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 **Mathematics Faculty**

 **Year 11 Higher - Autumn Term 1**

 **Unit 3 Overview – Transformations and Constructions**

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| **Topic** | **Key Ideas** | **Progress** |
| **R** | **A** | **G** |
| **Transformations and Constructions** | I can transform shapes using a combination of reflections, rotations, translations and enlargements. |  |  |  |
| I can identify invariant points following a transformation. |  |  |  |
| I can construct plans and elevations. |  |  |  |
| I can bisect lines and angles and construct perpendicular lines. |  |  |  |
| I can construct loci. |  |  |  |

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| **Lesson** | **Learning Focus** | **Assessment** | **Key Words** |
| **1** | **Describing and transforming 2D shapes using combined reflections, rotations, translations and enlargements (CM clips 104 – 109, 272 – 275 & 325 – 326)** | 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 staples challenges and half termly assessments, as part of our Assessment Calendar in Mathematics. | reflect, axis, equation, rotate, centre, angle, direction, translate, vector, direction, enlarge, positive, negative, fractional, scale factor, transformation |
| **2** | **Understanding and using the term ‘invariance’ for points, lines and shapes achieved by single or combined transformations (CM clip 392)** | invariant, point, coordinate, transformation, reflection, rotation, enlargement |
| **3** | Constructing plans and elevations of 3D shapes (CM clip 354) | plan, view, elevation, construct |
| **4** | **Constructing line and angle bisectors.** Constructing a perpendicular line to a given line from/at a given point (CM clips 72 & 78 – 80) | line, angle, perpendicular, bisect, compass, arc, intersect |
| **5** | Constructing loci and solving loci problems (CM clips 75 – 77) | locus, loci, region, arc, line, parallel, equidistant  |