Highgate Primary
Year 5 Maths Curriculum

WALT: We Are Learning To
WAP: We Are Practising

Number
Measurement
Geometry
Statistics

Summer 2: A Village School

Week	Unit	National Curriculum objectives Possible lesson objectives	White Rose Maths (WRM) 'small steps'	Models and images representing number Key vocabulary	Reasoning (in addition to WRM questions)	Fluency
1	**Geometry** **Shape (2)**					
	• identify 3-D shapes, including cubes and other cuboids, from 2-D representations • 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 WALT derive lengths and angles in shapes on a grid WAP finding lengths and angles in a range of shapes WAL the difference between regular and irregular polygons WALT reason about 3-D shapes and create them from 2-D nets WALT reason about 3-D shapes and create 2-D representations on isometric paper	• Calculating lengths and angles in shapes • Regular and irregular polygons • Reasoning about 3-D shapes	-	**What's the same, what's different?** The net of a cube and the net of a [non-cube] cuboid. **Visualising** I look at a large cube which is made up of smaller cubes.  If the larger cube is made up of between 50 and 200 smaller cubes what might it look like? **Connected Calculations** This equation represents the angles in degrees of an isosceles triangle. A + B + C = 180 degrees A and B are equal and are multiples of 5. Give an example of what the 3 angles could be. Write down 3 more examples. **NRICH Guess What?** **NRICH Egyptian Rope**	Calculating with fractions and finding equivalent fractions
2	**Geometry** **Position and direction**					
	• identify, describe and represent the position of a shape following a translation, using the appropriate language, and know that the shape has not changed WAP plotting coordinates in the first quadrant	• Describe position *(WRM revision)* • Draw on a grid *(WRM revision)* • Position in the first	-	**True or false?** A point with coordinates (3,3) can only be moved down or to the left a maximum of 3 grid squares. Explain you reasoning. **Working backwards**	Number facts: times tables and division facts

	WAP drawing shapes on a grid WAL how a coordinate describes movement from the origin WALT translate shapes on a grid WALT use coordinates to describe translations	quadrant • Translation • Translation with coordinates		A square is translated 3 squares down and one square to the right. Three of the coordinates of the translated square are: (3, 6) (8, 11) (8, 6) What are the co-ordinates of the original square? **NRICH Treasure Hunt** (Level 1 – online resource)	
3	• identify, describe and represent the position of a shape following a reflection, using the appropriate language, and know that the shape has not changed WAP drawing lines of symmetry WAP completing symmetric figures WALT reflect shapes which do not touch the mirror line WALT use coordinates to describe and draw reflections WAP creating reflected patterns *(not WRM)*	• Lines of symmetry *(WRM revision)* • Complete a symmetric figure *(WRM revision)* • Reflection • Reflection with coordinates	-	**Always, sometimes, never** The number of lines of reflective symmetry in a regular polygon is equal to the number of its sides n. **Do, then explain** Draw a simple shape on a coordinate grid, then draw a horizontal mirror line above or below it. Use the coordinates to reflect the shape about the mirror line. Explain how you did it, then repeat for a vertical mirror line.	Number facts: addition and subtraction
4	**Measurement** **Converting units**				
	• convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) • use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling WAP converting between metres and kilometres WALT convert between grams and kilograms WALT convert between metres and millimetres WALT convert between litres and millilitres WALT choose appropriate metric units and convert between them	• Kilometres *(WRM revision)* • Kilograms and kilometres • Millimetres and millilitres • Metric units	Bar model, ruler, metre stick, other measuring scales **Introduce** Double number line	**Write more statements** Mr Smith needs to fill buckets of water. A large bucket holds 6 litres and a small bucket holds 4 litres. If a jug holds 250 ml and a bottle holds 500 ml suggest some ways of using the jug and bottle to fill the buckets. **The answer is ….** 0.3km What is the question? **Top tips** Create a diagram or table which will help people convert between these metric units of length: mm cm m km	Place value – larger numbers and to 3 decimal places
5	• understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints • solve problems involving converting between	• Imperial units • Converting units of time • Timetables	Ruler, metre stick, other measuring scales, bar model	**Working backwards** Put these lengths of time in order starting with the longest time. 105 minutes	Adding and subtracting decimals

	units of time • use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling WALT give approximate equivalents to imperial and metric measures WAP converting between imperial and metric measures WALT convert between units of time WALT read a timetable WALT reason about the information in a timetable			1 hour 51 minutes 6360 seconds **What do you notice?** 1 minute = 60 seconds 60 minutes = ☐ seconds Fill in the missing number of seconds. Write down some more time facts like this. **What's the same, what's different** ...between a timetable and a line graph. **Comparison** My height in metric units is 1.75 m. In Imperial units it's 5 ft 9 inches. Which way of describing my height do you prefer? Why?	
6	**Measurement** **Volume**				
	• estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water] WAL the difference between volume and capacity WALT understand conservation of volume WALT compare the volume of different 3-D objects WALT use cubes and cuboids to estimate volume WALT use estimate the capacity of a container	• What is volume • Compare volume • Estimate volume • Estimate capacity	-	**Always, sometimes, never** A cuboid is taller than a cube made if both are made with the same number of smaller cubes. **Another, and another, …** Make a cuboid from smaller cubes where the height is twice the length which is twice the width. How many small cubes did you use? Now make another, … and another… **Other possibilities** A cuboid is made up of 36 smaller cubes.  If the cuboid has the length of two of its sides the same [?] what could the dimensions be? Convince me. **NRICH Pouring Problem** (online resource)	The four operations with integers