**Mathematics Faculty**

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

**Unit 6 Overview - Equations and Sequences**

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| **Topic** | **Key Ideas** | **Progress** |
| **R** | **A** | **G** |
| **Equations and Sequences** | I can solve equations, including those with fractions, brackets and unknowns on both sides. |  |  |  |
| I can solve inequalities and represent solutions on a number line. |  |  |  |
| I can represent inequalities graphically. |  |  |  |
| I can solve simultaneous equations. |  |  |  |
| I can factorise quadratics and solve quadratic equations. |  |  |  |
| I can calculate geometric progressions. |  |  |  |
| I can find the *nth* term of a quadratic sequence. |  |  |  |

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| **Lesson** | **Learning Focus** | **Assessment** | **Key Words** |
| **1** | Solving equations, including those with fractions, brackets and unknowns on both sides (CM clips 13, 110, 111 & 113) | 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. | equation, solve, bracket, expand, unknown, variable, coefficient, balance, inverse, fraction, numerator, denominator |
| **2** | **Solving linear inequalities and representing solutions on a number line** (CM clips 176 – 179) | solve, inequality, unknown, variable, coefficient, less than, greater than, equal, number line, boundary |
| **3** | Representing simple inequalities graphically (CM clips 180 & 181) | inequality, less than, greater than, equal, boundary, graph, axis, line |
| **4** | **Solving simple simultaneous equations** (CM clips 295 & 296) | simultaneous, equation, coefficient, variable, addition, subtraction, solve, eliminate |
| **5** | Factorising quadratic expressions (CM clip 118) | factorise, quadratic, constant, brackets, coefficient |
| **6** | Solving quadratic equations (CM clip 266) | factorise, quadratic, solve, brackets, unknown, coefficient, variable, constant |
| **7** | Calculating geometric progressions (CM clip 375) | sequence, progression, geometric, rule, multiply, term |
| **8** | **Calculating the nth term of a quadratic sequence** (CM clip 388) | quadratic, sequence, term, nth term, difference, rule, formula |