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**Mathematics Faculty**

**Year 10 Foundation – Autumn Term 1**

**Unit 2 Overview – Manipulating Expressions**

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| **Topic** | **Key Ideas** | **Progress** | | |
| **R** | **A** | **G** |
| **Manipulating Expressions** | I can simplify expressions involving single brackets. |  |  |  |
| I can expand double brackets. |  |  |  |
| I can factorise expressions by taking out common factors. |  |  |  |
| I can factorise quadratic expressions. |  |  |  |
| I can simplify expressions including fractions. |  |  |  |
| I can use identities. |  |  |  |
| I can show algebraic expressions are equivalent. |  |  |  |
| I can use algebra to verify a statement. |  |  |  |
| I can rearrange formulae. |  |  |  |
| I can substitute positive and negative numbers into expressions. |  |  |  |

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| **Lesson** | **Learning Focus** | **Assessment** | **Key Words** |
| **1** | Simplifying expressions by expanding brackets and collecting like terms (CM clips 9 & 13) | 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, Corbettmaths, Dr Frost Maths and Justmaths.  Finally, units are assessed through skills checks and half termly assessments, as part of our Assessment Calendar in Mathematics. | bracket, expand, term, like term, simplify |
| **2** | **Expanding double brackets (CM clip 14)** | bracket, expand, term, simplify, quadratic |
| **3** | Expanding double brackets with a coefficient of x greater than one (CM clip 14) | bracket, expand, term, simplify, coefficient, quadratic |
| **4** | **Factorising algebraic expressions by taking out common factors (CM clip 117)** | expression, factorise, factor |
| **5** | **Factorising quadratic expressions including those written as the difference of two squares (CM clip 118)** | factorise, expression, quadratic, bracket, sum, product, difference, square |
| **6** | Simplifying algebraic expressions by applying the index laws and cancelling common factors (CM clips 24 & 174) | expression, law, index, term, simplify, factorise, factor |
| **7** | Recognising and using identities. Showing algebraic expressions are equivalent. Using algebraic expressions to verify a statement. | identity, equation, expression, coefficient, expand, equate, equivalent, verify |
| **8** | **Rearranging formulae to change the subject (CM clip 7)** | formula, subject, rearrange, inverse, power |
| **9** | Substituting positive and negative values into expressions and formulae (CM clip 20) | substitute, positive, negative, expression, formula |