**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 moneyDiagonals 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. |