****

 **Mathematics Faculty**

 **Year 9 Autumn Term 1 – Alpha Scheme**

 **Unit 1 Overview - 4 Operations**

|  |  |  |
| --- | --- | --- |
| **Topic** | **Key Ideas** | **Progress** |
| **R** | **A** | **G** |
| **4 Operations** | I can solve multi-step problems involving the 4 operations and decimals. |  |  |  |
| I can apply the laws of indices. |  |  |  |
| I can calculate negative and simple fractional indices. |  |  |  |
| I can convert between standard form and ordinary numbers and order numbers written in these forms. |  |  |  |
| I can use the 4 rules with numbers written in standard form.  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Lesson** | **Learning Focus** | **Assessment** | **Key Words** |
| **1** | Solving multi-step problems involving the 4 operations and decimals (CM clips 90 – 94) | Formative assessment strategies e.g. MWBs, whole class questioning, Diagnostic Questions, SLOP time with self-assessment, Live Marking etc.Assessment is also supported with our use of ILOs, set through Century Learning and Corbettmaths.Finally, units are assessed through skills checks and half termly assessments, as part of our Assessment Calendar in Mathematics. | addition, sum, total, subtract, take away, minus, difference, multiply, product, division, quotient, integer, decimal |
| **2** | Knowing and applying the laws of indices including multiplication, division, stacked indices, power 0 and power 1 (CM clip 174)  | index, indices, power, exponent, base, simplify, expression, multiply, divide |
| **3** | **Calculating negative indices** (CM clip 175) | index, negative, reciprocal |
| **4** | Calculating simple fractional indices (CM clip 173) | index, fraction, root |
| **5** | Writing numbers in standard form or as ordinary numbers. Ordering numbers written in standard form and as ordinary numbers (CM clip 300) | standard form, power, index, convert |
| **6** | **Using the 4 operations with numbers written in standard form** (CM clips 301 - 303) | standard form, power, index, law, multiplication, division, addition, subtraction |
| **7** | Solving problems involving standard form (CM clips 301 - 303) | standard form, power, index, law, multiplication, division, addition, subtraction |