







# Grade 4 Unit 2 Family Resource

## Unit Name: Use Multiplication and Division

What's my child learning in Unit 2?	What does this mean? What does it look like?	How can I help my child at home?									
<ul style="list-style-type: none"> <li>Students will find all factor pairs for a whole number between 1-100 and recognize that a whole number is a multiple of each of its factors.</li> </ul>	<p style="text-align: center;"><b>Factoring</b></p> <p>Factor - One of two or more numbers that are multiplied together to get a product (answer).</p> <p>Ex. <math>6 \times 7 = 42</math>     6 and 7 are factors of 42</p> <div style="display: flex; justify-content: center; align-items: center;"> <div style="text-align: center;"> <p>30</p> <p>Factors</p> </div> <div style="margin-left: 20px;"> <table border="1"> <thead> <tr> <th colspan="2">Factor Pairs</th> </tr> </thead> <tbody> <tr><td>1,30</td></tr> <tr><td>2,15</td></tr> <tr><td>3,10</td></tr> <tr><td>5,6</td></tr> </tbody> </table> </div> </div>	Factor Pairs		1,30	2,15	3,10	5,6	 <p>Blast incoming meteors in space while practicing your multiplication facts with <a href="#">Meteor Multiplication!</a></p>			
Factor Pairs											
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2,15											
3,10											
5,6											
<ul style="list-style-type: none"> <li>Students will determine whether a given whole number is prime or composite in the range of 1-100.</li> </ul>	<p style="text-align: center;"><b>Prime vs. Composite Numbers</b></p> <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th style="color: green;">Prime</th> <th style="color: red;">Composite</th> </tr> </thead> <tbody> <tr> <td>have only 2 factors (1 and itself)</td> <td>have more than 2 factors</td> </tr> <tr> <td>2,3,5,7,11</td> <td>4,6,8,9,12,14</td> </tr> <tr> <td colspan="2">0 and 1 are neither</td> </tr> </tbody> </table>	Prime	Composite	have only 2 factors (1 and itself)	have more than 2 factors	2,3,5,7,11	4,6,8,9,12,14	0 and 1 are neither		 <p><a href="#">Fruit Splat</a> - An interactive game in which you identify whether numbers are prime or composite</p>	
Prime	Composite										
have only 2 factors (1 and itself)	have more than 2 factors										
2,3,5,7,11	4,6,8,9,12,14										
0 and 1 are neither											
<ul style="list-style-type: none"> <li>Students will generate a number or shape pattern that follows a given rule and identify features of the pattern that are not explicit to the rule itself.</li> </ul>	<p>Example:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Pattern</th> <th>Rule</th> <th>Feature(s)</th> </tr> </thead> <tbody> <tr> <td>3, 8, 13, 18, 23, 28, ...</td> <td>Start with 3, add 5</td> <td>The numbers alternately end with a 3 or 8</td> </tr> <tr> <td>5, 10, 15, 20 ...</td> <td>Start with 5, add 5</td> <td>The numbers are multiples of 5 and end with either 0 or 5. The numbers that end with 5 are products of 5 and an odd number. The numbers that end in 0 are products of 5 and an even number.</td> </tr> </tbody> </table>	Pattern	Rule	Feature(s)	3, 8, 13, 18, 23, 28, ...	Start with 3, add 5	The numbers alternately end with a 3 or 8	5, 10, 15, 20 ...	Start with 5, add 5	The numbers are multiples of 5 and end with either 0 or 5. The numbers that end with 5 are products of 5 and an odd number. The numbers that end in 0 are products of 5 and an even number.	 <p><a href="#">Number Patterns</a> - Interactive game involving patterns of numbers</p>
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<ul style="list-style-type: none"> <li>Students will distinguish between additive and multiplicative comparison situations using concrete materials, pictures, words, and numbers.</li> </ul>	<div style="background-color: #ADD8E6; padding: 5px; margin-bottom: 10px;"> <b>Big Idea</b>    There are two kinds of comparison: <span style="color: orange;">additive</span> and <span style="color: purple;">multiplicative</span>.     </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><span style="color: orange;">Additive</span> comparison focuses on the <span style="color: orange;">difference</span> between two quantities.</p> <p>How <span style="color: orange;">much more</span> is 15 than 5?</p>  <p><math>15 - 5 = 10</math></p> <p>15 is 10 <span style="color: orange;">more than</span> 5.</p> </div> <div style="width: 45%;"> <p><span style="color: purple;">Multiplicative</span> comparison focuses on comparing two quantities by showing that a quantity is some number of <span style="color: purple;">times larger</span> than another.</p> <p>How <span style="color: purple;">many times larger</span> is 15 than 5?</p> <div style="display: flex; justify-content: center; gap: 5px;"> <div style="border: 1px solid black; padding: 2px 5px;">5</div> <div style="border: 1px solid black; padding: 2px 5px;">5</div> <div style="border: 1px solid black; padding: 2px 5px;">5</div> </div> <div style="border: 1px solid black; padding: 2px 5px; margin: 5px 0;">5</div> <p><math>5 \times 3 = 15</math></p> <p>15 is 3 <span style="color: purple;">times larger</span> than 5.</p> </div> </div>	<p><a href="#">Thinking Blocks: Addition</a>  teaches children how to model and solve word problems involving addition and subtraction.</p> <p><a href="#">Thinking Blocks: Multiplication</a>  teaches children how to model and solve word problems involving multiplication and division.</p>									

- Students will multiply a whole number of up to 4 digits by a one digit whole number using strategies based on place value and the properties of operations.

### Example Strategies for $324 \times 6 = ?$

Partial Products		Area Model
$324$	$300 + 20 + 4$	$\times \begin{array}{r} 300 \\ 20 \\ 4 \end{array}$
$\underline{\times 6}$	$6 \times 4$	$6 \begin{array}{ c c c } \hline 1,800 & 120 & 24 \\ \hline \end{array}$
$24$	$6 \times 20$	
$120$	$6 \times 300$	
$\underline{1,800}$		$1,800 + 120 + 24 = 1,944$
$1,944$		

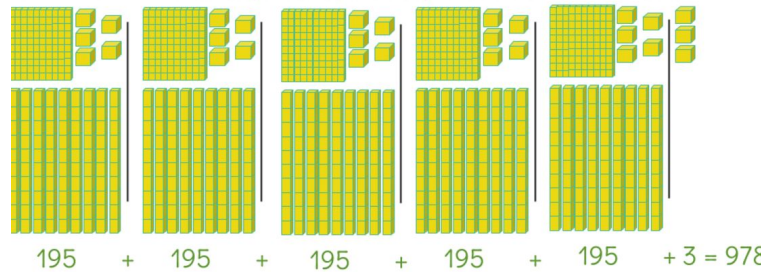


[Does your fourth grader multiply two digit numbers \(or larger\)?](#)

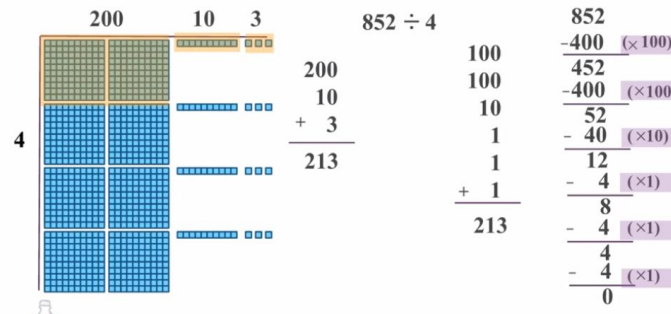
- Students will divide a whole number of up to 3 digits by a one digit whole number with remainders using strategies based on place value, properties of operations, and/or the relationship between multiplication and division.

### Equal Groups with Base 10 Blocks:

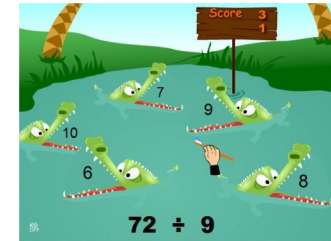
$978 \div 5 = 1$  hundred,  $9$  tens,  $5$  ones, with a remainder of  $3$



### Partial Quotients:



[Video with Additional Strategy Information](#)



[From Division Demolition to Division Dragons - choose from a variety of games to help master your division proficiency.](#)