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**Mathematics Faculty**

**Year 9 Summer Term 1 - Sigma Scheme**

**Unit 10 Overview - Coordinates and Graphs**

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| **Topic** | **Key Ideas** | **Progress** |
| **R** | **A** | **G** |
| **Coordinates and Graphs** | I can plot graphs of linear equations |  |  |  |
| I can interpret gradients as a rate of change |  |  |  |
| I can calculate gradients and intercepts |  |  |  |
| I can reduce a given equation to the form y=mx + c |  |  |  |
| I can recognise, sketch and interpret parallel lines expressed in the form y = mx + c |  |  |  |
| I can find approximate solutions to linear equations using graphs |  |  |  |
| I can plot and interpret graphs in real-life contexts  |  |  |  |
| I can plot and interpret quadratic graphs |  |  |  |
| I can recognise and sketch simple cubic and reciprocal functions |  |  |  |

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| **Lesson** | **Learning Focus** | **Assessment** | **Key Words** |
| **1** | **Plotting graphs of linear equations** (CM clip 186) | 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, which alternate between Basic Skills Checks one week and then a more individual ILO the following set through Century and Corbettmaths (see learning focus). Finally, every unit is assessed half-termly as part of our Assessment Calendar in Mathematics. | coordinate, generate, graph, linear, equation, substitute |
| **2** | Interpreting gradients as a rate of change. Calculating gradients numerically and graphically. Interpreting intercepts graphically (CM clips 189 & 190) | gradient, rate, change, intercept, axis, coordinate, graph |
| **3** | Reducing a given equation to the form y=mx + c. **Recognising, sketching and interpreting parallel lines expressed in the form y = mx + c** (CM clips 187 & 191) | equation, gradient, y-intercept, rearrange, sketch, parallel |
| **4** | Finding approximate solutions to equations using graphs.  | graph, linear, equation, solution, approximate |
| **5** | Plotting and interpreting graphs in real-life contexts including distance-time (CM clip 171) | plot, graph, coordinate, interpret, speed, distance, time, gradient, horizontal |
| **6** | **Completing a table of values for quadratic graphs and plotting the corresponding graph** (CM clip 264) | coordinate, generate, graph, quadratic, equation, substitute, plot |
| **7** | Interpreting graphs of simple quadratic graphs including roots and turning points. Finding approximate solutions to quadratic equations using graphs (Corbett 267c)  | quadratic, graph, interpret, turning point, root, solution, approximate |
| **8** | Recognising, sketching and interpreting graphs of simple cubic and reciprocal functions (CM clips 344 & 346) | graph, function, cubic, reciprocal, sketch, interpret |
| **9** | Interpreting real-life curved graphs.  | graph, curved, real-life, data, interpret |