


| Subject  | Year            | Month  |  |
|--|-----------------|--|---|
| Mathematics  | 10              | March  |   |
| <b>Topic:</b>  |                 |  |   |
| <b>Interior and exterior angles of polygons</b>  |                 |  | 3 lessons   |
| Content (Intent)   |                 |  |   |
| <b>Prior Learning</b><br>Year 10 Properties of shapes and angles on parallel lines March   |                 | <b>Future Learning</b><br>Year 11 Bearings October   |   |
| <b>Objectives</b> <ul style="list-style-type: none"> <li>Recognise and name pentagons, hexagons, heptagons, octagons and decagons;</li> <li>Understand 'regular' and 'irregular' as applied to polygons;</li> <li>Use the sum of angles of irregular polygons;</li> <li>Calculate and use the sums of the interior angles of polygons;</li> <li>Calculate and use the angles of regular polygons;</li> <li>Use the sum of the interior angles of an <math>n</math>-sided polygon;</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>Identify shapes which are congruent (by eye);</li> <li>Explain why some polygons fit together and others do not</li> </ul> |                 |  |   |
| <b>Pedagogical notes (implementation)</b>  |                 | <b>How will understanding be assessed &amp; recorded (Impact)</b>  |   |
| Study Escher drawings.<br>Use examples of tiling patterns with simple shapes to help students investigate if shapes 'fit together'.  |                 | <b>End of half term no</b><br><b>End of Year</b> Year 10 exams in April  |   |
|  |                 | <b>How can parents help at home?</b><br><br><b>MathsWatch clips</b><br><br>Qualification KS3: <i>G11, G17, G19, G23, G31</i><br><br>Qualification KS4: <i>10, 12ab, 45, 121, 123</i> |   |
| <b>Further reading/discussion</b>  |                 |  |   |
| <b>Reading / Enrichment</b><br><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><br>Engineer<br>Architect<br>Carpenter                          |