Hattiesburg Public School District
Grade 4 Mathematics Units
2015 – 2016

Unit 7: Fraction Foundations	**Time Frame:** 3 Weeks (Jan 19- Feb 5)
Content Standards	**Standards for Mathematical Practice**
Major Standards	(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.
4.NF.1. Explain why a fraction a/b is equivalent to a fraction (n x a)/(n x b) by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions. **4.NF.5.** Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. **4.NF.2**. Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or > **4.NF.3.** Understand a fraction a/b with a > 1 as a sum of fractions 1/b. b. Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model.	
Supporting Standards	
Additional Standards	
4.OA.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	

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4.NBT.4. Fluently add and subtract multi-digit whole numbers using the standard algorithm. **4.NBT.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.				
Pre-requisite Standards				
Lesson 1	**Lesson 2**	**Lesson 3**	**Lesson 4**	**Lesson 5**
Creating equivalent Fractions 4.NF.1 Creating equivalent Fractions Build a Fraction Wall	Comparing Fractions 4.NF.2 Pattern Block Fractions Fraction Compare	Fraction Reasoning 4.NF.2 Who Ate More? Which is Larger?	Exploring Equivalent Fractions 4.NF.3b Fraction Strip Discovery Fraction Circles	Cuisenaire Equivalent Fractions 4.NF.3b Cuisenaire Equivalent Fractions
Performance Task				
Birthday Fractions Snack Time				