

## Scheme of Work 2019 - 2020

## Subject: Mathematics

Year Group: 9 Foundation

Specification: Edexcel

| Lesson No | Topic & Objective                            | Big Question – What will students learn?  | Key Activities & Specialist Terminology<br>(Do Now Task / Starter/Tasks/Plenary)  | Planned Assessment   | Homework or flipped learning resources<br><br>ONLINE resources  | Lit<br><br>Num<br><br>SMSC<br>Codes   |
|-----------|--|---|---|--|---|---|
| 1-2       | Understand place value<br><br><b>Grade 1</b> | By the end of the sub-unit a & b students should be able to:<br>Use and order positive and negative numbers (integers);<br>Order integers, decimals, use the symbols <, > and understand the ≠ symbol;<br>Add and subtract positive and negative numbers (integers);<br>Recall all multiplication facts to 10 × 10, and use them to derive quickly the corresponding division facts;<br>Multiply or divide any number by powers of 10;<br>Multiply and divide positive and negative numbers (integers); | <b>Key Words:</b><br><br><b>Starter</b> : 5-a-day task<br>Numeracy<br><b>Main CW task:</b><br>Corbett Maths<br>Textbook Exercise:<br><a href="https://corbettmaths.com/wp-content/uploads/2013/02/words-figures-pdf.pdf">https://corbettmaths.com/wp-content/uploads/2013/02/words-figures-pdf.pdf</a><br>or<br>MathsWatch Worksheet<br><a href="https://vle.mathswatch.co.uk/downloads/worksheets/GCSE/clip1.pdf">https://vle.mathswatch.co.uk/downloads/worksheets/GCSE/clip1.pdf</a> | Exam style questions:<br><br><a href="https://corbettmaths.com/wp-content/uploads/2013/02/words-and-figures-pdf.pdf">https://corbettmaths.com/wp-content/uploads/2013/02/words-and-figures-pdf.pdf</a><br><br>MathsWatch Interactive Questions<br><br><a href="https://vle.mathswatch.co.uk/vle/browse/153/practice">https://vle.mathswatch.co.uk/vle/browse/153/practice</a><br><br>Doddle Quick test | Doddle lesson<br><br>MW Clip 1<br><br><a href="https://vle.mathswatch.co.uk/vle/browse/153">https://vle.mathswatch.co.uk/vle/browse/153</a><br><br>Corbett Maths video:<br><br><a href="https://corbettmaths.com/2013/12/07/figures-to-words/">https://corbettmaths.com/2013/12/07/figures-to-words/</a><br><br><a href="https://corbettmaths.com/2014/01/16/words-as-figures/">https://corbettmaths.com/2014/01/16/words-as-figures/</a> | <b>Edexcel</b><br><br><b>Unit 1</b><br><br><b>Part a &amp; b</b><br><br><b>NC Ref</b><br><br>N1, N2, N3, N4, N14, N15 |

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|-----|-------------------------------------|---|---|---|---|---|
| 3-4 | Ordering integers<br><b>Grade 1</b> | <p>Use brackets and the hierarchy of operations (not including powers);<br/>           Round numbers to a given power of 10;<br/>           Check answers by rounding and using inverse operations.<br/>           Use decimal notation and place value;<br/>           Identify the value of digits in a decimal or whole number;<br/>           Compare and order decimal numbers using the symbols &lt;, &gt;;<br/>           Understand the ≠ symbol (not equal);<br/>           Write decimal numbers of millions, e.g. 2 300 000 = 2.3 million;<br/>           Add, subtract, multiply and divide decimals, including calculations involving money;</p> <p>Multiply or divide by any number between 0 and 1;<br/>           Round to the nearest integer;<br/>           Round to a given number of decimal places;<br/>           Round to any given number of significant figures;<br/>           Estimate answers to calculations by rounding numbers to 1 significant figure;<br/>           Use one calculation to find the answer to another.</p> <p><b>POSSIBLE SUCCESS CRITERIA</b></p> <p>Given 5 digits, what are the largest or smallest answers</p> | <p><b>Key Words:</b><br/> <b>integer, ascending, descending</b></p> <p><b>Starter :</b> 5-a-day task<br/>           Numeracy</p> <p><b>Main CW task:</b><br/>           Corbett Maths<br/>           Textbook Exercise:<br/> <a href="https://corbettmaths.com/wp-content/uploads/2013/02/ordering-numbers-pdf1.pdf">https://corbettmaths.com/wp-content/uploads/2013/02/ordering-numbers-pdf1.pdf</a><br/>           or<br/>           MathsWatch Worksheet<br/> <a href="https://vle.mathswatch.co.uk/downloads/worksheets/GCSE/clip2.pdf">https://vle.mathswatch.co.uk/downloads/worksheets/GCSE/clip2.pdf</a></p> | <p>Exam style questions:<br/> <a href="https://corbettmaths.com/wp-content/uploads/2013/02/ordering-numbers-pdf.pdf">https://corbettmaths.com/wp-content/uploads/2013/02/ordering-numbers-pdf.pdf</a></p> <p>MathsWatch Interactive Questions<br/> <a href="https://vle.mathswatch.co.uk/vle/browse/154/practice">https://vle.mathswatch.co.uk/vle/browse/154/practice</a></p> <p>Doddle Quick test</p> | <p>Doddle lesson<br/>           MW Clip 2<br/> <a href="https://vle.mathswatch.co.uk/vle/browse/154">https://vle.mathswatch.co.uk/vle/browse/154</a></p> <p>Corbett Maths video:<br/> <a href="https://corbettmaths.com/2012/09/13/ordering-numbers/">https://corbettmaths.com/2012/09/13/ordering-numbers/</a></p>               | Edexcel<br>Unit 1<br>Part a & b<br>NC Ref<br>N1, N2, N3, N4, N14, N15 |
| 5-6 | Ordering decimals<br><b>Grade 1</b> | <p>Multiply or divide by any number between 0 and 1;<br/>           Round to the nearest integer;<br/>           Round to a given number of decimal places;<br/>           Round to any given number of significant figures;<br/>           Estimate answers to calculations by rounding numbers to 1 significant figure;<br/>           Use one calculation to find the answer to another.</p> <p><b>POSSIBLE SUCCESS CRITERIA</b></p> <p>Given 5 digits, what are the largest or smallest answers</p>   | <p><b>Key Words:</b><br/> <b>place value, ascending, descending</b></p> <p><b>Starter :</b> 5-a-day task<br/>           Numeracy</p> <p><b>Main CW task:</b><br/>           Corbett Maths<br/>           Textbook Exercise:<br/> <a href="https://corbettmaths.com/wp-content/uploads/2018/11/Ordering-Decimals-pdf.pdf">https://corbettmaths.com/wp-content/uploads/2018/11/Ordering-Decimals-pdf.pdf</a><br/>           or<br/>           MathsWatch Worksheet</p>  | <p>Exam style questions:<br/> <a href="https://corbettmaths.com/wp-content/uploads/2013/02/ordering-decimals-pdf1.pdf">https://corbettmaths.com/wp-content/uploads/2013/02/ordering-decimals-pdf1.pdf</a></p> <p>MathsWatch Interactive Questions</p>   | <p>Doddle lesson<br/>           MW Clip 3<br/> <a href="https://vle.mathswatch.co.uk/vle/browse/155">https://vle.mathswatch.co.uk/vle/browse/155</a></p> <p>Corbett Maths video:<br/> <a href="https://corbettmaths.com/2012/08/10/ordering-decimals-video/">https://corbettmaths.com/2012/08/10/ordering-decimals-video/</a></p> | Edexcel<br>Unit 1<br>Part a & b<br>NC Ref<br>N1, N2, N3, N4, N14, N15 |

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|     |   | <p>when subtracting a two-digit number from a three-digit number?</p> <p>Use inverse operations to justify answers, e.g. <math>9 \times 23 = 207</math> so <math>207 \div 9 = 23</math>.</p> <p>Check answers by rounding to nearest 10, 100, or 1000 as appropriate, e.g. <math>29 \times 31 \approx 30 \times 30</math></p> <p>Use mental methods for <math>\times</math> and <math>\div</math>, e.g. <math>5 \times 0.6</math>, <math>1.8 \div 3</math>.</p> <p>Solve a problem involving division by a decimal (up to 2 decimal places).</p> <p>Given <math>2.6 \times 15.8 = 41.08</math>, what is <math>26 \times 0.158</math>? What is <math>4108 \div 26</math>?</p> <p>Calculate, e.g. 5.2 million + 4.3 million.</p> <p><b>OPPORTUNITIES FOR REASONING/ PROBLEM SOLVING</b></p> <p>Missing digits in calculations involving the four operations</p> <p>Questions such as: Phil states <math>3.44 \times 10 = 34.4</math> and Chris states <math>3.44 \times 10 = 34.40</math>. Who is correct?</p> <p>Show me another number with 3, 4, 5, 6, 7 digits that includes a 6 with the same value as the "6" in the following number 36, 754</p> <p>Problems involving shopping for multiple items, such as: Rob purchases a magazine costing £2.10, a newspaper costing 82p and two bars of</p> | <p><a href="https://vle.mathswatch.co.uk/downloads/worksheets/GCSE/clip3.pdf">https://vle.mathswatch.co.uk/downloads/worksheets/GCSE/clip3.pdf</a></p> <p>MathsWatch Worksheet</p>  | <p><a href="https://vle.mathswatch.co.uk/vle/browse/155/practice">https://vle.mathswatch.co.uk/vle/browse/155/practice</a></p> <p>Doddle Quick test</p>  |  |  |
| 7-8 | <p>Multiply Integers</p> <p>Grade 2</p> | <p><b>Key Words:</b></p> <p><b>Integer, product</b></p> <p><b>Starter :</b> 5-a-day task</p> <p>Numeracy</p> <p><b>Main CW task:</b></p> <p>Corbett Maths</p> <p>Textbook Exercise:</p> <p><a href="https://corbettmaths.com/wp-content/uploads/2018/01/multiplication-1-grid.pdf">https://corbettmaths.com/wp-content/uploads/2018/01/multiplication-1-grid.pdf</a></p> <p><a href="https://corbettmaths.com/wp-content/uploads/2018/01/multiplication-2-grid.pdf">https://corbettmaths.com/wp-content/uploads/2018/01/multiplication-2-grid.pdf</a></p> <p>or</p> <p>MathsWatch Worksheet</p> <p><a href="https://vle.mathswatch.co.uk/downloads/worksheets/GCSE/clip19.pdf">https://vle.mathswatch.co.uk/downloads/worksheets/GCSE/clip19.pdf</a></p>  | <p>Exam style questions:</p> <p><a href="https://corbettmaths.com/wp-content/uploads/2013/02/multiplication-pdf1.pdf">https://corbettmaths.com/wp-content/uploads/2013/02/multiplication-pdf1.pdf</a></p> <p>MathsWatch Interactive Questions</p> <p><a href="https://vle.mathswatch.co.uk/vle/browse/173/practice">https://vle.mathswatch.co.uk/vle/browse/173/practice</a></p> <p>Doddle Quick test</p> | <p>Doddle lesson</p> <p>MW Clip 19</p> <p><a href="https://vle.mathswatch.co.uk/vle/browse/173">https://vle.mathswatch.co.uk/vle/browse/173</a></p> <p>Corbett Maths video:</p> <p><a href="https://corbettmaths.com/2013/12/20/multiplication-grid-method-video-199/">https://corbettmaths.com/2013/12/20/multiplication-grid-method-video-199/</a></p> | <p>Edexcel</p> <p>Unit 1</p> <p>Part a &amp; b</p> <p>NC Ref</p> <p>N1, N2, N3, N4, N14, N15</p> |  |
|     |   | <p><b>Key Words:</b></p> <p><b>Integer, quotient</b></p> <p><b>Starter :</b> 5-a-day task</p> <p>Numeracy</p> <p><b>Main CW task:</b></p>   | <p>Exam style questions:</p> <p><a href="https://corbettmaths.com/wp-content/uploads/2013/02/multiplication-pdf1.pdf">https://corbettmaths.com/wp-content/uploads/2013/02/multiplication-pdf1.pdf</a></p>   | <p>Doddle lesson</p> <p>MW Clip 20</p>   | <p>Edexcel</p> <p>Unit 1</p>   |  |

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| 9-11  | Dividing Integers<br><br><b>Grade 2</b>                       | <p>chocolate. He pays with a £10 note and gets £5.40 change. Work out the cost of one bar of chocolate.</p> <p>When estimating, students should be able to justify whether the answer will be an overestimate or underestimate.</p> <p><b>COMMON MISCONCEPTIONS</b></p> <p>Stress the importance of knowing the multiplication tables to aid fluency. Students may write statements such as <math>150 - 210 = 60</math>.</p> <p>Significant figures and decimal place rounding are often confused.</p> <p>Some students may think <math>35877 = 36</math> to two significant figures.</p> <p><b>NOTES</b></p> <p>Particular emphasis should be given to the importance of students presenting their work clearly.</p> <p>Formal written methods of addition, subtraction and multiplication work from right to left, whilst formal division works from left to right.</p> | <p>Corbett Maths<br/>Textbook Exercise:<br/><a href="https://corbettmaths.com/wp-content/uploads/2018/01/division-pdf.pdf">https://corbettmaths.com/wp-content/uploads/2018/01/division-pdf.pdf</a></p> <p><a href="https://corbettmaths.com/wp-content/uploads/2018/11/Division-Remainders-pdf.pdf">https://corbettmaths.com/wp-content/uploads/2018/11/Division-Remainders-pdf.pdf</a><br/>or</p> <p>MathsWatch Worksheet<br/><a href="https://vle.mathswatch.co.uk/downloads/worksheets/GCSE/clip20.pdf">https://vle.mathswatch.co.uk/downloads/worksheets/GCSE/clip20.pdf</a></p> | <p><a href="content/uploads/2013/02/division-pdf1.pdf">content/uploads/2013/02/division-pdf1.pdf</a></p> <p>MathsWatch Interactive Questions<br/><a href="https://vle.mathswatch.co.uk/vle/browse/174/practice">https://vle.mathswatch.co.uk/vle/browse/174/practice</a></p> <p>Doddle Quick test</p>  | <p><a href="https://vle.mathswatch.co.uk/vle/browse/174">https://vle.mathswatch.co.uk/vle/browse/174</a></p> <p>Corbett Maths video:<br/><a href="https://corbettmaths.com/2013/12/28/division-video-98/">https://corbettmaths.com/2013/12/28/division-video-98/</a></p>  | <p>Part a &amp; b</p> <p>NC Ref</p> <p>N1, N2, N3, N4, N14, N15</p>                              |
| 12-13 | Rounding numbers to a given power of 10<br><br><b>Grade 2</b> | <p>Some students may think <math>35877 = 36</math> to two significant figures.</p> <p><b>NOTES</b></p> <p>Particular emphasis should be given to the importance of students presenting their work clearly.</p> <p>Formal written methods of addition, subtraction and multiplication work from right to left, whilst formal division works from left to right.</p>  | <p><b>Key Words:</b><br/><b>power, round</b></p> <p><b>Starter :</b> 5-a-day task<br/>Numeracy</p> <p><b>Main CW task:</b><br/>Corbett Maths<br/>Textbook Exercise:<br/><a href="https://corbettmaths.com/wp-content/uploads/2018/09/Rounding-277-pdf.pdf">https://corbettmaths.com/wp-content/uploads/2018/09/Rounding-277-pdf.pdf</a><br/>or</p> <p>MathsWatch Worksheet</p>  | <p>Exam style questions:<br/><a href="https://corbettmaths.com/wp-content/uploads/2013/02/rounding-pdf.pdf">https://corbettmaths.com/wp-content/uploads/2013/02/rounding-pdf.pdf</a></p> <p>MathsWatch Interactive Questions<br/><a href="https://vle.mathswatch.co.uk/vle/browse/186/practice">https://vle.mathswatch.co.uk/vle/browse/186/practice</a></p> | <p>Doddle lesson<br/>MW Clip 31<br/><a href="https://vle.mathswatch.co.uk/vle/browse/186">https://vle.mathswatch.co.uk/vle/browse/186</a></p> <p>Corbett Maths video:<br/><a href="https://corbettmaths.com/2013/08/17/rounding-to-the-nearest-10/">https://corbettmaths.com/2013/08/17/rounding-to-the-nearest-10/</a></p> | <p>Edexcel</p> <p>Unit 1</p> <p>Part a &amp; b</p> <p>NC Ref</p> <p>N1, N2, N3, N4, N14, N15</p> |

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|       |  | Any correct method of multiplication will still gain full marks, for example, the grid method, the traditional method, Napier's bones. Negative numbers in real life can be modelled by interpreting scales on thermometers using F and C.  | <a href="https://vle.mathswatch.co.uk/downloads/worksheets/GCSE/clip31.pdf">https://vle.mathswatch.co.uk/downloads/worksheets/GCSE/clip31.pdf</a>  | Doddle Quick test  | <a href="https://corbettmaths.com/2013/08/17/rounding-to-the-nearest-100/">https://corbettmaths.com/2013/08/17/rounding-to-the-nearest-100/</a>   |  |
| 14-15 | Rounding to a given number of decimal places<br><br><b>Grade 2</b>     | Encourage the exploration of different calculation methods. Students should be able to write numbers in words and from words as a real-life skill. Practise long multiplication and division, use mental maths problems with decimals such as 0.1, 0.001. Amounts of money should always be rounded to the nearest penny. | <p><b>Key Words:</b><br/><b>place value</b></p> <p><b>Starter :</b> 5-a-day task<br/>Numeracy</p> <p><b>Main CW task:</b><br/>Corbett Maths<br/>Textbook Exercise:<br/><a href="https://corbettmaths.com/wp-content/uploads/2019/01/Rounding-decimal-places-pdf.pdf">https://corbettmaths.com/wp-content/uploads/2019/01/Rounding-decimal-places-pdf.pdf</a></p> <p>or</p> <p>MathsWatch Worksheet<br/><a href="https://vle.mathswatch.co.uk/downloads/worksheets/GCSE/clip32.pdf">https://vle.mathswatch.co.uk/downloads/worksheets/GCSE/clip32.pdf</a></p> | Exam style questions:<br><br><a href="https://corbettmaths.com/wp-content/uploads/2013/02/rounding-pdf.pdf">https://corbettmaths.com/wp-content/uploads/2013/02/rounding-pdf.pdf</a><br><br>MathsWatch Interactive Questions<br><br><a href="https://vle.mathswatch.co.uk/vle/browse/187/pactice">https://vle.mathswatch.co.uk/vle/browse/187/pactice</a><br><br>Doddle Quick test | Doddle lesson<br><br>MW Clip 32<br><br><a href="https://vle.mathswatch.co.uk/vle/browse/187">https://vle.mathswatch.co.uk/vle/browse/187</a><br><br>Corbett Maths video:<br><br><a href="https://corbettmaths.com/2013/09/07/rounding-to-1-or-2-decimal-places/">https://corbettmaths.com/2013/09/07/rounding-to-1-or-2-decimal-places/</a> | Edexcel<br><br><b>Unit 1</b><br><br>Part a & b<br><br><br><br>NC Ref<br><br>N1, N2, N3, N4, N14, N15 |
| 16    | <b>END OF UNIT CLASSROOM TEST</b><br><br><b>UNIT 1 Parts a &amp; b</b> |   |  |  |   |  |
| 17    | <b>END OF UNIT CLASSROOM TEST FEEDBACK &amp; REFLECTION LESSON</b>     |   |  |  |   |  |