

St. Patrick's High School Keady

Mathematics Department

Learning Intentions

YEAR 8

Unit: Shape and Space

Stage: 2D Shapes

At the end of this unit **all** pupils should be able to:

- Identify horizontal, vertical, parallel and perpendicular lines.
- Describe the properties a regular shape
- Recognise the properties of various quadrilaterals
- Identify common types of polygons

At the end of this unit **most** pupils should be able to:

- Construct triangles with a ruler and protractor

At the end of this unit **some** pupils should be able to:

- Construct triangles with a ruler and compass

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Unit: Shape and Space

Stage: Perimeter and Area

At the end of this unit **all** pupils should be able to:

- Work out the perimeter of simple shapes by adding all the given sides or using squared paper
- Calculate the perimeter of regular shapes with some missing but attainable sides
- Work out or estimate the area of a shape by counting squares
- Calculate the area of a square and rectangle
- Convert between metric units of length

At the end of this unit **most** pupils should be able to:

- Calculate the perimeter of compound shapes with some missing but attainable sides
- Calculate the area of a triangle

At the end of this unit **some** pupils should be able to:

- Find the length of a side of a square, given the area
- Find the length of a side of a rectangle, given the area and another side
- Calculate the area of a compound shape made from squares, rectangles and right angled triangles with missing but attainable sides
- Calculate the area of a parallelogram
- Calculate the area of a trapezium

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Unit: Shape and Space

Stage: Angles

At the end of this unit **all** pupils should be able to:

- Define the terms: whole turn, half turn, quarter turn
- Recognise the eight points of the compass
- Use a protractor to measure and draw any angle
- Name an angle using conventional notation i.e. $\hat{A}\hat{B}\hat{C}$
- Categorise types of angles, i.e. acute, straight, obtuse, reflex
- Categorise types of triangles i.e. isosceles, scalene, right angle, equilateral

At the end of this unit **most** pupils should be able to:

- Calculate a missing angle using the appropriate angle fact
- Calculate a missing angle in a triangle

At the end of this unit **some** pupils should be able to:

- Calculate more than one missing angle using the appropriate angle fact
- Calculate missing angles in triangles using special triangles i.e. isosceles, right angled, equilateral

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Unit: Shape and Space

Stage: Time

At the end of this unit **all** pupils should be able to:

- Read and write time in digital form and in words
- Draw an analogue clock face to show a time given in digital form and in words
- Calculate time intervals

At the end of this unit **most** pupils should be able to:

- Extract information from simple timetables
- Solve time problems in context
- Interchange 12 and 24 hour times
- Add on a time interval to a given time

At the end of this unit **some** pupils should be able to:

- Subtract a time interval from a given time