Grade Level: Fourth Grade	Course Title: Math	Name of Unit: Topic 7 Factors and Multiples
CCSS	**Content Competencies**	
Course Standards: ● 4.NBT.B.5 ● 4.OA.B.4	● Students multiply and divide increasingly larger numbers, add and subtract numbers as fractions, and explain and carry out procedures for 3- and 4-sided shapes and standard measurement. ● Students use a variety of strategies to solve and verify reasonable 2-step problems that require different basic operations. ● Students choose a process and/or strategy to solve a problem and explain their thinking through various ways: writing, speaking, and illustrating. ● Students interpret and use information provided in various ways to solve a problem.	
	Transfer	
	[What kinds of long-term independent accomplishments are desired? *Students will be able to independently use their learning to …]* Factors and multiples provide the foundation for… ● Using common factors to write equivalent fractions ● Extend the concept of factors and multiples to fraction multiplication ● Use common multiples to write fractions with a common denominator	

<table>
<tr><td></td><td colspan="2">Meaning</td></tr>
<tr><td rowspan="3">Possible Resources:

● Daily Common Core Review
● Today's Challenge
● Solve and Share
● Visual Learning
● Guided Practice
● Independent Practice</td><td>UNDERSTANDINGS:

Students should understand that…

● Factors of a number n can be shown by arranging n counters into rows with the same number of counters in each row. The number of rows and the number of counters in each row are factors of n.
● Factors of a number can be found in pairs by thinking about multiplication.
● Good math thinkers look for things that repeat, and they make generalizations.
● Prime numbers have exactly 2 factors, and composite numbers have more than 2.
● The product of any nonzero whole number and a given nonzero whole number is a multiple of both. Factors and multiples are closely related.</td><td>ESSENTIAL QUESTIONS:

● How can you use arrays or multiplication to find the factors of a number?
● How can you identify prime and composite numbers?
● How can you find multiples of a number?</td></tr>
<tr><td>Acquisition of Knowledge</td><td>Acquisition of Skills</td></tr>
<tr><td>Students will know…

● How to use arrays to find the factors of a given whole number.
● How to use multiplication to find all the factor pairs for a whole number.
● How to use repeated reasoning to generalize how to solve problems that are similar.
● How to use factors to determine whether a whole number greater than 1 is prime or composite.
● How to use multiplication to find multiples of a given number.</td><td>Students will be skilled at…

● Using arrays to find the factors of a given whole number.
● Using multiplication to find all the factor pairs for a whole number.
● Using repeated reasoning to generalize how to solve problems that are similar.
● Using factors to determine whether a whole number greater than 1 is prime or composite.</td></tr>
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		• **Using multiplication to find multiples of a given number.**