Wylye Valley
Primary School

Love Care Respect

To aspire to being outstanding in everything we do, by always aiming higher.

"Let your light shine in all you say and do."

Matthew 5:16

Maths Overview - Years 5 and 6

Teaching sequence

	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12
Autumn	**Number: Place Value**			**Number: Addition and Subtraction**		**Number: Multiplication and Division**			**Geometry: Properties of Shape**		**Geometry: Position and Direction**	**Assessment**
Spring	**Number: Fractions**		**Measurement: Perimeter, Area and Volume**		**Number: Fractions**		**Number: Percentages and Decimals**		**Number: Ratio**	**Statistics**		**Assessment**
Summer	**Measurement: Converting Units**		**Measurement: Time**		**Number: Algebra**	**Number: Addition and Subtraction Multiplication and Subtraction Consolidation**			**Measurement: Consolidation**			**Assessment**

National Curriculum Targets for Year 5 and 6

Place Value

Year 5

Read and write, order and compare numbers to 1 000 000 (1 million) and determine the value of each digit

Count forwards and backwards in steps of powers of 10 for any given number up to 1,000,000.

Year 6

Compare and order numbers beyond 1000

Understand the value of each digit in a 4 digit number

Say 1000 more or less than any given number

Count backwards through zero to include negative numbers

Round any whole number to the nearest 10, 100 or 1000

Read Roman Numerals from 1-100

Addition and Subtraction

Year 5

Add and subtract whole numbers with more than 4 digits using column method

Use rounding to check answers to calculations

Add and subtract numbers mentally with increasingly large numbers

Multiplication and Division

Year 5

Use a formal vertical method to multiply 4 digit numbers by a 1 or 2 digit number

Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000

Identify multiples and factors, including common factors of two numbers

Establish whether a number up to 100 is prime and recall prime numbers up to 19

Divide 4 digit numbers by a 1 digit number using short division and interpret remainders

Year 6

Use long multiplication to multiply THTU or HTU x TU

Multiply numbers with up to 2 decimal places by whole numbers

Divide numbers up to 4 digits by a 2 digit whole number

Multiply and divide numbers by 10, 100 and 1000 with answers up to 3 decimal places

Fractions, Decimals and Percentages

Year 5

Identify, name and write equivalent fractions of a given fraction represented visually including 1/10 and 1/100

Add and subtract fractions with the same denominator including recognising and converting improper fractions to mixed numbers

Compare and order fractions where denominations are in the same fraction family

Multiply proper fractions and mixed numbers by a whole numbers

Recognise and convert improper fractions to mixed numbers

Read and write decimal numbers as fractions e.g. 0.71 = 71/100

Recognise and understand % as part of 100 and write % as a fraction and a decimal

Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents

Read, write, order and compare numbers that have a mixture of 1, 2 and 3 decimal places

Round decimals with 2dp to the nearest whole number and to 1dp

Year 6

Simplify fractions using common factors

Use common multiples to express fractions in the same denomination

Add and subtract fractions and mixed numbers with different denominations

Compare and order any set of fractions, with fractions below 1

Multiply pairs of proper fractions and write the answer in its simplest form e.g. ¼ x ½ = 1/8

Divide proper fractions by a whole number e.g. 1/3 ÷ 2 = 1/6

Recall and use equivalences between simple fraction, decimals and %

Calculate more complex decimal equivalents such as 3/8 = 0.375 using understanding of the equivalence between fractions and decimals

Solve problems involving the calculations of % e.g. measures 15% of 360 and the use of % for comparison

Properties of Numbers

Year 6

Explore the order of operations using terms

Identify common factors, common multiples and prime numbers, with increasingly large numbers

Problem Solving

Year 5

Solve multi-step problems involving a combination of any of the four operations

Use all four operations to solve equivalence statements, eg. 13 + 24 = 12 + 25

Year 6

Solve multi-step word problems and investigations involving all 4 operations from a range of contexts

Solve problems which require answers to be rounded to specified degrees of accuracy

Generate and describe linear number sequences

Express missing number problems algebraically

Measurement

Year 5

Measure and calculate the perimeter and area of shapes that need to be divided into rectangles (composite rectilinear shapes) in cm ² and m²

Calculate and compare the area of rectangles using cm ² and m²

Estimate the area of irregular shapes

Convert between units of measure; km to m, Kg to g, litres to ml, p to £

Solve problems which involve converting between units of time

Year 6

Investigate relationships between area and perimeter e.g. shapes with the same area can have different perimeters and vice versa

Calculate the area of parallelograms and triangles

Calculate, estimate and compare volume of cubes and cuboids using standard units e.g. cm^3

Convert between miles and km

Solve problems involving the calculation and conversion of units of measure using decimal notation up to 3 dp

Solve problems involving similar shapes where the scale factor is known or can be found

Times Tables

Year 5

Recall quickly all the multiplication and division facts for tables up to 12 x 12 and can use them confidently

Recognise and use square numbers and cubed numbers and the notation for both

Statistics

Year 5

Complete, read and interpret information presented in tables and other graphical representations including timetables

Solve comparison, sum and difference problems using information presented in line graphs

Year 6

Calculate and interpret the mean as an average

Interpret and construct pie charts, line graphs and use these to solve problems

Shape

Year 5

Identify 3D shapes from 2D representations

Identify regular and irregular shapes using my knowledge of length of sides and angles

Find missing lengths and angles in rectangles using my knowledge of related facts

Identify and compare acute, obtuse and reflex angles

Draw and measure given angles in degrees

Calculate missing angles on a straight line (180°) or at a point (360°) or within a right angle (90°)

Year 6

Accurately draw 2D shapes using given angles and dimensions

Recognise, describe and build simple 3D shapes including making nets

Compare and classify geometric shapes based on their size and properties and find unknown angles in any triangle, quadrilateral or regular polygon

Recognise vertically opposite angles and use this to calculate missing angles

Illustrate and name parts of a circle including radius, diameter and circumference

Position and Direction

Year 5

Identify, describe and draw the position of a shape on a grid after a reflection on a line parallel to the axis

Identify, describe and draw the position of a shape on a grid after a translation

Year 6

Describe positions on the four co-ordinate grid (all four quadrants)

Draw and translate simple shapes on the co-ordinate plane and reflect them in the axis

Monday – Arithmetic Day – Every Week

Term 1	**MMS5 Arithmetic 1:** **Block 1** • Write two or three 4 digit whole numbers vertically and calculate (with more than one tricky column) using addition and subtraction. **Block 2** • Write two or three 4 digit decimal numbers vertically, with up to three decimal places, and calculate with more than one tricky column, using addition and subtraction.
Term 2	**MMS5 Arithmetic 1** **Block 4** • Use a grid for long multiplication with up to 3 digit by 2 digit whole or decimal numbers.
Term 3	**MMS6 Arithmetic 2** **Block 1** • Use a short method for division up to 3 digits by 2 digit whole numbers, including remainders.
Term 4	**MMS6 Arithmetic 2** **Block 2** • Convert a vulgar fraction to a percentage • Convert a percentage to a decimal fraction • Convert a decimal fraction to a percentage
Term 5	• Consolidation and investigations
Term 6	• Consolidation and investigations