds • Addition - adding together • Addition - adding more • Finding a part • Subtraction - taking away - crossing out • Subtraction - taking away - using the symbol • Subtraction - find a part • Fact families - the 8 facts • Subtraction - counting back • Subtraction - finding the difference	**Measurement:** Money Recognise coins and notes Count coins and notes Find Total/difference Find change **Number:** Multiplication and Division Using the x sign, arrays 2, 5 and 10 timestable	**Number:** Multiplication and Division Multiply by 2 and 5. Make equal groups. Multiply and divide by 3, 4 and 8.	Add and subtract lengths Measure perimeter Kilometres Perimeter of rectilinear shapes. **Number:** Multiplication and Division Multiply and divide by 10 and 100 Multiply and divide by 1 and 0 Multiply and divide by 3. Multiply and divide by 6, 7 and 9	Read, interpret and draw line graphs Two way tables Timetables **Number:** Multiplication and Division Multiply and divide by 10 and 100 Multiples, factors and common factors Prime, square and cubed numbers Multiply and divide by 10, 100 and 1000 Perimeter and Area Perimeter on a grid Perimeter of rectangles and rectilinear shapes Measure and calculate Perimeter Area of rectangles	Simplify fractions Fractions on a number line Add and subtract Fractions Multiply and divide fractions by integers Multiply fractions by fractions Four rules with fractions Fraction of an amount **Number:** Decimals Decimals to 2dp Thousandths Three decimal places Multiply and divide by 10, 100 and 1000 Multiply and divide decimals by integers Decimals as fractions Fractions as decimals **Number:** Percentages Fractions to percentages Equivalent FDP Order FDP Percentage of an amount Percentage – missing values
		Geometry • Recognise and name 3-D shapes • Sort 3-D shapes				

		• Recognise and name 2-D shapes • Sort 2-D shapes					

| Spring 1-7 | | **Place Value (within 20)**
• Count forwards and backwards and write numbers to 20
• Count one more one less
• Compare groups of objects
• Compare numbers
• Order groups of objects
• Order numbers | **Number:**
Multiplication and Division
Make doubles
Divide by 2, 5 and 10 | **Number:**
Multiplication and Division
Consolidate 2, 4 and 8 times tables.
Multiply 2 digits by 1 digit
Divide 2 digits by 1 digit | **Number:**
Multiplication and Division
Multiply 2- digits by 1- digit
11 and 12 x table
Multiply 3 numbers
Factor pairs
Multiply and divide 2 digit by 1 digit
Multiply and divide 3 digits by 1 digit
Divide 2- digits by 1- digit | Area of compound shapes
Area of irregular shapes

Number:
Multiplication and Division
Multiply 2 and 3- digits by 1- digit
Multiply and divide 4 digits by 1 digit
Multiply 2, 3 and 4 digit numbers by 2 digits
Divide 2 and 3- digits by 1- digit
Divide with remainders | **Measures:**
Converting Units
Metric measures
Convert and calculate with Metric measures
Miles and Kilometres
Imperial measures |
| | | **Addition and Subtraction within 20.**
Add by counting on within 20
• Add by making 10
• Subtraction - not crossing 10
• Subtraction - not crossing 10 (counting back)
• Subtraction - crossing 10 (1)
• Subtraction - crossing 10 (2)
• Related fact | **Statistics**
Tally charts
Pictograms
Bar charts
Tables
Block diagrams | **Measurement:** Money
Count in pounds and pence
Convert pounds and pence
Add and subtract money

Measurement: Time
¼ past, to
Telling time to the 5 minutes | **Measurement:**
Area
Counting squares
Making shapes
Comparing area | **Number:** Fractions
Equivalent fractions
Fractions greater than 1
Improper fractions to mixed numbers | **Measures:** Area, Perimeter and Volume
Shapes – same area
Area and perimeter
Area of a triangle
Area of a parallelogram
Volume – counting cubes
Volume of a cuboid

Ratio
Ratio and Fractions
Calculating Ratio
Using and calculating scale factors
Ratio and proportion |

		Length and Height ●Compare lengths and heights ●Measure Length Adding and subtracting lengths problems			**Number**: Fractions Unit and non- unit fractions Tenths **Equivalent fractions** Fractions greater than 1 Count in Fractions Add and subtract 2 fractions	Mixed numbers to improper fractions Compare and order fractions greater/less than 1. Fractions of a quantity	**Angles** Draw lines and angles Measure with a protractor Calculate angles Angles on a straight line and around a point Vertically opposite angles Angles in a triangle Missing angles Angles in special quadrilaterals Angles in regular polygons Draw shapes accurately Draw nets of 3d shapes
Spring 2	**Week 1 -6**	Number: Place Value within 50 • Counting forwards and backwards within 50 • One more one less	**Geometry**: Properties of shapes Counting properties of 2d and 3d shapes Lines of symmetry Sort 2 and 3d shapes Make patterns with 2d shapes Make patterns with 3d shapes. **Number**: Fractions Recognise ½, ¼, 1/3, and ¾ Equivalent Fractions Count in fractions	**Measurement**: Length and Perimeter Measure and compare lengths Equivalent lengths m & cm, mm & cm Add and subtract lengths Measure and calculate Perimeter **Number**: Fractions Half, quarter and thirds.	Fractions of a set of objects Subtract from whole amounts Calculate fractions of a quantity. **Number**: Decimals Recognise tenths and hundredths	Add and subtract fractions Add and subtract mixed numbers Add 3 or more fractions	**Statistics** Read, interpret and draw line graphs Circles Read, draw and interpret Pie charts Pie charts with percentages The mean **Algebra** Find a rule – one step Find a rule – two step Forming expressions Substitution Formulae Forming equations

			Problem solving with fractions	Unit and non-unit fractions Tenths Tenths as decimals Fractions on a numberline Count in fractions	Tenths and hundredths as decimals Divide 1 or 2 digit numbers by 10 or 100		Solving simple step equations Solve two steps equations Find pair of values Enumerate possibilities
						Number: Decimals and Percentages Decimals up to 2dp Decimals as fractions Understand thousandths Thousandths as a decimal Order, round and compare decimals Understand percentages Percentages as fractions and decimals Equivalent F,D and P.	**Revision**
Summer 1 **(Week 1- 7)**	**Number**: Multiplication and Division Count in 2's and 5's Count in 10s Make equal groups	**Measurement**: Length and Height Introduce mass and weight Measure mass Measure length in cm and M. Compare and order lengths Use four operations with length	**Number**: Fractions Equivalent Fractions Fractions of sets of objects Order Fractions Add Fractions Subtract Fractions	**Number**: Decimals Bonds to 10 and 100 Make a whole Write, compare and order decimals Round decimals Halves and quarters	**Number**: Decimals Adding and subtracting Decimals within 1 Adding and subtracting decimals with the same and different decimal places Add and subtract wholes and decimals Decimal sequences	**Revision**
							Revision
	Number: Fractions Find ½	**Geometry**: Position and Direction	**Measurement**: Time O'clock and half past	**Measurement**: Money			**Investigations and Problem-solving**

			Find ¼	Describing movement and turns Making patterns with shapes **Measurement**: Time Telling time to hour and half hour Writing time Hours and days Durations of times	Quarter to and quarter past Telling the time to 5 minutes Telling the time to the minute Using am and pm 24 hour clock Measuring time in seconds	Add and subtract money Pounds and pence Ordering money Estimating money Four operations	Multiply and divide decimals by 10, 100 and 1000. **Geometry**: Properties of shapes Measuring angles with degrees and using a protractor Drawing lines and angles accurately	
	Summer 2(Week 1-7)	**Geometry**: Position and Direction Describe turns Describe Position **Number**: Place value within 100 Counting to 100 Partitioning numbers **Measurement**: Money Recognise coins & notes. Counting in coins	**Measurement**: Capacity and Mass Measure mass in g/kg Measure volume in ml/l	**Geometry**: Properties of shapes Turns and angles Right angles Horizontal and vertical Parallel and perpendicular Make 3d shapes	**Measurement**: Time 5 minute intervals 1 minute intervals Am and pm Hours, minutes and seconds Years, months, weeks and days Analogue-digital 12 and 24 hours.	Identify angles Compare and order angles Calculating angles on a straight line and around a point Calculate length and angles in shapes Regular and irregular polygons	**Transition to High School unit** **Real life Maths**
			Measurement: Time Telling time the time to the half hour Telling the time to the hour O clock and half past Quarter to and quarter past Telling time to 5 mins Writing time Hours and days Find durations of time Compare durations of time	**Measurement**: Mass and Capacity Compare mass and volume Measure Mass Measure Capacity Add and subtract Mass Add and subtract Capacity. Temperature.	**Statistics** Interpret charts Comparison, sum and difference Line Graphs	**Position and Direction** Describe position Draw on a grid Position in the first quadrant Reflection Reflection with coordinates Translation Translation with coordinates Line of symmetry Symmetric figure	

			Measurement: Temperature	Mental Maths	Geometry: Properties of shapes	Measurement:
			Read different scales on a thermometer		Turns and angles Right angles in shapes Compare and order angles Triangles Quadrilaterals Lines of symmetry	Converting Units Kilograms and Kilometres Milligrams and Millilitres Metric units Imperial units Converting units of time Timetables
		Measurement: Time Time to the hour and ½ hour.		Measurement: Money Adding and subtracting Money Give change	Position and Direction Describe position Draw and move on a grid Describe a movement on a grid.	Measurement: Volume Compare volume Estimate volume Estimate capacity