**Secondary Maths Block 2 Curriculum Overview**

 **(FS EL3 FS L1 and KS3)**

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**EL3 : Learning Objectives: 105**

**Using numbers and the number system:**

**AUTUMN 1 - LO : 1 – 17**

**EL3.1 & EL3.6**

1. **Can you count reliably up to 1000 items?**
2. **Can you understand that the position of a digit signifies its value?**
3. **Can you know what each digit in a threedigit number represents, including the use of a zero as a placeholder?**
4. **Can you show how to count on and back starting from any twodigit or three-digit number up to 1000?**
5. **Can you recognise the numerals 0–1000?**
6. **Can you recognise odd and even numbers?**
7. **Can you read numbers up to 1000, including zero?**
8. **Can you write numbers up to 1000, including zero?**
9. **Can you order and compare numbers up to 1000, including zero?**
10. **Can you recognise numbers written in different fonts and styles?**

**EL 3.2 & 3.5**

1. **Can you understand that there are different strategies for adding and subtracting?**
2. **Can you add and subtract three-digit whole numbers?**
3. **Can you show how to align numbers in column addition and subtraction?**
4. **Can you understand that there are different strategies for adding and subtracting?**
5. **Can you add and subtract three-digit whole numbers?**
6. **Can you show how to align numbers in column addition and subtraction?**
7. **Can you demonstrate place value for units, tens, hundreds and thousands?**

 **AUTUMN 2 - LO : 18 – 34**

1. **Can you demonstrate that subtraction is the inverse of addition?**
2. **Can you demonstrate that numbers can be rounded to Different degrees of accuracy, e.g., nearest 10, nearest 100?**
3. **Can you demonstrate understanding that there are different methods of checking results, e.g., using inverse, using a calculator, approximation by rounding, adding in a different order?**

**EL3.4 & EL3.5**

1. **Can you multiply two-digit whole numbers by single-digit whole numbers?**
2. **Can you multiply two-digit whole numbers by double-digit whole numbers?**
3. **Can you show understanding of place value for units, tens and hundreds**
4. **Can you demonstrate different strategies for multiplying?**
5. **Can you show understanding and use the vocabulary of multiplication?**
6. **Can you demonstrate that multiplication is repeated addition?**
7. **Can you demonstrate that multiplication is commutative, e.g., 12 × 6 = 6 × 2?**
8. **Can you show understanding that numbers less than 1000 can be rounded to different degrees of accuracy, e.g., nearest 10 or nearest 100 ?**

 **EL3.3 & EL3.5**

1. **Can you divide three-digit whole number by single-digit numbers and express remainders?**
2. **Can you divide three-digit whole numbers by double-digit whole numbers and express remainders?**
3. **Can you identify and use the vocabulary of division?**
4. **Can you demonstrate that there are different strategies for division?**
5. **Can you demonstrate that division is repeated subtraction?**
6. **Can you demonstrate that division is the inverse of multiplication?

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**EL3
*SPRING 1* - LO : 35 – 51**

1. **Can you demonstrate that division is not commutative,
e.g., 6 ÷ 3 is not the same as 3 ÷ 6?**
2. **Can you show understanding of the concept of a remainder, and that remainders need to be interpreted in a functional context?**
3. **Can you show understanding that numbers can be rounded to different degrees of accuracy, e.g., nearest 10, nearest 100?**
4. **Can you show understanding of place value for units, tens and hundreds ?**

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**EL3.7**

1. **Can you show knowledge of the words: thirds, quarters, fifths and tenths and the symbols 1/3, 1/4, 1/5, 1/10?**
2. **Can you show understanding that the bottom number (denominator) indicates the number of equal parts in the whole?**
3. **Can you show understanding that a unit fraction is one part of a whole divided into equal parts?**
4. **Can you show understanding that a non-unit fraction is several equal parts of a whole, indicated by the top number (numerator)?**
5. **Can you show understanding that in unit fractions, the larger the denominator the smaller the fraction; understand that this is not true with non-unit fractions?**
6. **Can you show understanding that the connection between third of and share (or divide) into three equal parts?**
7. **Can you show understanding of the connection between quarter of and hare (or divide) into four equal parts?**
8. **Can you show understanding of the connection between fifth of and share or divide) into five equal parts?**
9. **Can you show understanding of the connection between tenth of and hare (or divide) into ten equal parts?**
10. **Can you show knowledge of common equivalent fractions, e.g., equivalent to quarters, thirds, fifths, tenths?**
11. **Can you show understanding that equivalent fractions look different but have the same value?**
12. **Can you show understanding that when the top and bottom number of a fraction are the same, this is equivalent to 1 ?

EL3.8 & EL3.9**
13. **Can you show understanding that the decimal point separates the pounds and pence, or m and cm?

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**EL3 *SPRING 2* - LO : 52 – 69**

1. **Can you show understanding of the use of a zero as a placeholder, e.g., 1.05 is £1 and 5p ?**
2. **Can you show understanding of the use of a leading zero, e.g., 0.5 m = 50 cm?**
3. **Can you recognise .5 as a half, e.g., 2.5 m = 2½ m?**
4. **Can you use a calculator to calculate using whole numbers and decimals of 1dp, to solve problems in context, and to check calculations?**
5. **Can you add and subtract sums of money using decimal notation?**
6. **Can you show understanding that the same strategies used with numbers can be applied in practical situations using money, e.g., shopping, household bills, orders, pay slips, cost of a small job or work, weekly budget?**
7. **Can you make approximate calculations by rounding sums of money to the nearest £ or 10p?**
8. **Can you read time in the 12-hour and 24-hour clock?**
9. **Can you measure time in the 12-hour and 24-hour clock?**
10. **Can you demonstrate knowledge of the relationship between units of time, e.g., 1 hour = 60 minutes?**
11. **Can you add and subtract time in hours and minutes?**
12. **Can you convert units of time, e.g., 70 minutes = 1 hour 10 minutes?**
13. **Can you record time in the 12-hour and 24-hour clock?**
14. **Can you show understanding of- and use am and pm?**
15. **Can you demonstrate knowledge that midnight is 00.00 or 0000 and 12.00 or 1200 is midday?**
16. **Can you demonstrate knowledge of the units of time, i.e., year, month, week, day, hour, minute?**
17. **Can you show understanding of and use vocabulary related to measures of length, width, and height?**
18. **Can you demonstrate knowledge of the standard metric units of length, including abbreviations (km, m, cm, mm) and be able to relate the measurements to familiar things?
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 **EL3
SUMMER 1 - LO : 70 – 87**

1. **Can you demonstrate knowledge of the standard imperial units of length, including abbreviations (ins, ft, yards, miles) and be able to relate the measurements to familiar things?**
2. **Can you show understanding of scales of length to the nearest labelled or unlabeled division?**
3. **Can you demonstrate understanding of mm, cm, m and km divisions on simple scales?**
4. **Can you obtain measurements of different items using a suitable measuring instrument?**
5. **Can you compare measurements of length in one metric?**
6. **Can you compare one measurement to another, e.g., mm and cm, cm and m?**
7. **Can you demonstrate how to use a ruler to draw and measure lines?**
8. **Can you show understanding of and use vocabulary related to weight?**
9. **Can you show knowledge of the standard metric units of weight, including abbreviations (kg, g) and be able to relate the measurements to familiar things?**
10. **Can you show knowledge of the standard imperial units of Weight, including abbreviations (lbs, oz) and be able to relate the measurements to familiar things?**
11. **Can you show understanding of scales of weight to the nearest labelled or unlabelled division?**
12. **Can you show understanding of g and kg divisions on simple scales?**
13. **Can you obtain weights of different items using a suitable measuring instrument?**
14. **Can you compare weights in one metric measurement to another, e.g., g, kg?**
15. **Can you show understanding of and use vocabulary related to capacity?**
16. **Can you show knowledge of the standard metric units of capacity, including abbreviations (ml, cl, l) and be able to relate the measurements to familiar things?**
17. **Can you show knowledge of the standard imperial units of capacity, including abbreviations (FL oz, pt, gal) and be able to relate the measurements to familiar things? Fluid Oz = 29.57 mL;**
**Gal = 128 Oz ;**
18. **Can you demonstrate understanding of scales of capacity to the nearest labelled or unlabelled division?**

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**EL3
SUMMER 2 - LO : 88 - 105**

1. **Can you obtain capacity of different items using a suitable measuring instrument?**
2. **Can you identify regular 2-D and 3-D shapes?**
3. **Can you show knowledge of the properties of regular 2-D**
 **shapes?**
4. **Can you demonstrate knowledge of the properties of regular 3-D shapes**
5. **Can you demonstrate knowledge that angles are measured in degrees?**
6. **Can you demonstrate knowledge that a right angle is 90° or a quarter turn?**
7. **Can you demonstrate understanding of the meaning of parallel and recognise parallel lines**
8. **Can you identify which regular shapes tessellate, i.e., fit together without a gap?**
9. **Can you identify the lines of symmetry in shapes and images?**
10. **Can you demonstrate an understanding of everyday positional vocabulary to describe position and direction?**
11. **Can you show understanding that a title, label, and key provide information?**
12. **Can you demonstrate knowledge of how to read the scale on an axis?**
13. **Can you demonstrate knowledge of how to use a simple scale such as 1 cm to 1 m?**
14. **Can you demonstrate knowledge of how to obtain information from a pictogram, pie chart, bar chart or single line graph?**
15. **Can you demonstrate understanding that comparisons can be made based on the height or length of the bars, or the number of pictures?**
16. **Can you sort, classify and record collected data?**
17. **Can you show how to present data in tables, diagrams, simple line graphs and bar charts?**
**Can you label tables, charts, graphs, and diagrams?**
**Can you demonstrate an understanding of the different elements in tables, charts and diagrams, e.g., title, axis, scale, key?**
18. **Can you demonstrate knowledge of how to use a simple scale to represent data, e.g., 1 cm = 1 m?**

**-======================== End of EL3 ===========================**

**L1**

**Learning Objectives = 67**

**L1**

**AUTUMN 1 - LO : 1 – 12**

**L1.1 &L1.2**

1. Can you read and write numbers up to one million (both written in words and using digits)?
2. Can you explain the value represented by a specific digit in a given number (up to one million)?
3. Can you place numbers up to one million in ascending and/or descending order?
4. Can you compare numbers up to one million using ‘greater than’ and ‘less than’ symbols?
5. Can you recognise and use positive and negative numbers in practical contexts (e.g., temperature, profit/loss)?
6. Can you count in steps of various sizes, including negativenumbers?
7. Can you calculate with positive and negative numbers ?

L1.3 & L1.4

1. Can you recognise multiples of 10, 100, 1000?
2. Can you recognise multiples of 2 to 9 up to 100?
3. Can you break down numbers into prime factors?
4. Can you work out multiplication and division problems using mental and written methods?

L1.5

1. Can you substitute a variable in a formula with a correct value?

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**L1**

**AUTUMN 2 - LO : 13 – 23**

1. Can you evaluate expressions in each formula?
2. Can you follow the correct order of operations to evaluate a formula?

L1.6 & L1.7

1. Can you understand that squaring a number means multiplying the number by itself?
2. Can you recall times tables to work out the squares of up to twodigit numbers?
3. Can you follow the order of operations to solve calculations?

L1.8

1. Can you read and write common fractions and mixed numbers?

L1.9

1. Can you find equivalent fractions (simplify fractions)?
2. Can you order fractions in ascending or descending order and compare them?
3. Can you work out the value of a fraction of a whole number, some using various units (£, kg, m, etc.)?

L1.10 , L1.11 & L1.12

1. Can you read and write decimals up to three decimal places (both written in words and using digits)?
2. Can you explain the value represented by a specific digit in a given decimal (up to three decimal places)?
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 **L1
*SPRING-1* LO : 24 – 34**
3. Can you place decimals in ascending and/or descending order?
4. Can you compare decimals up to three decimal places using ‘greater than’ and ‘less than’ symbols?
5. Can you add, subtract, multiply and divide decimals up to two decimal places?
6. Can you approximate by rounding to a whole number or to one or two decimal places?

L1.13 & L1.14

1. Can you read and write percentages in whole numbers?
2. Can you order and compare percentages using ‘greater than’ and ‘less than’ symbols?
3. Can you work out percentages of quantities, including increases and decreases by 5% and multiples thereof?

L1.15

1. Can you estimate answers to calculations using fractions and decimals?

L1.16

1. Can you recognise and calculate equivalences between common fractions, percentages,and decimals?

L1.17 ( Handling Data – Page 46 )

1. Can you demonstrate understanding of the multiplicative relationship between two quantities in a simple ratio?
2. Can you simplify ratio notation?

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**L1  *SPRING-2* LO : 35 – 45**
3. Can you use proportion as equality of simple ratios?

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4. Can you relate simple ratios to fractions correctly?
5. Can you work with direct proportion?

L1.18 & L1.19 ( MSS , Page 47 )

1. Can you work out simple interest on amounts of money?

1. Can you work out discount on amounts of money?

L1.20 & L1.21 ( MSS , Page 48 )

1. Can you convert between units of length, weight, capacity, money, and time in the same system?
2. Can you calculate accurately to two decimal places, using the correct units?
3. Can you recognise and make use of simple scales on maps and drawings?

L1.22 & L1.23 ( MSS , Page 49 )

1. Can you work out the perimeter of simple shapes including thosethat are made up of a combination of rectangles?
2. Can you work out the area of simple shapes including those that are made up of acombination of rectangles?
3. Can you calculate the volumes of cubes and cuboids?

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**L1**
**SUMMER-1 LO : 46 – 56**

1. Can you calculate accurately to two decimal places, using the correct units ?

L1. 24, L1. 25, L1. 26 ( MSS , Page 51 -52 )

1. Can you draw common 2-D shapes and identify lines of symmetry?
2. Can you place squares of different shading into a symmetrical pattern on a grid?
3. Can you draw lines of symmetry on a given shape?
4. Can you name common angles and their size (e.g., right angle = 90°, ¾ sector in a pie chart has 270° angle)?
5. Can you interpret the front elevation and plan of simple 3-D shapes?
6. Can you interpret a working net of a cube, cuboid, cylinder, pyramid and prism?
7. Can you draw nets of simple 3-D shapes ?
8. Can you describe position or direction using angles, including bearings?
9. Can you measure angles in degrees?

Handling information and data.= DATA =

Page 52 – 56 .

L 1.27 & L1.28

1. Can you extract and interpret information from tables, diagrams, charts, and graphs?

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**Summer 2**

**L1**
**SUMMER-2 LO : 57 – 67**

1. Can you recognise features of charts to summarise and compare sets of data?
2. Can you represent discrete data in tables, diagrams and charts including pie charts, bar charts and line graphs?
3. Can you group discrete data and represent grouped data graphically?

L1.29

1. Can you analyse information presented in different ways and apply simple statistics to interpret it?
2. Can you work out the mean of a set of quantities?
3. Can you work out the range of a set of quantities?

L1.30 & L1.31

1. Can you demonstrate understanding of probability on a scale from 0 (impossible) to 1 (certain)?
2. Can you show probability as a fraction?
3. Can you use equally likely outcomes to find the probabilities of simple events?

L1.27

1. Can you demonstrate understanding of ratio?
2. Can you demonstrate understanding of direct proportion?

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