Highgate Primary
Year 6 Maths Curriculum

WALT: We Are Learning To
WAP: We Are Practising

Number
Measurement
Geometry
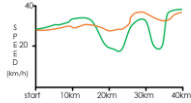Statistics
Algebra
Ratio and Proportion

**Spring 2: The Swinging 60s**

| Week | Unit | National Curriculum objectives<br>Possible lesson objectives | White Rose Maths (WRM)<br>'small steps' | Models and images representing number<br>Key vocabulary | Reasoning<br>(in addition to WRM questions) | Fluency |
|------|------|------|------|------|------|------|
| 1 | **Measurement**<br>**Area, perimeter and volume (2)** | | | | | |
| | | • recognise when it is possible to use formulae for area and volume of shapes<br>• calculate the area of parallelograms and triangles<br>• calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres and cubic metres and extending to other units | • Area of a parallelogram<br>• Volume - counting cubes<br>• Volume of a cuboid | Bar model | **Visualising**<br>Jess has 24 cubes which she builds to make a cuboid. Write the dimensions of cuboids that she could make. List all the possibilities.<br>**Drawing**<br>Draw a net for a cuboid that has a volume of 24 cm3<br>**NRICH Cylinder Cutting** | MyMiniMaths |
| 2 | **Ratio and proportion** | | | | | |
| | | • solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts<br>• solve problems involving unequal sharing and grouping using knowledge of fractions and multiples | • Use ratio language<br>• Ratio and fractions<br>• Introducing the ratio symbol<br>• Calculating ratio | Counters, bar model, Cuisenaire | **True or false**<br>Last season, for every 3 goals that Dan scored, Anil scored 2 goals.<br>For each statement, say if it is possible or impossible:<br>In total, Dan and Anil scored 18 goals.<br>Anil scored 10 goals.<br>Dan scored 15 goals and Anil scored 6 goals.<br>In total, Dan and Anil scored 35 goals.<br>**How Many Ways**<br>Ben has 3 times as many conkers as Holly. In total, Ben and Holly have less than 25 conkers. Holly has more than 3 | MyMiniMaths |

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| | | | conkers. How many conkers does Ben have?<br>How many possible answers are there?<br>**NRICH Pumpkin Pie Problem**<br>**NRICH Orange Drink** | |
| 3 | • solve problems involving similar shapes where the scale factor is known or can be found | • Using scale factors<br>• Calculating scale factors<br>• Ratio and proportion problems | - | **Unpicking**<br>A recipe needs to include three times as much apple than peach. The total weight of apples and peaches in a recipe is 700 grammes. How much apple do I need?<br>**NRICH Mixing Lemonade** (online)<br>**NRICH Tray Bake** | MyMiniMaths |
| 4 | **Statistics** | | | | |
| | • interpret and construct pie charts and line graphs and use these to solve problems<br>• illustrate and name parts of circles including radius, diameter and circumference and know that the diameter is twice the radius | • Read and interpret line graphs<br>• Draw line graphs<br>• Use line graphs to solve problems<br>• Circles | - | **Is this true or false?**<br>Convince me. Make up your own 'true/false' statement about a pie chart.<br>**Drawing conclusions**<br><br>This graph shows the speeds of Nada and Amy in the race. Describe the difference between their races. Which cyclist do you think finished first - Nada or Amy?<br>**NRICH Graphing Number Patterns** | MyMiniMaths |
| 5 | • interpret and construct pie charts and line graphs and use these to solve problems<br>• calculate and interpret the mean as an average | • Read and interpet pie charts<br>• Pie charts with percentages<br>• Draw pie charts<br>• The mean | - | **Missing information**<br>The mean score in six test papers in a spelling test of 20 questions is 15.Five of the scores were 13 12 17 18 16 What was the missing score?<br>**Create a questions** Make up a set of five numbers with a mean of 2.7<br>**NRICH Birdwatch**<br>**NRICH Presenting the Project** | MyMiniMaths |
| 6 | **Geometry**<br>**Properties of shape (1)** | | | | |

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| <ul><li>find unknown angles in any triangles, quadrilaterals and regular polygons</li><li>recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles</li><li>find unknown angles in any triangles, quadrilaterals and regular polygons</li><li>recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles</li></ul> | <ul><li>Measure with a protractor</li><li>Introduce angles</li><li>Calculate angles</li><li>Vertically opposite angles</li><li>Angles in a triangle</li></ul> | - | **Possibilities**<br>One angle at the point where the diagonals of a rectangle meet is 36 degrees. What could the other angles be? Convince me.<br><br><br><br>**NRICH Olympic Turns**<br>**NRICH Triangles in Circles** (easy, then hard!) | MyMiniMaths |