CHIEF ACADEMIC OFFICE

8THGRADE BIE ESSENTIAL STANDARDS

MATHEMATICS

8-1-2025

Interim 1 Essential Standards	
M.BIE.8. EE.A.1	Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, 32 × 3-5 = 3-3 = 1/33 = 1/27.
M.BIE.8. EE.A.3	Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. For example, estimate the population of the United States as 3 times 108 and the population of the world as 7 times 109, and determine that the world population is more than 20 times larger.
M.BIE.8. EE.A.4	Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology
M.BIE.8. G.A.1	Verify experimentally the properties of rotations, reflections, and translations:
M.BIE.8. G.A.2	Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.
M.BIE.8. G.A.3	Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.
M.BIE.8. G.A.4	Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.

Interim 2 Essential Standards	
M.BIE.8. EE.A.2	Use square root and cube root symbols to represent solutions to equations of the form x2 = p and x3 = 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.
M.BIE.8. EE.B.5	Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.
M.BIE.8. EE.B.6	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.
M.BIE.8. EE.C.7	Solve linear equations in one variable.
M.BIE.8. EE.C.8	Analyze and solve pairs of simultaneous linear equations.

M.BIE.8. G.A.1	Verify experimentally the properties of rotations, reflections, and translations:
M.BIE.8. G.A.2	Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.
M.BIE.8. G.A.3	Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.