** Mathematics Faculty**

**Year 9 Spring Term 2 – Alpha Scheme**

**Unit 7 Overview - Angles**

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| **Topic** | **Key Ideas** | **Progress** |
| **R** | **A** | **G** |
| **Angles** | I can solve mixed angle problems. |  |  |  |
| I understand the conditions of congruency. |  |  |  |
| I can use Pythagoras’ theorem in 2D and 3D problems. |  |  |  |
| I can find a missing length or angle of a right-angled triangle using trigonometric ratios. |  |  |  |
| I can recall and use exact trig values. |  |  |  |
| I can solve problems involving a combination of Pythagoras’ theorem and trigonometry in 2D. |  |  |  |

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| **Lesson** | **Learning Focus** | **Assessment** | **Key Words** |
| **1** | Solving mixed angle problems involving basic properties, angles in parallel lines and interior/exterior angles (CM clips 25, 30, 32, 33 34, 35, 37 & 39) | 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. | straight line, point, vertically opposite, parallel, corresponding, alternate, co-interior, interior, exterior, polygon |
| **2** | Understanding the conditions of congruency (CM clip 67) | angle, side, hypotenuse, condition, congruent, identical |
| **3** | Using Pythagoras’ theorem to find the hypotenuse or a shorter side of a right-angled triangle. Applying Pythagoras’ theorem in 3D problems. (CM clips 257 & 259) | triangle, right angle, hypotenuse, Pythagoras’ theorem, sum, square, square root |
| **4** | **Finding a missing length of a right-angled triangle using trigonometric ratios** (CM clip 330) | trigonometry, sin, cos, tan, hypotenuse, adjacent, opposite |
| **5** | **Finding a missing angle of a right-angled triangle using trigonometric ratios** (CM clip 331) | trigonometry, sin, cos, tan, hypotenuse, adjacent, opposite, inverse |
| **6** | **Recalling and using exact trig values** (CM clip 341) | trigonometry, sin, cos, tan, hypotenuse, adjacent, opposite, inverse, exact value |
| **7** | Solving problems involving a combination of Pythagoras’ theorem and trigonometry in 2D (CM clips 257, 330, 331 & 341) | trigonometry, sin, cos, tan, hypotenuse, adjacent, opposite, inverse, Pythagoras’ theorem, sum, square |