


Subject	Year	Month	
Mathematics	10	January	
<b>Topic:</b>			
<b>Angles, including polygons and parallel lines</b>			5 lessons
Content (Intent)			
<b>Prior Learning</b> Year 8 Feb Parallel lines and polygons Year 7 Jan Angle rules and 2D shapes		<b>Future Learning</b> Year 10 May Bearings	
<b>Objectives</b> <ul style="list-style-type: none"> <li>• Know understand and use angle facts associated with triangles, including a proof of, and use the fact that, the exterior angle of a triangle is equal to the sum of the interior angles at the other two vertices;</li> <li>• Know, understand and use the angle properties of quadrilaterals including the fact that the angle sum of a quadrilateral is <math>360^\circ</math>;</li> <li>• Understand and use the angle properties of parallel lines and find missing angles using the properties of corresponding and alternate angles, giving reasons;</li> <li>• Calculate and use the sums of the interior angles of regular and irregular polygons, including the sum of the interior angles of an n-sided polygon; use these to solve problems</li> <li>• Find the size of each interior angle, or each exterior angle, or the number of sides of a regular polygon, and use the sum of angles of irregular polygons;</li> <li>• Use the sum of the exterior angles of any polygon is <math>360^\circ</math>;</li> <li>• Use the sum of the interior angle and the exterior angle is <math>180^\circ</math>;</li> <li>• Understand how and why shapes tessellate by calculating interior angles</li> </ul>			
<b>Pedagogical notes (implementation)</b>		<b>How will understanding be assessed &amp; recorded (Impact)</b>	
Students must be encouraged to use geometrical language appropriately, 'quote' the appropriate reasons for angle calculations and show step-by-step deduction when solving multi-step problems. Emphasise that diagrams in examinations are seldom drawn accurately. Students must use co-interior, not supplementary, to describe paired angles inside parallel lines. (NB Supplementary angles are any angles that add to 180, not specifically those in parallel lines.)		<b>End of half term</b> Feb <b>End of Year</b> Year 10 exams in April	
		<b>How can parents help at home?</b> <b>MathsWatch clips (Qualification KS4)</b>	
<b>Further reading/discussion</b>			
<b>Reading / Enrichment</b> <a href="http://passyworldofmathematics.com/jobs-with-geometry/">http://passyworldofmathematics.com/jobs-with-geometry/</a>	<b>Literacy</b>	<b>Numeracy Links</b>	<b>Careers Links</b>