Gulf English School Term 1 Year 8 Mathematics

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| TOPICS: Ratio, Polygons, Area of Triangles & Parallelograms |

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| Themes: Understanding ratio and proportion; displaying knowledge of regular/irregular polygons; Applying formulae for area of triangles 7 parallelograms  | Level: Year 8 |
| Objectives: To understand and use; methods for simplifying ratio; dividing in a given ratio; methods for creating proportions: To identify and classify polygons as regular/irregular; To apply knowledge of angle sum of a polygon to calculate interior/exterior angles; To create and solve equations involving unknown angles in polygons; To create/design patterns using tessellating polygons: To apply formulae for area of triangles & parallelograms; To explain how to calculate a missing length given an area and one length; To assess methods of calculating area of compound shapes. |

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| Focussing Questions | Key Words |
| **1-2 Ratio*** Key resources: STP Year 8 Chapter 5 Ex 5a – f
* What are the rules of working with ratio?
* What is ratio used for?
* What effect does changing all units in a ratio have?
	+ Assessment: Cumulative quiz

**3-4. Polygons:*** Key resources: STP Book Year 8 Chapter 6 Ex 6a - h
* Explain the difference between a regular & irregular polygon?
* How can we show equal sides/angles on a diagram?
* What do exterior angles sum to? Can you explain why?
* How can we predict which polygons will tessellate?
* Always / Sometimes / Never: exterior angles of a polygon add to 3600?
	+ Assessment: Cumulative quiz

**5-6. Area: Triangles & parallelograms*** Key resource: STP Book Year 8 Chapter 7 Ex 7a - f
* Explain the area of a triangle formula.
* How do we illustrate unknown quantities?
* If you calculate a missing length, how can you demonstrate your answer is correct?
* Design a question involving a compound shape. Assess the different methods available to calculate the area of your compound shape.
	+ Assessment: Cumulative quiz

Assessment: Cumulative test | RatioSimplest formProportionMultiplierEquivalent fractionsRegular polygonIrregular polygonAngle sumInterior angleExterior angleTessellationsFormulaFormulaeVariableUnknownInverseCompound shape | Explaining wordsTo convert to simplest form…You must only multiply or divide ratio because….Therefore...The definition of a regular polygon is….The properties of the interior/exterior angles of a polygon are….We can form and solve an equation if…. |

**TEXT BOOK: STP MATHEMATICS YEAR 8**