

WALT: We Are Learning To  
WAP: We Are Practising

## Spring 1: Our Place in Space

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	<b>Number</b> <b>Calculation: Multiplication and division (2)</b>					
		<ul style="list-style-type: none"> <li>multiply numbers up to [3] digits by a one-digit number using a formal written method</li> <li>multiply numbers mentally drawing upon known facts</li> </ul> <p>WAP the column method for multiplication with concrete resources WAP column multiplication for larger numbers, using concrete resources</p>	<ul style="list-style-type: none"> <li>Multiply 2-digits by 1-digit (WRM revision)</li> <li>Multiply 3-digits by 1-digit (WRM revision)</li> </ul>	Place value counters, place value grid, column layout	<b>NRICH Picture Your Method</b>	Mental multiplication using known facts
2		<ul style="list-style-type: none"> <li>multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers</li> <li>multiply numbers mentally drawing upon known facts</li> </ul> <p>WALT use concrete resources for column multiplication with thousands WALT use Dienes for the area model of multiplication WALT use the area model to multiply WALT use the long multiplication method WALT compare the long multiplication method and the area model [not WRM]</p>	<ul style="list-style-type: none"> <li>Multiply 4-digits by 1-digit</li> <li>Multiply 2-digits (area model)</li> <li>Multiply 2-digits by 2-digits</li> </ul>	Place value counters, place value grid, column layout, base-10, area model [grid method]	<b>Use a fact</b> To multiply by 25 you multiply by 100 and then divide by 4. Use this strategy to solve $48 \times 25$ $78 \times 25$ $4.6 \times 25$ <b>What's the same, what's different?</b> The area model and long multiplication. <b>NRICH Trebling</b> <b>NRICH All the Digits</b> <b>NRICH Compare the Calculations</b> (for multiplication)	Mental multiplication using known facts
3		<ul style="list-style-type: none"> <li>multiply numbers up to 4 digits by a two-digit number using a formal written method, including long multiplication</li> <li>divide numbers mentally drawing upon known facts</li> </ul>	<ul style="list-style-type: none"> <li>Multiply 3-digits by 2-digits</li> <li>Multiply 4-digits by 2-digits</li> <li>Divide 2-digits by 1-</li> </ul>	Column layout, area mode Place value counters, place value grid, part-whole model, counters	<b>Always, sometimes, never</b> Multiplying a 3-digit number by a 1-digit number is easier than dividing a 3-digit number by a 1-digit number. Convince me of your answer.	Mental division using known facts

	<p>WALT use the grid method and the area model to multiply 3-digit numbers</p> <p>WALT use the grid method and the area model to multiply 4-digit numbers</p> <p>WAP using sharing to divide, without exchanging</p> <p>WAP using sharing to divide, with exchanging</p> <p>WAP using sharing to divide, with remainders</p>	<p>digit (1) (<i>WRM revision</i>)</p> <ul style="list-style-type: none"> <li>• Divide 2-digits by 1-digit (2) (<i>WRM revision</i>)</li> <li>• Divide 3-digits by 1-digit (<i>WRM revision</i>)</li> </ul>		<p><b>Size of an answer</b></p> <p>The product of a two digit and three digit number is approximately 6500. What could the numbers be?</p> <p><b>Prove It</b></p> <p>What goes in each missing box?</p> <p>12 □ 2 ÷ 6 = 212</p> <p>14 □ 4 ÷ 7 = 212</p> <p>22 □ 3 ÷ 7 = 321 r 6</p> <p>323 x □1 = 13243</p> <p>Prove it.</p> <p><b>NRICH Compare the Calculations</b> (for division)</p>	
4	<ul style="list-style-type: none"> <li>• divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context</li> </ul> <p>WALT divide by partitioning and grouping – no exchanging</p> <p>WALT divide by partitioning and grouping – with exchanging</p> <p>WALT divide with remainders</p> <p>WALT understand remainders in context</p> <p>WAP short division (<i>not WRM</i>)</p>	<ul style="list-style-type: none"> <li>• Divide 4-digits by 1-digit</li> <li>• Divide with remainders</li> </ul>	Place value counters, place value grid, column layout	<p><b>Making links</b></p> <p>Apples weigh about 170 g each. How many apples would you expect to get in a 2 kg bag?</p> <p><b>NRICH Division Rules</b></p> <p><b>NRICH Four Goodness Sake</b></p> <p><b>NRICH Highest and Lowest</b></p> <p><b>NRICH Make 100</b></p>	Mental calculation with 4 operations
5	<p><b>Number Fractions (1)</b></p>				
	<ul style="list-style-type: none"> <li>• identify, name and write equivalent fractions of a given fraction, represented visually</li> </ul> <p>WAP using mathematical vocabulary to talk about fractions</p> <p>WAP finding equivalent fractions</p> <p>WALT use concrete models to find equivalent fractions</p> <p>WALT use numerical methods to find equivalent fractions</p> <p>WAP using the part-whole model for fractions greater than 1</p>	<ul style="list-style-type: none"> <li>• What is a fraction? (<i>WRM revision</i>)</li> <li>• Equivalent fractions (1) (<i>WRM revision</i>)</li> <li>• Equivalent fractions</li> <li>• Fractions greater than 1 (<i>WRM revision</i>)</li> </ul>	Cuisenaire rods, Numicon, bar model, paper strips, cubes, part-whole model	<p><b>Odd one out.</b></p> <p>Which is the odd one out in each of these collections of 4 fractions, and why?</p> <p>6/10 3/5 18/20 9/15</p> <p>30/100 3/10 6/20 3/9</p> <p><b>Top tips</b></p> <p>What are your top tips for identifying equivalent fractions?</p> <p><b>NRICH Tumbling Down</b></p>	Primes, squares, cubes; factors and products
6	<ul style="list-style-type: none"> <li>• recognise mixed numbers and improper fractions and convert from one form to the other and</li> </ul>	<ul style="list-style-type: none"> <li>• Improper fractions to mixed numbers</li> </ul>	Cubes, bar model, counting stick, number	<p><b>Do, then explain</b></p> <p>Can you improve the way this number</p>	Addition and subtraction fact families based on

	<p>write mathematical statements <math>&gt; 1</math> as a mixed number [for example, <math>2/5 + 4/5 = 6/5 = 1 \frac{1}{5}</math>]</p> <p>WALT convert improper fractions to mixed numbers</p> <p>WALT convert mixed numbers to improper fractions</p> <p>WALT use fractions as counting numbers</p> <p>WALT complete and create fraction number sequences</p>	<ul style="list-style-type: none"> <li>• Mixed numbers to improper fractions</li> <li>• Number sequences</li> </ul>	line	<p>sequence is written?</p> <p><math>1 \frac{1}{6}</math>, <math>1 \frac{1}{3}</math>, <math>1 \frac{3}{6}</math>, <math>1 \frac{4}{6}</math>, <math>1 \frac{5}{6}</math>, <math>1 \frac{12}{6}</math>, <math>2 \frac{1}{6}</math>, <math>7/3</math>, <math>2 \frac{1}{2}</math></p> <p>Explain what you've done.</p> <p><b>Always, sometimes, never</b></p> <p>Improper fractions have a numerator greater than the denominator</p> <p>Improper fractions have a numerator greater than 2</p> <p><b>Top tips</b></p> <p>Tell me how to change an improper fraction into a mixed number.</p>	<p>bonds to 100, 1000 and 10 000</p>
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