Mohawk Local Schools Grade 4 Math

Quarter 2 Curriculum Guide

Mathematical Practices

1. Make Sense of Problems and Persevere in Solving them
2. Reasoning Abstractly & 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

Critical Areas of Focus Being Addressed:

- Multiplication and Division
- Fractions
- Geometry

Content Statements Addressed and Whether they are Knowledge, Reasoning, Performance Skill, or Product: (DOK1) (DOK2) (DOK3) (DOK4)	Underpinning Targets Corresponding with Standards and Whether they are Knowledge, Reasoning, Performance Skill, or Product: "I can…..", "Students Will Be Able To……."
4.NBT.5 Multiply a whole number of us 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. (DOK2)	-Multiply a whole number of up to four digits by a one-digit whole number. -Multiply two two-digit numbers. -Use strategies based on place value and the properties of operations to multiply whole numbers. -Illustrate and explain calculations by using written equations, rectangular arrays, and/or area models.
4.NBT.3 Use place value understanding to round multi-digit whole numbers to any place. (DOK2)	-Round multi-digit whole numbers to any place using place value
4NBT.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based	-Find whole number quotients and remainders with up to four-digit dividends and one-digit divisors

on place, value, the properties of operations and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays and/or area models. (DOK2)	-Use the strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. -Illustrate and explain the calculation by using written equations, rectangular arrays, and/or area models
4.OA.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. (DOK3)	-Divide whole numbers including division with remainders. -Represent multi-step word problems using equations with a letter standing for the unknown quantity. -Interpret multistep word problems (including problems in which remainders must be interpreted) and determine the appropriate operation(s) to solve. -Assess the reasonableness of an answer in solving a multistep word problem using mental math and estimation strategies (including rounding)
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. (DOK2)	-Define prime and composite numbers. -Know strategies to determine whether a whole number is prime or composite. -Identify all factor pairs for any given number 1-100. -Recognize that a whole number is a multiple of each of its factors. -Determine if a given whole number (1-100) is a multiple of a given one-digit number.
4NF.1 Explain why a fractions a/b is equivalent to a fraction (nxa)/(nxb) 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. (DOK2)	-Recognize and identify equivalent fractions with unlike denominators -Explain why a/b is equal to (nxa)/(nxb) by using fraction models with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. (Ex: Use fraction strips to show why ½=2/4=3/6=4/8) -Use visual fraction models to show why fractions are equivalent (ex: ¾ = 6/8) Generate equivalent fractions using visual fraction models and explain why they can be called "equivalent".
4NF.2 Compare two fractions with different numerators and different denominators…by comparing to a benchmark fraction such as ½. Recognize that comparisons are valid only	-Recognize fractions as being greater than, less than, or equal to other fractions. -Record comparison results with symbols -Use benchmark fractions such as ½ for

when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model. (DOK2)	comparison purposes. -Make comparisons based on parts of the same whole. -Compare two fractions with different numerators, e.g. by comparing to a benchmark fraction such as ½. -Compare two fractions with different denominators, e.g. by creating common denominators, or by comparing to a benchmark fraction such as ½. -Justify the results of a comparison of two fractions, e.g. by using a visual fraction model.
4.NF.3 Understand a fraction a/b with a>1 as a sum of fractions 1/b. (DOK2)	-Accumulating unit fractions (1/b) results in a fraction (a/b), where a is greater than 1. From the Introduction: Students extend previous understandings about how fractions are built from unit fractions, composing (joining) fractions from unit fractions, and decomposing (separating) fractions into unit fractions. -Using fraction models, reason that addition of fractions is joining parts that are referring to the same whole. -Using fraction models, reason that subtraction of fractions is separating parts that are referring to the same whole.