

GRADE 4 UNIT 1

<p>Established Goals: Standards</p> <p>4.OA.1 Write multiplication equations from multiplicative comparisons given in words (example, 35 is 5 times as many as 7 and 7 times as many as 5) and describe a multiplication equation in words.</p> <p>4.OA.2 Multiply or divide to solve word problems involving multiplicative comparison e.g. by using drawings and equations with a symbol for the unknown number to represent the problem distinguishing multiplicative comparison from additive comparison.</p> <p>4.NBT.1 Explain the quantitative relationship between places of a multi-digit whole number up to one million when moving from right to left</p> <p>4.NBT.2 Compare numbers using $>$, $=$, and $<$ for two multi-digit whole numbers up to one million (presented as base ten numerals, number names, or expanded form).</p> <p>4.NBT.3 Round multi-digit whole numbers up to one million to any place.</p> <p>4.NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.</p>	Transfer	
	<p><i>Students will be able to:</i></p> <ul style="list-style-type: none"> • Explain the quantitative relationship between places of a multi-digit whole number up to one million when moving from right to left. • Compare numbers using $>$, $=$, and $<$ for two multi-digit whole numbers up to one million (presented as base ten number names, or expanded form) • Given numbers to the millions, students will use their knowledge of place value to compare and order numbers. • Write multiplication equations from multiplicative comparisons given in words (<i>example, 35 is 5 times as many as 7</i>) and describe a multiplication equation in words • Write an equation to identify the arithmetic operation written in a word problem • Fluently add and subtract multi-digit whole numbers using the standard algorithm 	
	Meaning	
	ENDURING UNDERSTANDING	ESSENTIAL QUESTIONS
<ul style="list-style-type: none"> • Students should be able to identify and verbalize which quantity is being multiplied and which number tells how many times. • Developing understanding and fluency with multi-digit multiplication, and developing understanding of dividing to find quotients involving multi-digit dividends. • A strong foundation in whole-number place value and rounding is critical for the expansion to decimal place value and decimal rounding. • Students should also be able to compare two multi-digit whole numbers using appropriate symbols. • In a multi-digit number, a digit in the ones place represents ten times what it would represent immediately to its right and one tenth what it would represent in the place 	<ul style="list-style-type: none"> • How can you describe the value of a digit? • How can you use place value to compare and order numbers? • Why does a digit in one place represent ten times what it represents in the place to the right? • How does place value affect a number? • How can you model multiplication comparisons? • How does a model help you solve a comparison? • How can you add whole numbers? • How can you subtract whole numbers? 	

	<p>immediately to its left.</p> <ul style="list-style-type: none"> The expectation is that students have a deep understanding of place value and number sense and can explain and reason about the answers they get when they round. Students should have numerous experiences using a number line and a hundreds chart as tools to support their work with rounding. 	
Acquisition		
KNOWLEDGE	SKILLS	
<i>Students will know how to...</i>	<i>Students will be skilled at...</i>	
<ul style="list-style-type: none"> Fluently add up to one million Fluently subtract up to one million Compare numbers using $>$, $=$, and $<$ for two multi-digit whole numbers up to one million Write multiplication equations from multiplicative comparisons given in words Explain the quantitative relationship between places of a multi-digit whole number up to one million when moving from right to left Write an equation to identify the arithmetic operation written in a word problem 	<ul style="list-style-type: none"> Student will be able to add 2 6 digit numbers up to one million Student will be able to subtract 2 6 digit numbers Students will be able to write multiplication equations in word form Students will be able to explain the relationship of each place value to the place value to the right and left of the digit Students will be able to write an equation to identify and addition operation 	

Vocabulary		Instruction and Pacing	
Estimate	Factor	Place Value	2 weeks
Expanded Form	Partial Product	Compare and Order Numbers	1 week
Period	Distributive Property	Round Numbers	2 week
Round		Add whole numbers to one million	1 week
Standard Form			

	Subtract whole numbers to one million Multiplication Equation Comparisons	1 week 1 week
Resources		
<p>Go Math Chapter 1</p> <p>Go Math Chapter 2 Topic 2.1, 2.2</p> <p>Common Core Standards, New Jersey Model Curriculum</p> <p>People's Common Core</p> <p>Prodigy Math Game - website prodigymath.com</p> <p>SuperTeacherWorksheet.com</p>		
Differentiation and Accommodations		
<p>Provide graphic organizers</p> <p>Provide additional examples and opportunities for additional problems for repetition</p> <p>Provide tutoring opportunities</p> <p>Provide retesting opportunities after remediation (up to teacher and district discretion)</p> <p>Teach for mastery not test</p> <p>Teaching concepts in different modalities</p> <p>Adjust pace and homework assignments</p>		
21st Century Skills	Critical Thinking, Creative Thinking, Collaborating, Communicating, and Technology Literacy	
Instructional Strategies	<p>Fairfield Township School recognizes the importance of the varying methodologies that may be successfully employed by teachers within the classroom and, as a result, identifies a wide variety of possible instructional strategies that may be used effectively to support student achievement. These may include, but not be limited to, strategies that fall into categories identified by the Framework for Teaching by Charlotte Danielson:</p> <ul style="list-style-type: none"> ● Communicating with students ● Using questioning and discussion techniques ● Engaging students in learning ● Using assessment in instruction ● Demonstrating Flexibility and Responsiveness 	

Interdisciplinary Connections		
Common Misconceptions		Proper Conceptions
	Many students will understand the 1000 and the 2 but then instead of placing the 2 in the ones place, students will write the numbers as they hear them, 10002 (ten thousand two).	There are multiple strategies that can be used to assist with this concept, including place-value boxes and vertical addition method.
	Students often assume that the first digit of a multi-digit number indicates the "greatness" of a number. The assumption is made that 954 is greater than 1002 because students are focusing on the first digit instead of the number as a whole.	Have students write their calculations on grid paper or lined notebook paper with the lines running vertical. This assists the student with lining up the numbers more accurately.
	Often students mix up when to 'carry' and when to 'borrow'. Also students often do not notice the need of borrowing and just take the smaller digit from the larger one. Emphasize place value and the meaning of each of the digits.	Have students write their calculations on grid paper or lined notebook paper with the lines running vertical. This assists the student with lining up the numbers more accurately.

Performance Task
<p data-bbox="79 724 1913 781">Maria earns \$10 per hour babysitting for Ms. Brown. She earns \$12 per hour walking Mr. Hall's dogs. Last week, Maria babysat 14 hours for Ms. Brown and spent 10 hours walking Mr. Hall's dogs.</p> <ul style="list-style-type: none"> <li data-bbox="128 821 1136 849">A) Describe a method you can use to find how much total money Maria earned. <li data-bbox="128 889 1289 917">B) Use your method to calculate the total amount of money Maria earned. (show your work) <li data-bbox="128 958 1142 985">C) Who paid Maria more money last week, and by how much? (show your work) <p data-bbox="989 1026 1077 1053" style="text-align: center;">Rubric</p> <p data-bbox="716 1094 1346 1122" style="text-align: center;">One point for each bullet the student gets correct.</p>

ASSESSMENTS

Suggested Formative Assessment

Problem of the Day

Lesson Quizzes

Exit Ticket

Anecdotal Records (Topic Observation Checklist)

Fluency Test - (Adding to one million)

Suggested Summative Assessment

Grade level developed Unit/Envisions Topic Test