Highgate Primary
Year 5 Maths Curriculum

Number
Measurement
Geometry
Statistics

WALT: We Are Learning To
WAP: We Are Practising

Autumn 1: A Victorian Education

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	**Warm-Up Week** **Times table revision**					
2	**Number** **Place value to 1 million**					
	• read and write numbers to at least 1 000 000 and determine the value of each digit • count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 • round any number up to 1 000 000 to the nearest 10, 100 and 1000 • solve number problems and practical problems WALT represent numbers up to 10 000 with concrete resources WALT represent numbers up to 10 000 with diagrams WAP rounding to the nearest 10 WAP rounding to the nearest 100 WALT round to the nearest 10, 100 or 1000	• 1000s, 100s, 10s and 1s • Numbers to 10 000 • Rounding to the nearest 10 • Rounding to the nearest 100 • Rounding to the nearest 10, 100 or 1000	Base-10, place value counters, part-whole model, empty numberline	**Possible answers** A number rounded to the nearest thousand is 76000 What is the largest possible number it could be? **What do you notice?** Round 44997 to the nearest 1000. Round it to the nearest 10000. What do you notice? Can you suggest other numbers like this? **Top Tips** What are your top tips for rounding?	Addition and subtraction facts to 100
3	• read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit • count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 • round any number up to 1 000 000 to the nearest 10, 100 and 1000 and 10 000 • solve number problems and practical problems WALT partition numbers to 100 000 WALT compare and order numbers represented in different ways	• Numbers to 100 000 • Compare and order numbers to 100 000 • Round numbers within 100 000 • Numbers to 1 million • Counting in 10s, 100s, 1000s, 10 000s and 100 000s	Place value grid, counters, bar model, part-whole model, empty numberline **Introduce** Gattegno chart	**Spot the mistake:** 177000,187000,197000,217000 What is wrong with this sequence of numbers? **True or False?** When I count in 10's I will say the number 10100? Explain your answer. **Give further examples** Create six digit numbers where the digit sum is five and the thousands digit is two, e.g. 3002000. What are the largest and smallest numbers you can make?	Addition and subtraction methods

	WALT round numbers within 100 000 WALT partition numbers to 1 million WALT count in powers of 10			**NRICH Space Distances**	
4	• order and compare numbers to at least 1 000 000 and determine the value of each digit • interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero • round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 • solve number problems and practical problems • read Roman numerals to 1000 (M) and recognise years written in Roman numerals WALT reason about numbers WALT round numbers to 1 million to any power of 10 WALT to solve difference problems involving negative numbers WALT calculate with negative numbers WAL Roman numerals to 1000, including D and M	• Compare and order numbers to 1 million • Round numbers to 1 million • Negative numbers • Roman numerals to 1000	Empty numberlines, printed numberlines, cubes, Numicon	**Do, then explain** 747014 774014 747017 774077 744444 If you wrote these numbers in order starting with the smallest, which number would be third? Explain how you ordered the numbers. **NRICH Tug Harder!** **NRICH Sea Level** **NRICH Roman Numerals**	Times table round-up
5	**Number** **Calculation: Addition and subtraction**				
	• add and subtract whole numbers with more than 4 digits, including using formal written methods • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why WAP using different columnar methods to add 4-digit numbers WAP use the column method for harder 4-digit addition WALT use the column method to add any whole numbers WAP using different columnar methods to subtract 4-digit numbers WAP use the column method for harder 4-digit addition	• Add 4-digit numbers – one exchange • Add 4-digit numbers – two+ exchanges • Add whole numbers with more than 4 digits • Subtract 4-digit numbers – one exchange • Subtract 4-digit numbers – more than one exchange	Place value grid, place value counters, column layout, bar model, Gattegno chart	**Convince me** □ + 1475 = 6□ 24 What numbers/digits go in the boxes? What different answers are there? Convince me **NRICH Reach 100** **NRICH Subtraction Surprise**	Division within times tables

6	• add and subtract whole numbers with more than 4 digits, including using formal written methods • use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy • solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why WALT use columnar methods to subtract any whole number WALT use the column method to subtract any whole number WALT estimate to find approximate solutions WALT use the inverse to check our calculations WALT solve addition and subtraction problems with more than one step	• Subtract whole numbers with more than 4 digits • Round to estimate and approximate • Inverse operation • Multi-step problems	Place value grid, place value counters, column layout, empty numberline, bar model	**Hard and easy questions** Which questions are easy / hard? 213323 - 70 = 512893 + 300 = 819354 - 500 = 319954 + 100 = Explain why you think the hard questions are hard **Visualise it** Draw a bar model that could be used for a 2-step word problem. Then write a problem to fit! **The answer is…** …123 456 What's the (interesting) question?	Multiplication calculations
7	**Statistics (1)**				
	• solve comparison, sum and difference problems using information presented in a line graph WAP reading bar charts and pictograms WALT use bar charts and pictograms to answer questions involving comparison, sum and difference WAL the difference between discrete and continuous data WALT interpret and construct a line graph	• Interpret charts • Comparison, sum and difference • Introduce line graphs	Tables, bar charts, pictograms, line graphs	**What's the same, what's different…** … between a pictogram, bar chart and line graph	Division calculations
8	• solve comparison, sum and difference problems using information presented in a line graph WALT read and interpret line graphs WALT draw line graphs WALT gather data to answer a questions WALT construct a line graph to present data WALT interpret a line graph to answer our question	• Read and interpret line graphs • Draw line graphs • Use line graphs to solve problems	Tables, line graphs	**Can and cannot** Write down some questions that this graph can be used to answer; now write down some that it cannot and explain why not	Fractions of amounts