**Primary 7 Maths Curriculum – St Andrew’s Primary**

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| Term 1 es and os | Detail | SALs and *learner statements* |
| MNU 2-02a | *I have extended the range of whole numbers I can work with and having explored how decimal fractions are constructed, can explain the link between a digit, its place and its value.*  | **Using knowledge and understanding of the number system, patterns and relationships**

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|  *Zero as a place holder in decimal fractions*  |

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|  *Relationship between fractional numbers, decimal fractions and percentages* I can apply stages listed previously, independently, to a variety of tasks demonstrating that I am secure in my understanding. \*IN ALL WORK, AT ALL LEVELS CHILDREN WILL UNDERSTAND THE IMPORTANCE OF ZERO WHEN READING AND RECORDING NUMBERS.)  |

**Applying numeracy and mathematical skills.**

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|  *Multiples and factors of numbers* *Order of operations* *Complex number sequences Impact of mathematics in our global environment*  |

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| MNU 2-03a | *Having determined which calculations are needed, I can solve problems involving whole numbers using a range of methods, sharing my approaches and solutions with others.*  | **Using knowledge and understanding of the number system, patterns and relationships**

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|  *Choose the appropriate level of accuracy in a given context*  |

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|  *Negative numbers*  |

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|  *Multiples and factors of numbers* *Order of operations* *Complex number sequences Impact of mathematics in our global environment* I can use my knowledge of number bonds to add all numbers, including decimals.I can add mentally within 1000.I can investigate various strategies for subtraction including decimals \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_I can discuss/read the problem independently to identify the information being sought.I can choose which calculation is needed from all given number processes.I can choose appropriately from a wider range of methods to solve problems.I can discuss and present the approaches I have and justify/demonstrate why I have chosen these approaches.I can create numeracy problems for others based on my knowledge of methods.Having determined which calculations are needed, I can solve problems involving whole numbers using a range of methods, sharing my approaches and solutions with others. I can amalgamate the two previous processes into 1 sum. I.e. move the numbers up a column to x by 10 then x by I can multiply by 1000 and beyond, mentally and written, bearing in mind place value.I can multiply decimals by decimals up to 2 decimal places.I can divide numbers by 2 digit numbers using repeated subtraction of bundles of 10 or 100 or more .I can, with support, investigate other methods of long division. I can explore multiplication facts beyond tables.. I can see that multiplication by 2 digits by multiples of 10 ie 20, 30, involves 3 processes ie.69 x 20 = 69 X 10, then x answer by 2 , then add.  Thus 3 sums are needed. 2 processes multiplication and addition.  |

**Applying numeracy and mathematical skills.**  |
| Term 2 es and os | Detail  | SAL |
| MTH 2-05a | Having explored the patterns and relationships in multiplication and division, I can investigate and identify the multiples and factors of numbers. | **Using knowledge and understanding of the number system, patterns and relationships**

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|  *Multiples and factors of numbers*  |

I can use relationships between numbers to simplify calculations e.g. doubling and halving   |
| MTH 2-15a | I can apply my knowledge of number facts to solve problems where an unknown value is represented by a symbol or letter. **MTH 2-15a** | **Using knowledge and understanding of the number system, patterns and relationships**

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|  *Choose the appropriate level of accuracy in a given context* |

I can find the missing numbers and/or operations in more complex statements e.g. 4 ? 7 = 28 I can find the function given the input and outputI can create such complex statements of my own for others to solve.I can collect the terms and work out how many there are of each letter (e.g. 4t + 3s + 2t – s = 6t + 2s), If there is more than one letter.I can simplify an expression and know this doesn’t change the value.**Applying numeracy and mathematical skills.**  |
| MTH 2-03b, 03c | *I have explored the contexts in which problems involving decimal fractions occur and can solve related problems using a variety of methods*. ***MNU 2-03b***Having explored the need for rules for the order of operations in number calculations, I can apply them correctly when solving simple problems.**MTH 2-03c** | **Using knowledge and understanding of the number system, patterns and relationships**

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| *Order of operations*  |

I can read decimal places on a variety of scales accurately. I can estimate using simple decimal fractions when solving practical problems, such as measurement (including time).  I can solve a simple algebraic equation eg. 3y + 5 = 20 I can use brackets to show how I have grouped together helpful numbers. I can demonstrate how I might have to write several steps to show thinking as I work out each part of the calculation. The number and number process skillscontained within **2-01a, 2-03a and b** should be applied to problem solving in a variety of contexts within number, money and measure.  **Applying numeracy and mathematical skills.**  |
| MTH 2-07a, 7b, 7c | *I have investigated the everyday contexts in which simple fractions, percentages or decimal fractions are used and can carry out the necessary calculations to solve related problems.* ***MNU 2-07a*** *I can show the equivalent forms of simple fractions, decimal fractions and percentages and can choose my preferred form when solving a problem, explaining my choice of method.****MNU 2-07b***  I have investigated how a set of equivalent fractions can be created, understanding the meaning of simplest form, and can apply my knowledge to compare and order the most commonly used fractions.**MTH 2-07c** | **Using knowledge and understanding of the number system, patterns and relationships**

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|  *Relationship between fractional numbers, decimal fractions and percentages*  |

I can recognise and use second decimal place eg. 0.25, 3.72 I can recognise the division of shapes into percentages and can use simple percentages eg. 1%, 10%, 50%  I can work out percentages of amounts I can recognise a fraction in is simplest form eg. no more common factors (3/8) I can compare and order the most commonly used fractions eg. 1/10, ½, ¾.  I can show my understanding of fractions by stating equivalent fractions I can match vulgar fractions, decimal fractionsand percentages. I can solve problems presenting my work As % decimal of fractions. **Applying numeracy and mathematical skills.**  |
| MTH 2-16a. 16c | Having explored a range of 3D objects and 2D shapes, I can use mathematical language to describe their properties, and through investigation can discuss where and why particular shapes are used in the environment.**MTH 2-16a**I can draw 2D shapes and make representations of 3D objects using an appropriate range of methods and efficient use of resources. **MTH 2-16c** | **Using knowledge and understanding of shape and space**

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| *Properties of, and relationships between, 2D shapes and 3D objects*  |

I can discuss 3D objects with reference to: Vertices & Diagonals  I can define and classify quadrilaterals I can explore the cross sections of various 3D objects and describe what I find using correct terminology. I can recognise a variety of polyhedra and talk about their properties.  I can draw representations of 3D objects – cube, cuboids & prisms I can use cut out variety of nets from various material in an efficient way.   |
| MTH 2-19a | I can illustrate the lines of symmetry for a range of 2D shapes and apply my understanding to create and complete symmetrical pictures and patterns.  | **Using knowledge and understanding of shape and space** *Symmetry in a range of 2D shapes* I can complete symmetrical shapes with a diagonal line of symmetry I can complete a symmetrical pattern with more than one line of symmetry  I can create a symmetrical shape with more than one line of symmetry I can create rotational symmetry patters on squared and isometric paper. I can identify how often a rotational symmetry shape fits into its own outline.   |
| MNU2-09a, 9b, 0c | *I can manage money, compare costs from different retailers, and determine what I can afford to buy.****MNU 2-09a****I understand the costs, benefits and risks of using bank cards to purchase goods or obtain cash and realise that budgeting is important.****MNU 2-09b****I can use the terms profit and loss in buying and selling activities and can make simple calculations for this*.***MNU 2-09c*** | **Researching and evaluating data to assess risks and make informed choices** I can cost items and allocate money appropriately within a budget.I can talk about representations of money such as vouchers, credit cards, rail/pre-pay tickets I can give examples of where people keep the money they have and how they access it I can talk about how people earn or obtain money  I can talk about how to be safe with money I can talk about the items or services which people spend money on : giving examples of the items or services I need and others I might want I can prioritise my wants and needs  I can explain the benefits and risks of using abank card instead of actual cash I can explain how a bank card is used to obtain cash I understand how a bank account works I understand the importance of budgeting. I can think about costs that may be hiddenwhen I make a purchase such as VAT andservice charges. I can explain the meaning of the terms ‘profit’ and ‘loss’. I can identify when a profit has been made I can identify when a loss has been made I can complete simple calculations for profit and loss . |
| Term 3 es and os |  |  |
| MTH 2-17a, 17b | I have investigated angles in the environment, and candiscuss, describe and classify angles using appropriate mathematical vocabulary.**MTH 2-17a**I can accurately measure and draw angles using appropriate equipment, applying my skills to problems in context.**MTH 2-17b** | **Using knowledge and understanding of measurement and its application** *Calculate measurements* I can identify and use the term ‘reflex’ to describe an angle between 180° and 360° I regularly estimate angles with increasing accuracy (within 10 degrees approx) using the “Bananas” game (teacher’s tools on comp).I can draw and measure angles accurately within 2° using both full and half protractors.    |
| MTH 2-12a | I have worked with others to explore, and present our findings on, how mathematics impacts on the world and the important part it has played in advances and inventions.**MTH 2-12a** | *I have investigated how Maths has played its part in advances and inventions and can give examples**I have shown my understanding of these through discussion and presenting my findings in a variety of ways*I have investigated how Maths has played its part in advances and inventions and can give examples I have shown my understanding of these through discussion and presenting my findings in a variety of ways  |
| MNU 2-01a | *I can use my knowledge of rounding to routinely estimate the answer to a problem then, after calculating, decide if my answer is reasonable, sharing my solution with others.****MNU 2-01a*** | **Applying numeracy and mathematical skills.** I can round numbers to 3 decimal places. I can estimate answers to problems in money, time & measurement, which involve rounding to 3 decimal places. I can share and justify my answers.  I can round numbers to 3 decimal places. I can estimate answers to problems in money, time & measurement, which involve rounding to 3 decimal places. I can share and justify my answers.   |
| MNU 2-11a, 11b, 11c | *I can use my knowledge of the sizes of familiar objects or places to assist me when making an estimate of measure.****MNU 2-11a****I can use the common units of measure, convert between related units of the metric system and carry out calculations when solving problems.****MNU 2-11b****I can explain how different methods can be used to find the perimeter and area of a simple 2D shape or**volume of a simple 3D object.****MNU 2-11c*** | **Using knowledge and understanding of measurement and its application** *Convert standard units* *Area, perimeter, volume* I can choose the appropriate unit of measure when estimating a variety of objects.I can choose the appropriate unit of measurewhen estimating length, width or height. I can choose the appropriate unit of measure when estimating capacity.  I can choose the appropriate unit of measurewhen measuring length, width or height.I can choose the appropriate unit of measure when weighing objects.I can do calculations using addition, subtraction, multiplication and division involving unit of weight.I can choose the appropriate unit of measure measuring capacity.I can do calculations using addition,subtraction, multiplication and divisioninvolving unit of capacity.I can do calculations using addition,subtraction, multiplication and divisioninvolving units of length, including km, weight and capacity I can calculate the area of right-angled triangles using the formula A = ½(l x b), measuring in cm² and ½cm². I can calculate the area of more complex shapes using my knowledge of the area of squares, rectangles and right-angled triangles. I can calculate the area of small objects using the formula A = l x b, measuring in mm². I can calculate the volume of cubes and cuboids using the formula V = l x b x h .   |
| Term 4 es and os |  |  |
| MTH 2-13a | Having explored more complex number sequences, including well-known named number patterns, I can explain the rule used to generate the sequence, and apply it to extend the pattern.**MTH 2-13a** | **Using knowledge and understanding of the number system, patterns and relationships**

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|  *Complex number sequences*  |

I can continue, describe and understand a sequence involving prime numbers. e.g. 1, 2, 3, 5, 7… I can continue, describe and understand more complex linear patterns. I can investigate recognised patterns i.e., Paschal’s triangle and Fibonacci numbers.  |
| MTH 2-16b | Through practical activities, I can show my understanding of the relationship between 3D objects and their nets.**MTH 2-16b** | **Using knowledge and understanding of shape and space**

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| *Properties of, and relationships between, 2D shapes and 3D objects* I can make solid 3D models using nets of: · Tetrahedra I understand that a 3D object can be formed from composite 2D shapes. I can explore whether I can make the net of a 3D object with a curved face.   |

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| MTH 2-10a, 10b, 10c | *I can use and interpret electronic and paper-based timetables and schedules to plan events and activities, and make time calculations as part of my planning.****MNU 2-10a*** *I can carry out practical tasks and investigations involving timed events and can explain which unit of time would be most appropriate to use.****MNU 2-10b****Using simple time periods, I can give a good estimate of how long a journey should take, based on my knowledge of the link between time, speed and distance.* ***MNU 2-10c*** | **Using knowledge and understanding of measurement and its application** *Appropriate collection of data and graphical representations* I can plan an event making and using a timetable. I can select the most appropriate unit to time aselection of activities. I can select and use appropriate timers I know that the faster something travels theshorter the time the journey takes I know the greater the distance a journey isthe longer it will take I can identify the link between time/speed anddistance. I can, with increasing accuracy, estimate thetime taken for a journey.  |
| MNU 2-20a, 20b | *Having discussed the variety of ways and range of media used to present data, I can interpret and draw conclusions from the information displayed, recognising that the presentation may be misleading.****MNU 2-20a****I have carried out investigations and surveys, devising and using a variety of methods to gather information and have worked with others to collate, organise and communicate the results in an appropriate way.****MNU 2-20b*** | **Researching and evaluating data to assess risks and make informed choices** *Reliability of data and graphical presentation* I can interpret the information presented to show awareness of the significance of the data e.g. “Why were there no umbrellas sold in July in Spain?” I can recognise that information can be presented in a misleading way e.g. changing the scale  I can discuss how methods of collecting information may affect the data collected and the conclusions drawn or predictions made, for example through the impact of misleading data I can represent data using suitable scales I can choose appropriately from an extended range of:Tables/Charts/Diagrams/Plots/Graphs  I can compare key features of different displays of the same data   |
| MTH 2-21a | I can display data in a clear way using a suitable scale, by choosing appropriately from an extended range of tables, charts, diagrams and graphs*,* making effective use of technology.**MTH 2-21a / MTH 3-21a** | *I can display data in the most appropriate manner*  I can display data in the most appropriate manner   |