**** **Mathematics Faculty**

**Year 8 Autumn Term 2 – Sigma Scheme**

**Unit 3 Overview - Area and Volume**

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| **Topic** | **Key Ideas** | **Progress** |
| **R** | **A** | **G** |
| **Area and Volume** | I can solve problems involving the area and perimeter of squares, rectangles, parallelograms, triangles and trapezia. |  |  |  |
| I can identify and name parts of a circle. |  |  |  |
| I can calculate the circumference and area of a circle. |  |  |  |
| I can calculate the volume of prisms and cylinders. |  |  |  |
| I can calculate the surface area of prisms and cylinders. |  |  |  |

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| **Lesson** | **Learning Focus** | **Assessment** | **Key Words** |
| **1** | Solving problems involving the area and perimeter of squares, rectangles, parallelograms, triangles and trapezia (CM clips 44, 45, 48 & 49) | 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. | perimeter, area, square, rectangle, length, width, parallelogram, triangle, base, height, trapezium, parallel, unit, cm² |
| **2** | Recognising and naming the parts of a circle. **Calculating the circumference of a circle, including in terms of pi** (CM clips 60 & 61)  | circle, radius, diameter, chord, circumference, arc, sector, segment, tangent |
| **3** | **Calculating the area of a circle, including in terms of pi** (CM clip 40) | circle, radius, diameter, area, unit, cm² |
| **4** | Calculating the volume of prisms (CM clips 355 & 356) | volume, capacity, cube, cuboid, triangular prism, length, width, depth, cm3 |
| **5** | Calculating the volume of a cylinder (CM clip 357) | volume, cylinder, area, cross section, radius, diameter, circle, unit, cm3 |
| **6** | Calculating the surface area of prisms (CM clips 310 - 312) | surface area, face, square, rectangle, triangle, cube, cuboid, prism, length, base, height, unit, cm² |
| **7** | Calculating the surface area of a cylinder (CM clip 315) | surface area, face, circle, radius, diameter, circumference, height, unit, cm² |