Mohawk Local Schools Grade 8 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:

- Expressions and Equations
- Statistics and Probability

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……."
8.EE.7a Solve linear equations in one variable: a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the	(DOK 1) I can: • Give examples of linear equations in one variable with one solution and show that the given example equation has one solution by successively transforming the equation into an equivalent equation of the form x = a.

form x = a, a = a, or a = b results (where a and b are different numbers). (DOK 1)	• Give examples of linear equations in one variable with infinitely many solutions and show that the given example has infinitely many solutions by successively transforming the equation into an equivalent equation of the form a = a. • Give examples of linear equations in one variable with no solution and show that the given example has no solution by successively transforming the equation into an equivalent equation of the form b = a, where a and b are different numbers.
8.EE.7b Solve linear equations in one variable: b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms. (DOK 1)	(DOK 1) I can: • Solve linear equations with rational number coefficients. • Solve equations whose solutions require expanding expressions using the distributive property and/ or collecting like terms.
8.EE.8a Analyze and solve pairs of simultaneous linear equations: a. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously. (DOK 1)	(DOK 1) I can: • Identify the solution(s) to a system of two linear equations in two variables as the point(s) of intersection of their graphs. • Describe the point(s) of intersection between two lines as points that satisfy both equations simultaneously
8.EE.8b Analyze and solve pairs of simultaneous linear equations: b. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. (DOK 2)	(DOK 1) I can: • Identify cases in which a system of two equations in two unknowns has no solution. • Identify cases in which a system of two equations in two unknowns has an infinite number of solutions. • Solve a system of two equations (linear) in two unknowns algebraically. • Solve simple cases of systems of two linear equations in two variables by inspection. (DOK 2) I can:

	• Estimate the point(s) of intersection for a system of two equations in two unknowns by graphing the equations
8.EE.8c Analyze and solve pairs of simultaneous linear equations: c. Solve real-world and mathematical problems leading to two linear equations in two variables. (DOK 2)	(DOK 1) I can: • Solve systems of two linear equations in two unknowns. • Define the term "system of equation" and "simultaneous linear equations". (DOK 2) I can: • Apply rules for solving systems of two equations in two unknowns to mathematical problems. • Analyze real-world problems that lead to two linear equations in two variables by extracting needed information and translating words to symbols.
8.SP.1 Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association. (DOK 1)	(DOK 1) I can: • Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association • Construct scatter plots for bivariate measurement data. (DOK 2) I can: • Interpret scatter plots for bivariate (two different variables such as distance and time) measurement data to investigate patterns of association between two quantities.
8.SP.2 Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line. (DOK 2)	(DOK 1) I can: • Explain how straight lines are used to model relationships between two quantitative variables. (DOK 2) I can:

	• Informally assess the model fit by judging the closeness of the data points to the line. • Fit a straight line within the plotted data.
8.SP.3 Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. (DOK 2)	(DOK 1) I can: • Find the slope and intercept of a linear equation. (DOK 2) I can: • Interpret the meaning of the slope and intercept of a linear equation in terms of the situation. (For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.) • Solve problems using the equation of a linear model.
8.SP.4 Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. (DOK 2)	(DOK 1) I can: • Recognize patterns shown in comparison of two sets of data. • Construct a two-way table with given data. (DOK 2) I can: • Interpret the data in the two-way table to recognize patterns. (For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?) • Use relative frequencies of the data to describe relationships (positive, negative, or no correlation).