

NJDOE MODEL CURRICULUM

CONTENT AREA: Mathematics	GRADE: 4	UNIT: # 1	UNIT NAME: Use the Four Operations with Whole Numbers to Solve Problems
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#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1	Explain the quantitative relationship between places of a multi-digit whole number up to one million when moving from right to left.	4.NBT.1
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).	4.NBT.2
3	Round multi-digit whole numbers up to one million to any place.	4.NBT.3
4	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.	4.OA.1
5	Multiply or divide 3-digit by 1-digit numbers to solve word problems involving multiplicative comparisons.	4.OA.2
6	Write an equation to identify the arithmetic operation written in a word problem (without solving).	4.OA.2

Major Content Supporting Content **Additional Content** (Identified by PARCC Model Content Frameworks).

Bold type indicates grade level fluency requirements. (Identified by PARCC Model Content Frameworks).

Selected Opportunities for Connection to Mathematical Practices

- 1. Make sense of problems and persevere in solving them.**
 - SLO #4 Explain verbal descriptions of multiplicative comparisons by writing an equation of the verbal multiplicative comparison.
 - SLO #6 Explain correspondences between written equations and word problems derived from the same information.
- 2. Reason abstractly and quantitatively.**
 - SLO #1 Understand and make sense of quantities as they relate to place value moving right to left.
 - SLO #2 Understand and make sense of the quantities of two multi-digit numbers up to one million in order to compare them.
 - SLO #3 Understand and make sense of numeric quantities in order to round to any place.

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SLO #5	Understand and make sense of quantities involved in multiplicative comparisons.
3. Construct viable arguments and critique the reasoning of others.	
SLO #1	Understand and use the stated assumptions about place value of multi-digit whole numbers.
SLO #1	Justify conclusions and be able to explain the quantitative relationship between place values of multi-digit whole numbers.
SLO #3	Justify conclusions and be able to explain the rationale of rounding multi-digit whole numbers to any place.
4. Model with mathematics.	
SLO #4	Use and apply previously learned concepts about multiplication to write equations from verbal multiplicative comparisons.
SLO #6	Use and apply previously learned concepts to identify arithmetic operations in word problems.
5.	Use appropriate tools strategically.
6. Attend to precision.	
SLO #1	Be able to communicate precisely the quantitative relationship between place values moving right to left.
SLO #2	State and understand the meaning of the $<$, $>$, or $=$ symbols when comparing two multi-digit numbers up to one million.
7.	Look for and make use of structure.
8.	Look for and express regularity in repeated reasoning.

Bold type identifies possible starting points for connections to the SLOs in this unit.

Code #	Common Core State Standards
4.NBT.1	Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. <i>For example, recognize that $700 \div 70 = 10$ by applying concepts of place value and division.</i>
4.NBT.2	Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.
4.NBT.3	Use place value understanding to round multi-digit whole numbers to any place.

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4.OA.1	Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.
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.

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