## Hattiesburg Public School District Grade 4 Mathematics Units <br> 2015-2016

## Unit 3: Multiplication Foundation

## Content Standards

## Major Standards

4.OA.B. 4 Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite.
4.OA.A. 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.A. 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. ${ }^{1}$

## Supporting Standards

## Additional Standards

4.NBT.B.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.
4.NBT.B. 5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Time Frame: 3 weeks (Sept 21-Oct 8, 2015)

## Standards for Mathematical Practice

(1) Make sense of problems and persevere in solving them.
(2) Reason abstractly and quantitatively.
(3) Construct viable arguments and critique the reasoning of others.
(4) Model with mathematics.
(5) Use appropriate tools strategically.
(6) Attend to precision.
(7) Look for and make use of structure.
(8) Look for and express regularity in repeated reasoning.

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| Pre-requisite Standards <br> 3.OA. 3 Represent and solve problems involving multiplication and division. <br> 3.OA. 8 Solve problems involving the four operations, and identify and explain patterns in arithmetic |  |  |  |  |
| Lesson 1 | Lesson 2 | Lesson 3 | Lesson 4 | Lesson 5 |
| Multiplication as Comparison 4.OA.1/4.OA. 2 <br> Multiplication Equations and Comparative Statements | Compare to Solve <br> Problems <br> 4.OA. 2 <br> Comparison Problems | Factors and Multiples <br> 4.OA. 4 <br> Finding Multiples | Prime and Composite <br> Numbers <br> 4.OA. 4 <br> Prime or Composite | Finding Least Common <br> Multiples <br> 4.OA. 4 <br> Least Common Multiple |
| Performance Task |  |  |  |  |
| The Locker Game |  |  |  |  |

