St. Margaret's C.E. Junior School
Year 4 Maths Curriculum Overview

AUTUMN	SPRING	SUMMER
Number: place value	**Number: multiplication and division**	**Decimals**

AUTUMN

Number: place value
- Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) (NPV 1) (NPV 2)
  - ➢ Represent numbers to 1,000
  - ➢ Partition numbers to 1,000
  - ➢ Number line to 1,000 (R) (NPV 4)
  - ➢ Thousands
  - ➢ Represent numbers to 10,000
  - ➢ Partition numbers to 10,000
  - ➢ Flexible partitioning of numbers to 10,000
- Find 1,000 more or less than a given number (NPV 3)
  - ➢ Find 1, 10, 100, 1,000 more or less
  - ➢ Number line to 10,000
  - ➢ Estimate on a number line to 10,000
- Order and compare numbers beyond 1,000 (NPV 3)
  - ➢ Compare numbers to 10,000
  - ➢ Order numbers to 10,000
- ***(PS) logical reasoning**
- 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 (NPV 3)
- Round any number to the nearest 10, 100 or 1,000 (NPV 3)
- Identify, represent and estimate numbers using different representations (NPV 2)
- Count backwards through zero to include negative numbers (NPV 3) (YEAR 5)
- **Solve number and practical problems** that involve all of the above and with increasingly large positive

SPRING

Number: multiplication and division
- Recall and use multiplication and division facts for multiplication tables up to 12 × 12 (x and divide by 6, 9, 7) (NF 1) (NF 2) (MD 2)
- Count in multiples of 6, 7, 9, 25 (NPV 3) and 1,000
- Recognise and use factor pairs and commutativity in mental calculations (MD 1) (MD 2)
  - ➢ Factor pairs
  - ➢ Use factor pairs
- ***(PS) Drawing diagrams**
- 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 (MD 1)
- Convert between different units of measure [for example, kilometre to metre]
- Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 (Y5) (NPV 1) (NF 3)
  - ➢ Multiply by 10
  - ➢ Multiply by 100
  - ➢ Divide by 10
  - ➢ Divide by 100
- 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 (MD 3) ***(PS) Working backwards**
  - ➢ Related facts – multiplication and division
  - ➢ Informal written methods for multiplication
- Multiply two-digit and three-digit numbers by a one-digit number using formal written layout (MD 2) (MD 3)

SUMMER

Decimals
- Recognise and write decimal equivalents of any number of tenths or hundredths
- 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
  - ➢ Make a whole with tenths
  - ➢ Make a whole with hundredths
- Compare numbers with the same number of decimal places up to two decimal places
  - ➢ Partition decimals
  - ➢ Flexibly partition decimals
  - ➢ Compare decimals
  - ➢ Order decimals
- ***(PS) Looking for patterns**
- Round decimals with one decimal place to the nearest whole number
  - ➢ Round to the nearest whole number
- Recognise and write decimal equivalents to 1/4, 1/2, ¾
- **Solve simple measure and money problems** involving fractions and decimals to two decimal places
  - ➢ Halves and quarters as decimals

numbers
*(PS) Acting out/working backwards

➢ Multiply a 2-digit number by a 1-digit number
➢ Multiply a 3-digit number by a 1-digit number
- Divide 2 digits by 1 digit (MD 3) (R)
- 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 (MD 2)
  ➢ Divide a 2-digit number by a 1-digit number (1)
  ➢ Divide a 2-digit number by a 1-digit number (2)
  ➢ Divide a 3-digit number by a 1-digit number
- **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 (MD 3) ***(PS) Organised list**
  ➢ Correspondence problems
  ➢ Efficient multiplication

AUTUMN	SPRING	SUMMER
Number: addition and subtraction	**Measurement: length and perimeter**	**Measurement: Money**

AUTUMN

Number: addition and subtraction
- Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate
  - ➤ Add and subtract 1s, 10s, 100s and 1,000s
  - ➤ Add up to two 4-digit numbers - no exchange
  - ➤ Add two 4-digit numbers – one-exchange
  - ➤ Add two 4-digit numbers– more than one exchange
  - ➤ Subtract two 4-digit numbers - no exchange
  - ➤ Subtract two 4-digit numbers – one-exchange
  - ➤ Subtract two 4-digit numbers – more than one exchange
- Efficient methods of addition/subtraction
  - ➤ Efficient subtraction
- Estimate and use inverse operations to check answers to a calculation
  - ➤ Estimate answers
- **Solve addition and subtraction two-step problems** in contexts, deciding which operations and methods to use and why ***(PS) Looking for patterns/working backwards/drawing a diagram**
  - ➤ Checking strategies

SPRING

Measurement: length and perimeter
- Convert between different units of measure [for example, kilometre to metre; hour to minute]
  - ➤ Measure in kilometres and metres
  - ➤ Equivalent lengths (kilometres and metres)
- Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres (G 2) (R)
- Add & subtract lengths (R)
- Equivalent lengths- m, mm, cm (R)
  - ➤ Perimeter on a grid
  - ➤ Perimeter of a rectangle
  - ➤ Perimeter of rectilinear shapes
  - ➤ Find missing lengths in rectilinear shapes
  - ➤ Calculate perimeter of rectilinear shapes
  - ➤ Perimeter of regular polygons
  - ➤ Perimeter of polygons
- ***(PS) Working backwards/drawing a table**

SUMMER

Measurement: Money
- Convert pounds & pence (R)
- Add & subtract money (R)
- Find change (R)
- Estimate, compare and calculate different measures, including money in pounds and pence
  - ➤ Write money using decimals
  - ➤ Convert between pounds and pence
  - ➤ Compare amounts of money
  - ➤ Estimate with money
  - ➤ Calculate with money
- **Solve simple measure and money problems** involving fractions and decimals to two decimal places
- ***(PS) Trial & improvement/Estimation**
  - ➤ **Solve problems** with money

Measurement: Time
- Telling the time to 5 mins & to the nearest min (R)
- Using am/pm & 24hr clock (R)
- Convert between different units of measure [hour to minute]
- Read, write and convert time between analogue and digital 12- and 24-hour clocks
  - ➤ Years, months, weeks and days
  - ➤ Hours, minutes and seconds
  - ➤ Convert between analogue and digital times
  - ➤ Convert to the 24-hour clock
  - ➤ Convert from the 24-hour clock
- **Solve problems** involving converting from hours to minutes; minutes to seconds; years to months; weeks to days
- *** (PS) Drawing a table/drawing a diagram**

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AUTUMN	SPRING	SUMMER
Measurement: Area	**Fractions**	**Geometry: properties of shapes**
• Find the area of rectilinear shapes by counting squares ➢ What is area? ➢ Counting squares ➢ Make shapes • Estimate, compare and calculate different measures ➢ Compare area ***(PS) Open-ended**	• Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators (Y3) • Unit & non-unit fractions (F 1) (R) • Count in tenths (F 1) (R) ➢ Understand the whole ➢ Count beyond 1 ➢ Partition a mixed number ➢ Number lines with mixed numbers ➢ Compare and order mixed numbers ➢ Understand improper fractions ➢ Convert mixed numbers to improper fractions (F 2) ➢ Convert improper fractions to mixed numbers (F 2) • Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten • Recognise and show, using diagrams, families of common equivalent fractions (F 1) (R) ➢ Equivalent fractions on a number line ➢ Equivalent fraction families • Add and subtract fractions with the same denominator (F3) (R) ➢ Add two or more fractions ➢ Add fractions and mixed numbers ➢ Subtract two fractions ➢ Subtract from whole amounts ➢ Subtract from mixed numbers • **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	• Identify acute and obtuse angles and compare and order angles up to two right angles by size (G 2) ➢ Understand angles as turns ➢ Identify angles ➢ Compare and order angles • Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes (G 2) ➢ Triangles ➢ Quadrilaterals ➢ Polygons • Identify lines of symmetry in 2D shapes presented in different orientations (G 3) ➢ Lines of symmetry • Complete a simple symmetric figure with respect to a specific line of symmetry (G 3) ➢ Complete a symmetric figure

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AUTUMN	SPRING	SUMMER

AUTUMN

Number: multiplication and division

- Recall multiplication and division facts for multiplication tables up to 12 × 12 (NF 1) (NF 2) (MD 1) (MD 2)
- Multiply by 3
  - ➢ Multiples of 3
  - ➢ Multiply and divide by 6
  - ➢ 6 times-table and division facts
  - ➢ Multiply and divide by 9
  - ➢ 9 times-table and division facts
  - ➢ The 3, 6 and 9 times-tables
  - ➢ Multiply and divide by 7
  - ➢ 7 times-table and division facts
  - ➢ 11 times-table and division facts
  - ➢ 12 times-table and division facts
- 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 (MD 2)
  - ➢ Multiply by 1 and 0
  - ➢ Divide by 1 and itself
  - ➢ Multiply 3 numbers
- *(PS) Working backwards/creating an organised list

SPRING

Decimals

- Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing 1-digit numbers or quantities by 10 (Y3)
- Recognise and write decimal equivalents of any number of tenths or hundredths
  - ➢ Tenths as fractions
  - ➢ Tenths as decimals
  - ➢ Tenths on a place value chart
  - ➢ Tenths on a number line
- 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
  - ➢ Divide a 1-digit number by 10
  - ➢ Divide a 2-digit number by 10
- Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten
  - ➢ Hundredths as fractions
  - ➢ Hundredths as decimals
  - ➢ Hundredths on a place value chart
  - ➢ Divide a 1- or 2-digit number by 100
- Solve simple measure and money problems involving fractions and decimals to two decimal places.
- Convert between different units of measure [for example, kilometre to metre]
- Solve simple measure problems involving fractions and decimals to two decimal places

SUMMER

Statistics

- Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs (NPV 4)
  - ➢ Interpret charts
  - ➢ Comparison, sum and difference
  - ➢ Interpret line graphs
  - ➢ Draw line graphs
- Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs (NPV 4)

Geometry: position & direction

- Describe positions on a 2D grid as coordinates in the first quadrant (G 1)
- Plot specified points and draw sides to complete a given polygon (G 1)
- Describe movements between positions as translations of a given unit to the left/right and up/down (G 1)
  - ➢ Describe position using coordinates
  - ➢ Plot coordinates
  - ➢ Draw 2-D shapes on a grid
  - ➢ Translate on a grid
  - ➢ Describe translation on a grid

White Rose Maths Hub & **Power Maths** schemes of learning are used to support medium term planning and as exemplification for maths objectives.

R- RECAP of previous objectives
➢ WRH Small Steps
Small steps can be combined into one lesson.
* (PS) PROBLEM SOLVING opportunities

DfE- Ready to progress criteria
NF- Number Facts
NPV- Number & Place Value

AS- Addition & Subtraction
MD- Multiplication & Division
F- Fractions
G- Geometry
REMEMBER to complete **pre & post learning assessments.**
Only move on when the majority of pupils are secure in the objective.