# Curriculum Map

**Course Title:** Math **Grade:** 4th

| **Unit (Name/Number):** Numbers & Operations: Fractions | **Pacing:** Refer to RCC Pacing Guide |
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| **Essential Question(s):** What is the relationship between fractions and decimals, and how do you find equivalents, order, and compare them? | |

| **Content/Key Concepts** (Eligible Content) | **Standards** | **Key Vocabulary** | **Learning Activities/Resources** | **Evidence of Learning** (Assessments; Performance Tasks) |
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| **Fraction Equivalence and Ordering**<br>M04.B-O.2.1.1 Find all factor pairs for a whole number in the interval 1 through 100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the interval 1 through 100 is a multiple of a given one digit number. Determine whether a given whole number in the interval 1 through 100 is prime or composite.<br><br>**Adding and Subtracting Fractions and Mixed Numbers with Like Denominators**<br><br>**M04.A-F.2.1.1 Add and subtract fractions with a common denominator (denominators limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100; answers do not need to be simplified; and no improper fractions as the final answer).**<br><br>**M04.A-F.2.1.2 Decompose a fraction or a mixed number into a sum of fractions with the same denominator** | **Common Core**<br>4.NF.1, 4.NF.3, 4.NF.3a, 4.NF.3b, 4.NF.3c, 4.NF.3d,4.NF.4, 4.NF.4a, 4.NF.4b, 4.NF.4c, 4.NF.5, 4.NF.6, 4.NF.7<br><br>**PA Core Standards**<br>CC.2.1.4.C.1<br>CC.2.1.4.C.2<br>CC.2.1.4.C.3<br>CC.2.4.4.A.1 | **imperative to use exact vocabulary:**<br>● fraction<br>● numerator<br>● denominator<br>● equivalent fractions<br>● benchmark fraction<br>● common denominator<br>● mixed number<br>● improper fractions | ***use calculators at teacher's discretion**<br><br>*Understand the relationship between fractions* and decimals, find equivalents, order, and compare them.*<br><br>**Lesson 13:** Understand Equivalent Fractions **(M)**<br>**Lesson 14:** Compare Fractions **(M)**<br>Sample Assessment Questions<br>SAS Materials/Resources<br><br>**Lesson 15:** Understand Fraction Addition and Subtraction **(M)**<br>**Lesson 16:** Add and Subtract Fractions **(M)**<br>**Lesson 17:** Add and Subtract Mixed Numbers **(M)**<br>Sample Assessment Questions<br>SAS Materials/Resources | **Assessment Options:**<br>RCC Quizzes<br>RCC Mid-Unit Assessments<br>RCC Interim Assessment<br><br>**District Requirement:**<br>RCC Unit Assessments<br><br>**Extension Activities:**<br>Math in Action<br>***Practice Standard 5: use of calculators appropriate**<br><br>Practice Standards:<br>**Understand Equivalent Fractions**<br>2,3,4,7,8<br><br>**Compare Fractions**<br>1,2,4,5,7<br><br>**Understand Fraction Addition and Subtraction**<br>1,2,3,4,5,6,7,8<br><br>**Add and Subtract Fractions**<br>1,2,4,5,6,7,8 |

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| **(denominators limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100), recording the decomposition by an equation. Justify decompositions (e.g., by using a visual fraction model). Example 1: 3/8 = 1/8 + 1/8 + 1/8 OR 3/8 = 1/8 + 2/8 Example 2: 2 1/12 = 1 + 1 + 1/12 = 12/12 + 12/12 + 1/12**<br><br>**M04.A-F.2.1.3 Add and subtract mixed numbers with a common denominator (denominators limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100; no regrouping with subtraction; fractions do not need to be simplified; and no improper fractions as the final answers).**<br><br>**M04.A-F.2.1.4 Solve word problems involving addition and subtraction of fractions referring to the same whole or set and having like denominators (denominators limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100).**<br><br>**M04.A-F.2.1.5 Multiply a whole number by a unit fraction (denominators limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100 and final answers do not need to be simplified or written as a mixed number). Example: 5 × (1/4) = 5/4**<br><br>**M04.A-F.2.1.6 Multiply a whole number by a non-unit fraction (denominators limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100 and final answers do not need to be simplified or written as a mixed number). Example: 3 × (5/6) = 15/6**<br><br>**M04.A-F.2.1.7 Solve word problems involving multiplication of a whole number by a fraction (denominators limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100).** | | | | **Add and Subtract Mixed Numbers**<br>1,2,3,4,5,6,7,8<br><br>**Understand Fraction Multiplication**<br>1,2,3,4,5,6,7,8<br><br>**Multiply Fractions**<br>1,2,4,5,6,7,8<br><br>**Fractions as Tenths and Hundredths**<br>1,2,4,5,7<br><br>**Relate Decimals and Fractions**<br>2,4,5,6,7<br><br>**Compare Decimals**<br>2,4,5,7,8 |

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| **M04.A-F.3.1.1 Add two fractions with respective denominators 10 and 100. Example: Express 3/10 as 30/100, and add 3/10 + 4/100 = 30/100 + 4/100 = 34/100.**<br><br>**<u>Extending Fraction Concepts</u>**<br><br>**M04.A-F.3.1.2 Use decimal notation for fractions with denominators 10 or 100. Example: Rewrite 0.62 as 62/100 and vice versa.**<br><br>**M04.A-F.3.1.3 Compare two decimals to hundredths using the symbols >, =, or <, and justify the conclusions.**<br><br>**M04.B-O.1.1.1 Interpret a multiplication equation as a comparison. Represent verbal statements of multiplicative comparisons as multiplication equations. Example 1: Interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Example 2: Know that the statement 24 is 3 times as many as 8 can be represented by the equation 24 = 3 × 8 or 24 = 8 × 3.**<br><br>**M04.B-O.1.1.2 Multiply or divide to solve word problems involving multiplicative comparison, distinguishing multiplicative comparison from additive comparison. Example: Know that 3 × 4 can be used to represent that Student A has 4 objects and Student B has 3 times as many objects not just 3 more objects.**<br><br>**M04.B-O.1.1.3 Solve multi-step word problems posed with whole numbers using the four operations. Answers will be either whole numbers or have** | | ● tenth<br>● hundredths<br>● decimal<br>● decimal point | **Lesson 18:** Understand Fraction Multiplication**(M)**<br>**Lesson 19:** Multiply Fractions**(M)**<br>Sample Assessment Questions<br>SAS Materials/Resources<br><br>**Lesson 20:** Fractions as Tenths and Hundredths**(M)**<br>**Lesson 21:** Relate Decimals and Fractions**(M)**<br>**Lesson 22:** Compare Decimals**(M)**<br>Sample Assessment Questions<br>SAS Materials/Resources | |

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| **remainders that must be interpreted yielding a final answer that is a whole number. Represent these problems using equations with a symbol or letter standing for the unknown quantity.**<br><br>**M04.B-O.1.1.4 Identify the missing symbol (+, –, ×, ÷, =, <, and >) that makes a number sentence true (single-digit divisor only)** | | | | |

M = lessons that have a **major emphasis** in the Common Core Standards

S/A = lessons that have **supporting/additional** emphasis in the Common Core Standards