

Year 6 Spring Term Unit 5 Properties of Shape

**R2P: 6G-1**

**NC:**

Draw 2D shapes using given dimension and angles.

Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangle, quadrilateral and regular polygon.

Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.

Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius

**Focus:** Properties of Shape/Circles

**Time:** 3 weeks

**Times Tables 5NF-1**

Consolidate and practice all multiplication and division facts to 12x12 – any order, missing numbers, fractions.

Use multiplication and division facts to derive associated facts.

Develop multiplicative reasoning - links between multiplication, division and fractions.

**Concept Sequence**

Measure and classify angles - use a protractor – line up protractor accurately and identify which scale to read. Read measurements and practise measuring angles in different orientations. Link to compass points. Introduce angles – know two right angles in a straight line and four right angles around a point. Make links to turns, time and compass points. Recap acute, obtuse and reflex angles.

Calculate angles – apply angles in a right angle, straight line and around a point to calculate missing/unknown angles.

Vertically opposite angles – vertically opposite angles share a vertex and these are equal. Use to calculate missing angles around a point.

Angles in triangles 1 – all angles add to 180°.

Angles in triangles 2 - special cases – use hatch marks for equal lengths. Look at isosceles and right-angled triangles.

Angles in triangles 3 - missing angle problems. Apply knowledge of angle on a straight line and around a point and vertically opposite angles.

Angles in special quadrilaterals – explore interior angles in trapeziums, parallelograms, rhombus....Note all angle and to 360°. Need to know links between rectangles/parallelograms, rhombus/square.

Angles in regular polygons – can partition into triangles. Use knowledge of straight line angles sum to 180°.

Draw shapes accurately – use squared/dotted paper. Use protractors.

Recognise, describe and build 3D shapes including nets. Identify shapes from nets.

Circles - Illustrate and name parts of circles – radius, diameter, circumference

Know diameter is twice the radius

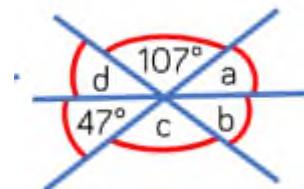
**Resources**

Protractors, Shapes, squared/dotted paper

Gordons Maths Games, Mathletics, TTRockstars

BBC Super Movers

<https://www.bbc.co.uk/teach/super-movers/ks2-collection/zr4ky9q>



**Vocabulary**

Angles, acute, obtuse, right-angled, reflex Degrees

Intersecting, vertex

Polygon, regular, irregular

2D shapes - parallelogram, rhombus, rectangle, square, circle, triangles (right-angled, equilateral, isosceles, scalene), pentagon, hexagon, octagon, quadrilateral, trapezium, kite....

3D shapes – cylinder, cone, pyramid, prism, tetrahedron, polyhedron, octahedron....

Parallel, perpendicular

Face, edge, vertex, side

**New Vocabulary**

Net, dodecahedron, circumference, diameter, radius

**Planning Links**

Power Maths/Maths No Problem/Aspire Maths

White Rose Scheme of Work:

<https://assets.whiterosemaths.com/new-schemes/Year%206%20Summer%20Block%201%20SOL%20Shape.pdf>