**St Peter’s C of E (Aided) Primary School Medium Term Maths Planning Overview Year 4/5 Medium Term Planning Autumn Term**

*Blue and Italics are used to highlight the younger year group*

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| Date/Weeks | Cross Curricular Links | Topic | Curriculum Objectives |
|  |  | *Number, place*  *value and rounding*  Place value and rounding off | *● To recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones).*  *● To identify, represent and estimate numbers using different representations.*  *● To order and compare numbers beyond 1000.*  *● To round any number to the nearest 10, 100 or 1000.*  *● To count in multiples of 6, 7, 9, 25, 1000.*  *● To find 1000 more or less than a given number.*  *●*To read, write, order and compare numbers at least to 1,000,000 and determine the value of each digit.  *●*To count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000. |
|  |  | *Mental addition and subtraction*  Mental and written addition and subtraction of large numbers | *● To add and subtract numbers with up to four digits using the efficient written methods of columnar addition and subtraction where appropriate.*  *● To solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.*  *● To estimate and use inverse operations to check answers to a calculation.*  *●*To add and subtract whole numbers with more than 4 digits, including using efficient written methods (columnar addition and subtraction).  *●*To add and subtract numbers mentally with increasingly large numbers.  *●*To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. |
|  |  | *Multiplication and division facts*  Multiples, factors and prime numbers | *● To recall multiplication facts for multiplication tables up to 12 × 12.*  *● To 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.*  *● To solve problems involving multiplying and adding, including using the distributive law and harder multiplication problems such as which n objects are connected to m objects.*  *● To 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.*  *● To recognise and use factor pairs and commutativity in mental calculations.*  *● To multiply two-digit and three-digit numbers by a one-digit number using formal written layout.*  *●*To identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.  *●*To multiply and divide whole numbers and those involving decimals by 10, 100 and1000.  *●*To solve problems involving multiplication and division where larger numbers are used by decomposing them into factors.  *●*To know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.  *●*To establish whether a number up to 100 is prime and recall prime numbers up to 19. |
|  |  | *Fractions*  Fractions and decimals: tenths and hundredths | *● To count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten.*  *● To 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.*  *● To recognise and show, using diagrams, families of common equivalent fractions.*  *● Find the effect of dividing a one or two digit number by 10 or 100 identifying the value of the digits in the answer as ones, tenths and hundredths*  *●*To compare and order fractions whose denominators are all multiples of the same number.  *●*To identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.  *●*To read and write decimal numbers as fractions (for example, 0.71 = 71/100).  *●*To read, write, order and compare numbers with up to three decimal places.  *●*To read and write decimal numbers as fractions (for example, 0.71 = 71/100).  *●*To round decimals with two decimal places to the nearest whole numbers and to one decimal place.  *●*To recognise and use thousandths and relate them to tenths, hundredths and decimals equivalents.  *●*To solve problems involving number up to three decimal places. |
|  |  | Mental and written methods for multiplication and division. | *●*To multiply and divide numbers mentally drawing upon known facts.  *●*To multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.  *●*To solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.  *●*To multiply numbers up to 4 digits by a one- or two-digit number using an efficient written method, including long multiplication for two-digit numbers.  *●*To divide numbers up to 4 digits by a one-digit number using the efficient written method of short division and interpret remainders appropriately for the context. |
|  |  | *Measures*  Units of measure including length perimeter and area | *● To convert between different units of measure (for example, kilometre to metre; hour to minute).*  *● To measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.*  *● To solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.*  *● To estimate, compare and calculate different measures, including money in pounds and pence.*  *●*To convert between different units of measure (for example, kilometre and metre; metre and centimetre; centimetre and millimetre; kilogram and gram; litre and millilitre).  *●*To understand and use equivalences between metric units and common imperial units such as inches, pounds and pints.  *●*To use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling.  *●*To measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.  *●*To calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes |
|  |  | *Time* | *● To read, write and convert time between analogue and digital 12- and 24-hour clocks.*  *● To solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.* |
|  |  | *Geometry: properties of shapes*  Circles and angles | *● To compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.*  *● To identify lines of symmetry in 2D shapes presented in different orientations.*  *● To complete a simple symmetric figure with respect to a specific line of symmetry.*  *● To describe positions on a 2D grid as coordinates in the first quadrant.*  *● To plot specified points and draw sides to complete a given polygon.*  *● To compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.*  *● To identify acute and obtuse angles and compare and order angles up to two right angles by size.*  *●*To know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles  *●*To draw given angles, and measure them in degrees (º).  *●*To identify angles at a point and one whole turn (total 360º) angles at a point on a straight line and 1/2 a turn (total 180º) other multiples of 90º.  *●*To distinguish between regular and irregular polygons based on reasoning about equal sides and angles.  *●*To use the properties of rectangles to deduce related facts and find missing lengths and angles.  *●*To identify 3D shapes including cubes and cuboids from 2D representations. |
|  |  | *Data handling and time*  Pie charts, Tables and bar charts | *● To interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.*  *● To solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and simple line graphs.*  *●*To complete, read and interpret information in tables, including timetables. |
| Assess and review | | | ● To assess and review the half-term’s work. |

**St Peter’s C of E (Aided) Primary School Medium Term Maths Planning Overview Year 4/5 Medium Term Planning Spring Term**

*Blue and Italics are used to highlight the younger year group*

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| Date/Week | Cross Curricular Links | Topic | Curriculum Objectives |
|  |  | *Number, place value and rounding*  Negative numbers, and solving problems involving numbers | *● To find 1000 more or less than a given number.*  *● To recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones).*  *● To order and compare numbers beyond 1000.*  *● To identify, represent and estimate numbers using different representations.*  *● To round any number to the nearest 10, 100 or 1000.*  *● To solve number and practical problems that involve all of the above and with increasingly large positive numbers.*  *● To read Roman numerals to 100 (I to C) and understand how, over time, the numeral system changed to include the concept of zero and place value.*  *●*To read, write, order and compare numbers at least to 1,000,000 and determine the value of each digit.  *●*To count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000.  *●*To interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero.  *●*To round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000.  *●*To solve number problems and practical problems that involve all of the above. |
|  |  | *Mental and written addition and subtraction* | *● To add and subtract numbers with up to four digits using the efficient written methods of columnar addition and subtraction where appropriate.*  *● To estimate and use inverse operations to check answers to a calculation.*  *● To solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.*  *● To estimate, compare and calculate different measures, including money in pounds and pence.*  *●*To add and subtract whole numbers with more than 4 digits, including using efficient written methods (columnar addition and subtraction).  *●*To add and subtract numbers mentally with increasingly large numbers.  *●*To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.  *●*To use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.  *●*To solve problems involving numbers up to three decimal places.  *●*To add and subtract numbers mentally with increasingly large numbers. |
|  |  | *Mental and written multiplication*  Mental and written multiplication and division | *● To recall multiplication and division facts for multiplication tables up to 12 × 12.*  *● To 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.*  *● To multiply two-digit and three-digit numbers by a one-digit number using formal written layout.*  *● To solve problems involving multiplying and adding, including using the distributive law and harder multiplication problems such as which n objects are connected to m objects.*  *● To recognise and use factor pairs and commutativity in mental calculations.*  *●*To multiply and divide numbers mentally drawing upon known facts.  *●*To multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.  *●*To solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.  *●*To multiply numbers up to 4 digits by a one- or two-digit number using an efficient written method, including long multiplication for two-digit numbers.  *●*To recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3).  *●*To calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes.  *●*To divide numbers up to 4 digits by a one-digit number using the efficient written method of short division and interpret remainders appropriately for the context.  *●*To solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign. |
|  |  | *Fractions* | *● To count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten.*  *● To 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.*  *● To recognise and show, using diagrams, families of common equivalent fractions.*  *● To recognise and write decimal equivalents of any number of tenths or hundredths.*  *● To recognise and write decimal equivalents to 1/4; 1/2; 3/4.*  *● To 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 units, tenths and hundredths.*  *● To round decimals with one decimal place to the nearest whole number.*  *● To compare numbers with the same number of decimal places up to two decimal places.*  *● To solve simple measure and money problems involving fractions and decimals to two decimal places.*  *●*To recognise mixed numbers and improper fractions and convert from one form to the other; write mathematical statements > 1 as a mixed number: 2/5 + 4/5 = 6/5 =11/5.  *●*To add and subtract fractions with the same denominator and multiples of the same number.  *●*To multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.  *●*To recognise the per cent symbol (%) and understand that per cent relates to “number of parts per hundred”, and write percentages as a fraction with denominator hundred, and as a decimal fraction. |
|  |  | Perimeter, area and volume and Mass | *● To convert between different units of measure (kilometre to metre; hour to minute).*  *● To estimate, compare and calculate different measures, including money in pounds and pence.*  *●*To convert between different units of measure (kilometre and metre; metre and centimetre; centimetre and millimetre; kilogram and gram; litre and millilitre).  *●*To understand and use basic equivalences between metric units and common imperial units such as inches, pounds and pints.  *●*To use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling.  *●*To estimate volume and capacity |
|  |  | *Geometry* | *● To compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.*  *● To identify acute and obtuse angles and compare and order angles up to two right angles by size.*  *● To describe positions on a 2D grid as coordinates in the first quadrant.*  *● To describe movements between positions as translations of a given unit to the left/right and up/down.*  *● To plot specified points and draw sides to complete a given polygon.* |
|  |  | *Time* | *● To read, write and convert time between analogue and digital 12- and 24-hour clocks.*  *● To solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.* |
|  |  | *Data Handling*  Line Graphs | *● To interpret and present discrete data using bar charts and continuous data using time graphs.*  *● To solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and simple line graphs.*  *●*To solve comparison, sum and difference problems using information presented in a line graph. |
| Assess and review | | | ● To assess and review the half-term’s work. |

**St Peter’s C of E (Aided) Primary School Medium Term Maths Planning Overview Year 4/5 Medium Term Planning Summer Term**

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| Date/Week | Cross Curricular Links | Topic | Curriculum Objectives |
|  |  | *Place value ideas*  Negative numbers and Roman numerals | *● To count in multiples of 6, 7, 9, 25 and 1000.*  *● To find 1000 more or less than a given number.*  *● To count backwards through zero to include negative numbers.*  *● To recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones).*  *● To order and compare numbers beyond 1000.*  *● To identify, represent and estimate numbers using different representations.*  *● To round any number to the nearest 10, 100 or 1000.*  *● To solve number and practical problems that involve all of the above and with increasingly large positive numbers.*  *●*To count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000.  *●*To interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero.  *●*To round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000.  *●*To solve number problems and practical problems that involve all of the above.  *●*To read numerals to 1000 (M) and recognise years written in Roman numerals. |
|  |  | *Mental and written multiplication and division*  Long multiplication and division | *● To recall multiplication and division facts for multiplication tables up to 12 × 12.*  *● To 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.*  *● To recognise and use factor pairs and commutativity in mental calculations.*  *● To multiply two-digit and three-digit numbers by a one-digit number using formal written layout.*  *● To solve problems involving multiplying and adding, including using the distributive law and harder multiplication problems such as which n objects are connected to m objects.*  *●*To multiply numbers up to 4 digits by a one- or two-digit number using an efficient written method, including long multiplication for two-digit numbers.  *●*To divide numbers up to 4 digits by a one-digit number using the efficient written method of short division and interpret remainders appropriately for the context.  *●*To solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.  *●*To multiply and divide numbers mentally drawing upon known facts.  *●*To identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.  *●*To solve problems involving multiplication and division where larger numbers are used by decomposing them into factors. |
|  |  | *Mental addition and subtraction and measures (use measures as a context for problems)*  Adding and subtracting large and small numbers | *● To estimate and use inverse operations to check answers to a calculation.*  *● To solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.*  *● To estimate, compare and calculate different measures, including money in pounds and pence.*  *● To add and subtract numbers with up to four digits using the efficient written methods of columnar addition and subtraction where appropriate.*  *●*To add and subtract whole numbers with more than 4 digits, including using efficient written methods (columnar addition and subtraction).  *●*To add and subtract numbers mentally with increasingly large numbers.  *●*To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.  *●*To use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.  *●*To solve problems involving numbers up to three decimal places. |
|  |  | *Area and perimeter of rectilinear shapes and capacity*  *2D shape, angles and coordinates*  Volume, time and money  Diagonals and problems involving angles | *● To convert between different units of measure (kilometre to metre; hour to minute).*  *● To measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.*  *● To find the area of rectilinear shapes by counting.*  *● To estimate, compare and calculate different measures, including money in pounds and pence.*  *● To compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.*  *● To identify acute and obtuse angles and compare and order angles up to two right angles by size.*  *● To identify lines of symmetry in 2D shapes presented in different orientations.*  *● To describe positions on a 2D grid as coordinates in the first quadrant.*  *● To describe movements between positions as translations of a given unit to the left/right and up/down.*  *● To plot specified points and draw sides to complete a given polygon.*  *●*To estimate volume (e.g. using 1 cm3 blocks to build cubes and cuboids) and capacity (e.g. using water).  *●*To use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling  *●*To solve problems involving converting between units of time.  *●*To know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles  *●*To draw given angles, and measure them in degrees (º).  *●*To identify:  angles at a point and one whole turn (total 360º)  angles at a point on a straight line and 1/2 a turn (total 180º) other multiples of 90º.  *●*To use the properties of a rectangle to deduce related facts and find missing lengths and angles.  *●*To distinguish between regular and irregular polygons based on reasoning about equal sides and angles. |
|  |  | *Measures* | *● To convert between different units of measure (kilometre to metre; hour to minute).*  *● To measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.*  *● To find the area of rectilinear shapes by counting.*  *● Perimeter to be expressed algebraically as 2(a + b) where a and b are the dimensions in the same unit*  *● To estimate, compare and calculate different measures, including money in pounds and pence.*  *● To read, write and convert time between analogue and digital 12- and 24-hour clocks.*  *● To solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.*  *●*To measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.  *●*To calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes.  *●*To solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. |
|  |  | *Fractions*  Problems involving percentages, fractions and decimals | *● To count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten.*  *● To 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.*  *● To recognise and show, using diagrams, families of common equivalent fractions.*  *● To add and subtract fractions with the same denominator.*  *●*To recognise mixed numbers and improper fractions and convert from one form to the other; write mathematical statements > 1 as a mixed number: 2/5 + 4/5 = 6/5 = 11/5.  *●*To add and subtract fractions with the same denominator and multiples of the same number.  *●*To read, write, order and compare numbers with up to three decimal places.  *●*To read and write decimal numbers as fractions (for example, 0.71 = 71/100).  *●*To recognise and use thousandths and relate them to tenths, hundredths and decimals equivalents.  *●*To round decimals with two decimal places to the nearest whole numbers and to one decimal place.  *●*To recognise the per cent symbol (%) and understand that per cent relates to “number of parts per hundred”, and write percentages as a fraction with denominator hundred, and as a decimal fraction.  *●*To solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 4/5 and those with a denominator of a multiple of 10 or 25. |
|  |  | *Statistics* | *● To interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.*  *● To solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and simple line graphs.*  *●*To complete, read and interpret information in tables, including timetables.  *●*To solve comparison, sum and difference problems using information presented in a line graph. |
| Assess and review | | | ● To assess and review the half-term’s work. |