Eighth Grade Math Promise Standards

- Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., \( \sqrt{2} \)). For example, by truncating the decimal expansion of \( \sqrt{2} \), show that \( \sqrt{2} \) is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.
- Use square root and cube root symbols to represent solutions to equations of the form \( x^2 = p \) and \( x^3 = p \), where \( p \) is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that \( \sqrt{2} \) is irrational.
- Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.
- Use similar triangles to explain why the slope \( m \) is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation \( y = mx \) for a line through the origin and the equation \( y = mx + b \) for a line intercepting the vertical axis at \( b \).
- Give examples of linear equations in one variable with one solution, infinitely many solutions or no solutions.
- Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions distributive property and collecting like terms.
- 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.
- Interpret the equation \( y = mx + b \) as defining a linear function, whose graph is a straight line; give examples of functions that are not linear.
- Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two \((x, y)\) values, including reading these from a table or from a graph. interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.
- Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.
- Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and angle-angle criterion for similarity triangles.
- Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.

6/20/2024
Eighth Grade Language Arts Promise Standards

- Cite textual evidence to support analysis of literary text.
- Cite textual evidence to support analysis of informative text.
- Determine central idea of text, write an objective summary.
- Evaluate the advantages and disadvantages of using different mediums (e.g., print or digital text, video, multimedia) to present a particular topic or idea.
- Trace/evaluate the argument and specific claims in a text.
- Support claims with reasoning and relevant evidence.
- Use words, phrases, and clauses to create cohesion and clarity among reasons and evidence.
- Introduce the topic clearly; organize information into broader categories; include formatting and multimedia.
- Develop and strengthen writing by planning, revising, editing, rewriting, or trying a new approach.
- Come to discussions prepared, having read or researched material under study
- Use context as a clue to the meaning of a word or phrase
- Use common, grade-appropriate Greek/Latin affixes/roots as clues to the meaning of a word.
Eighth Grade Social Studies Promise Standards

- Evaluate the logic of reasons for a position on an issue or event.
- Create and use research questions to guide inquiry on an issue or event.
- Engage in discussion, analyzing multiple viewpoints on public issues.
- Use appropriate format to cite sources within an essay, presentation, and reference page.
- Explain key ideals and principles outlined in the Declaration of Independence, the U.S. Constitution, and the Bill of Rights.
- Analyze the structure and powers of government at the national level.
- Analyze how a claim on an issue attempts to balance individual rights and the common good.
- Analyze how the forces of supply and demand have affected the production, distribution, and consumption of goods, services, and resources in the United States in the past or present.
- Analyze how the environment has affected people and how people have affected the environment in the United States in the past or present.
- Explain and analyze migration as a catalyst for the growth of the United States in the past or present.
- Explain how themes and developments help to define eras in United States history from 1763 to 1877.
- Explain and analyze how individuals and movements have shaped United States history (1763-1877).
- Explain and analyze how technology and ideas have impacted United States history (1763-1877).
- Analyze multiple causal factors to create positions on major events in United States history (1763-1877).
- Analyze how a historical event in United States history helps us to understand contemporary issues and events.