

Grade 4 Mathematics – Unit 2: Whole Number Multiplication and Division

Phoenixville Area School District

Stage 1 Desired Results		
<p>PA Core Standards: <u>CC.2.1.4.B.2</u> Use place-value understanding and properties of operations to perform multi-digit arithmetic</p> <p><u>CC.2.2.4.A.1</u> Represent and solve problems involving four operations</p> <p><u>CC.2.2.4.A.2</u> Develop and/or apply number theory concepts to find factors and multiples</p> <p>PSSA Assessment Anchors: <u>M04.A-T.2.1</u> Use operations to solve problems</p> <p><u>M04.B-0.1.1</u> Use numbers and symbols to model the concepts of expressions and equations</p>	Transfer	
	<p>TRANSFER GOALS <i>Students will be able to independently use their learning to...</i></p> <ul style="list-style-type: none"> • Fluency: Demonstrate automatic recall of addition, subtraction, multiplication and division facts • Problem-solving: Persistently apply various problem-solving strategies and organized approaches to accurately understand and solve problems • Mathematical Vocabulary: Interpret mathematical vocabulary and apply proper terminology to engage in meaningful oral and written expression that communicates mathematical thinking, problem-solving methods, and rationale 	
	Meaning	
	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;"> <p>UNDERSTANDINGS <i>Students will understand that...</i></p> <ul style="list-style-type: none"> • Operations and numerical properties increase computational fluency. • Depending on the situation, problems may be solved using a variety of tools and strategies • Mathematicians require perseverance and resilience when creating solutions. </td> <td style="width: 50%;"> <p>ESSENTIAL QUESTIONS <i>Students will keep considering...</i></p> <ul style="list-style-type: none"> • Have I sufficiently supported my answer and shown my work? • How are the basic operations related to one another? How do numerical properties assist in computation? • What information and strategies do I use to solve this problem? What is the right tool (operation/strategy/technology) for the job? </td> </tr> </table>	<p>UNDERSTANDINGS <i>Students will understand that...</i></p> <ul style="list-style-type: none"> • Operations and numerical properties increase computational fluency. • Depending on the situation, problems may be solved using a variety of tools and strategies • Mathematicians require perseverance and resilience when creating solutions.
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Knowledge and Skills Acquisition		
<p>KNOWLEDGE <i>Students will know...</i></p> <ul style="list-style-type: none"> • The factor of a number is a whole number and when a given number is divided by its factor, it does not leave a remainder • Division is used to determine whether a number is a factor of another number 	<p>SKILLS <i>Students will be skilled at...</i></p> <ul style="list-style-type: none"> • Multiply a whole number up to four digits by a one-digit whole number and multiply 2 two-digit numbers 	

<p><u>M04.B-O.2.1</u> Develop and apply number theory concepts to represent numbers in various ways</p>	<ul style="list-style-type: none"> • A number is a multiple if it can be divided exactly by the lesser number • Place value is used to multiply and divide multi-digit numbers • Division is the inverse of multiplication <p>VOCABULARY</p> <ul style="list-style-type: none"> • Quotient • Product • Dividend • Divisor • Factor • Multiple 	<ul style="list-style-type: none"> • Divide up to four-digit dividends by one-digit divisors with answers written as whole-number quotients and remainders • Estimate the answer to multiplication and division problems using whole numbers through six digits (multiplication no more than 2×1, excluding powers of 10) • Interpret a multiplication equation as a comparison • Solve multi-step word problems posed with whole numbers using the four operations • Find all factor pairs for a whole number in the interval 1 through 100 • Recognize that a whole number is a multiple of each of its factors and determine whether a given whole number is a multiple of a given number from 1 to 100
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Stage 2 – Evidence

Code A/M/T	Evaluative Criteria	Assessment Evidence	
<p>A/M/T</p> <p>Acquisition</p> <p>Meaning Making</p> <p>Transfer</p>	<p><i>What criteria will be used in each assessment to evaluate attainment of the desired results?</i></p>	<p>PERFORMANCE TASK(S)</p> <p><i>Students will demonstrate understanding (meaning-making and transfer) through complex performance by...</i></p> <p>N/A</p>	<p>Differentiation Considerations:</p> <p>[Work on this section after completing Stages 1-2 of all units]</p>
<p>A/M/T</p> <p>Acquisition</p> <p>Meaning Making</p>	<p><i>What criteria will be used in each assessment to evaluate</i></p>	<p>OTHER EVIDENCE</p> <p>Unit Test A: Estimation and Number Theory</p> <ul style="list-style-type: none"> • See <u>modified test</u> in Assessment folder • Multiple Choice • Fill in the blank 	<p>Differentiation Considerations:</p> <p>[Work on this section after</p>

Transfer	<i>attainment of the desired results?</i>	<ul style="list-style-type: none">• Open ended Response Unit Test B: Multiplication and Division <ul style="list-style-type: none">• See Math in Focus Chapter 2 Test Prep• Multiple Choice• Fill in the blank• Open ended Response	completing Stages 1-2 of all units]
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