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| **Year 6 - Building and assessing the conceptual understanding and learning – Geometry** | | | |
| **End of Year Expectations:**  **Properties of shapes**  Pupils should be taught to:   * 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.   **Position and direction**  Pupils should be taught to:   * describe positions on the full coordinate grid (all four quadrants) * draw and translate simple shapes on the coordinate plane, and reflect them in the axes. | | **Non-statutory guidance:**  **Properties of shapes**  Pupils draw shapes and nets accurately, using measuring tools and conventional markings and labels for lines and angles.  Pupils describe the properties of shapes and explain how unknown angles and lengths can be derived from known measurements.  These relationships might be expressed algebraically e.g. d = 2 × r; a = 180 - (b + c).  **Position and direction:**  Pupils draw and label a pair of axes in all four quadrants with equal scaling. This extends their knowledge of one quadrant to all four quadrants, including the use of negative numbers.  Pupils draw and label rectangles (including squares), parallelograms and rhombuses, specified by coordinates in the four quadrants, predicting missing coordinates using the properties of shapes. These might be expressed algebraically e.g. translating vertex (a, b) to (a-2, b+3); (a, b) and (a+d, b+d) being opposite vertices of a square. | |
| **Autumn** | **Spring** | | **Summer** |
| **See NCETM “Teaching for Mastery” Year 6 book – geometry**  <https://www.ncetm.org.uk/public/files/23305653/Mastery_Assessment_Y6_Low_Res.pdf> | * 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. * Make links with algebra, where formulae can be used e.g. to calculate a missing angle * describe positions on the full coordinate grid (all four quadrants) * draw and translate simple shapes on the coordinate plane, and reflect them in the axes. | | Revision  Continue to practise and embed skills through revision units. |

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| **Key questions:** | **Key questions:**   * Can I draw 2D shapes when given dimensions and angles? * Can I recognize and make simple 3D shapes, including making nets? * Can I compare and classify geometric shapes? * Can I find unknown angles in triangles, quadrilaterals and regular polygons? * Can I illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius? * Can I recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles? * Can I use formulae in geometry? * Can I describe positions on the full coordinate grid (all four quadrants)? * Can I draw and translate simple shapes on the coordinate plane, and reflect them in the axes? | **Key questions:** |