Cumulus 2019-2020 Maths Functional Skills SOW

Long Term Plan

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| **Term** | **L1** | **L2** | **L3** | **L4** | **L5** | **L6** | **L7** | **L8** | **L9** | **L10** | **L11** | **L12** | **L13** |
| **1** | Revision | | | | | | | | | Use of number and the number system | | | |
| **2** | Use of number and the number system | | | | | | Use of measures, shape and space | | | | | | |
| **3** | Use of measures, shape and space | | | Handling information and data | | | | | | | |  | |
| **4** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **5** |  |  |  |  |  |  |  |  |  | | | | |
| **6** |  |  |  |  |  |  |  |  |  |  |  |  | |

Cumulus 2019-2020 Maths Functional Skills SOW

Medium Term Plan

Use of number and the number system

Content in **bold** is for level 2 functional skills.

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| **Lesson** | **Lesson Content** | **Learning Objective** |
| **1** | Follow the order of precedence of operators – BIDMAS | Be able to successfully use some of BIDMAS |
| **2** | Read, write, order, compare, **add and subtract** common fractions, mixed numbers **and improper fractions** | Be able to understand the types of fraction |
| **3** | Find fractions of whole number quantities or measurements **and express one number as a fraction of another** | Be able to use fractions in a calculation |
| **4** | Add, subtract, multiply and divide decimals to one or two **(three)** decimal places | Be able to complete calculations with decimals |
| **5** | Read, write, order and compare percentages in whole numbers | Be able to understand percentages |
| **6** | Calculate percentages of quantities, including simple percentage increase and decrease by 5% and multiples thereof **and original value after percentage change** | Be able to calculate percentage increase and decrease |
| **7** | **Work out percentages of amounts and express once amount as a percentage of another** | Be able to compare percentages |
| **8** | Estimate answers to calculations using fractions and decimals | Be able to estimate answers to calculations |
| **9** | Recognise, calculate, **identify and know** equivalences between common fractions, percentages and decimals | Be able to understand equivalence |
| **10** | Work with simple ratio, direct proportion **and inverse proportion** | Be able to understand ratio and proportion |

Use of measures, shape and space

Content in **bold** is for level 2 functional skills.

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| **Lesson** | **Lesson Content** | **Learning Objective** |
| **1** | Calculate simple interest and discounts in multiples of 5% on amounts of money, **including compound interest, tax and simple budgeting** | Be able to calculate simple interest |
| **2** | Convert between units of length, weight and capacity, **for metric and imperial units, using a conversion factor and a conversion graph** | Be able to convert between units of length, weight and capacity |
| **3** | Convert between units of money, **including foreign currency**  Convert between units of time  **Calculate using compound measures including speed, density and rates of pay** | Be able to convert between units of money and time |
| **4** | Recognise and make use of simple scales on maps and drawings  **Calculate actual dimensions from scale drawings and create a scale diagram given actual measurements** | Be able to use scales on maps |
| **5** | Use coordinates in 2-D, positive and negative, to specify the positions of points  **Understand the use of common 2-D representations of 3-D objects** | Be able to use coordinates |
| **6** | Calculate the perimeter and area of simple shapes including those that are made up of a combination of rectangles  **Calculate areas and perimeters of 2-D shapes including triangles and circles and composite shapes including cylinders (formulae to be given for 3-D shapes other than cylinders)** | Be able to calculate perimeter and area of simple shapes |
| **7** | Calculate the area of cubes and cuboids | Be able to calculate area of 3-D shapes |
| **8** | Draw 2-D shapes and demonstrate an understanding of line of symmetry and demonstrate a knowledge of the relative size of angles | Be able to draw lines of symmetry for some simple shapes |
| **9** | Interpret plans, elevations and nets of simple 3-D shapes  **Draw 3-D shapes including plans and elevations** | Be able to interpret plans, elevations and nets of simple 3-D shapes |
| **10** | **Calculate values of angles and/or coordinates with 2-D shapes**  (Students taking level 1 only can revisit any other topic struggled with this topic) | Be able to calculate angles of 2-D shapes |

Handling information and data

Content in **bold** is for level 2 functional skills.

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| **Lesson** | **Lesson Content** | **Learning Objective** |
| **1** | Represent discrete data in tables, bar charts and line graphs | Be able to draw tables, bar charts and line graphs |
| **2** | Represent discrete data in pie charts | Be able to draw pie charts |
| **3** | Group discrete data and represent grouped data graphically  **Estimate the mean of a grouped frequency distribution from discrete data** | Be able to understand and use discrete data |
| **4** | Group discrete data and represent grouped data graphically  **Estimate the mean of a grouped frequency distribution from discrete data** | Be able to compare grouped data |
| **5** | Find the mean, range, **median and mode o**f a set of quantities  **Use these averages to compare two sets of data** | Be able to find some averages |
| **6** | Understand probability on a scale from 0 (impossible) to 1 (certain) and use probabilities to compare the likelihood of events  **Work out the probability of combined events including the use of diagrams and tables, including two-way tables.** | Be able to use a probability scale |
| **7** | Use equally likely outcomes to find the probabilities of simple events and express them as fractions  **Express probabilities as fractions, decimals and percentages** | Be able to use probability in simple events |
| **8** | **Draw and interpret scatter diagrams and recognise positive and negative correlation**  (Students taking level 1 only can revisit any other topic struggled with this topic) | Be able to draw and interpret scatter diagrams |