Bierton CE Combined School

Maths Curriculum Map: Geometry – Properties of Shape

Progression of knowledge & skills		
Year 1	**Year 2**	**Year 3**
N.C. Link • recognise and name common 2-D and 3-D shapes, including: - 2-D shapes [for example, rectangles (including squares), circles and triangles] - 3-D shapes [for example, cuboids (including cubes), pyramids and spheres].	**N.C. Link** • identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line • identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces • identify 2-D shapes on the surface of 3-D shapes [for example, a circle on a cylinder and a triangle on a pyramid] • compare and sort common 2-D and 3-D shapes and everyday objects.	**N.C. Link** • draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them • recognise angles as a property of shape or a description of a turn • identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle • identify horizontal and vertical lines and pairs of perpendicular and parallel lines
When is this topic taught in our school? Autumn: Weeks 8 (total one week and half) Spring: Week 2 and 3 (total one week and half) Summer: Week 10 (total one week)	**When is this topic taught in our school?** Spring: Week 6-9 (total 3 week)	**When is this topic taught in our school?** Summer: Week 7-9 (total three weeks)
Curriculum Prioritisation: • 1G–1 Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one another. • 1G–2 Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations.	**Curriculum Prioritisation:** • 2G–1 Use precise language to describe the properties of 2D and 3D shapes, and compare shapes by reasoning about similarities and differences in properties	**Curriculum Prioritisation:** • 3G–1 Recognise right angles as a property of shape or a description of a turn, and identify right angles in 2D shapes presented in different orientations.
Year 4	**Year 5**	**Year 6**
N.C. Link	**N.C. Link**	**N.C. Link**

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• compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes • identify acute and obtuse angles and compare and order angles up to two right angles by size • identify lines of symmetry in 2-D shapes presented in different orientations • complete a simple symmetric figure with respect to a specific line of symmetry.	• identify 3-D shapes, including cubes and other cuboids, from 2-D representations • know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles • draw given angles, and measure them in degrees (°) • identify: - angles at a point and one whole turn (total 360°) - angles at a point on a straight line and 2 1 a turn (total 180° - other multiples of 90° - use the properties of rectangles to deduce related facts and find missing lengths and angles - distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	• draw 2-D shapes using given dimensions and angles • recognise, describe and build simple 3-D shapes, including making nets • compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons • illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius -recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.
When is this topic taught in our school? Summer: Week 7- 11 (total three and a half weeks)	**When is this topic taught in our school?** Spring: Weeks 10-12 (total three weeks)	**When is this topic taught in our school?** Spring: Weeks 11-12 (total two weeks) Summer: Weeks 6-8 (total 3 weeks)
Curriculum Prioritisation: • 4G–1 Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant. • 4G–2 Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons • 4G–3 Identify line symmetry in 2D shapes presented in different orientations. Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry.	**Curriculum Prioritisation:** • 5G–1 Compare angles, estimate and measure angles in degrees (°) and draw angles of a given size. • 5G–2 Compare areas and calculate the area of rectangles (including squares) using standard units.	**Curriculum Prioritisation:** • 6G–1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.
Cultural Capital opportunities		

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Year 5 – Space – Hidden Figures (Black Mathematicians)
Year 6 – WW2 – Alan Turing and the enigma code

Achievement for All

As stated in our vision and pedagogy, at Bierton CE Combined School, we aspire for all children to achieve and 'keep up' rather than 'catch up'. In order to promote this, we implement a range of strategies throughout the school.

Strategies:

- Live marking and feedback within each lesson identifies children who require support and clarification of misconceptions
- Pre-teaching interventions at the start of the school day
- Interventions during the school day
- Focused support in class
- Additional opportunities provided to help children make connections and consolidate their learning
- Continued use of concrete manipulatives to embed core facts

Class teachers respond to the needs of the children in their class. The Maths No Problem approach includes 'white space' days, which allow teachers to provide additional teaching opportunities if a topic is not yet secure. As a result, some objectives covered may differ from the weeks stated in this document.

Opportunities beyond the National Curriculum

- Children in Early Years and Key Stage 1 have access to Numbots.
- Children in Year 2 begin to use Times Table Rock Stars in the Spring Term.
- Children in Key Stage 2 have access to Numbots and Times Table Rock Stars.
- Maths Medley / Fun with Numbers after school clubs offer enrichment activities.
- Maths No Problem provides 'white space' days to explore topics in further detail.
- Cross-curricular opportunities provided in other subjects (e.g. statistics in Science and topic).
- Children throughout the school celebrate Number Day
- Challenges provided throughout the year to promote enthusiasm and engagement.
- Year 6 children participate in Young Enterprise.

Please refer to our long term plan for reference to possible alterations for when certain objectives will be taught.