Council Rock School District Priority Standards

The priority standards denote the essential learning that is most critical for all students to understand and do in the particular subject, grade or course. Teachers will teach all standards, but will work collaboratively to ensure students learn the priority standards as they are critical to the next grade, next course, or post-secondary success.

Mathematics Priority Standards by Course

<u>Grade K</u>

K.CC.1. Know number names and the count sequence.

- K.CC.3. Know the number names and the count sequence.
- K.CC.4. Count to tell the number of objects.
- K.OA. 1.Understand addition as putting together and adding to, and understand -.
- K. NBT.1. Work with numbers 11-19 to gain foundations for place value.
- K.MD.2. Describe and compare measurable attributes.
- K. MD.3. Classify objects and count the number of objects in each category.
- K.G. 1. Identify and describes shapes.

Grade 1

1.OA.1 Represent and solve problems involving addition and subtraction.

1.OA.3 Understand and apply properties of operations and the relationship between addition and subtraction

- 1.OA.6 Add and subtract within 20
- 1.NBT.1 Extend the counting sequence
- 1.NBT.2 a-c Understand place value
- 1.NBT.4 Use place value understanding and properties of operations to add and subtract
- 1.MD.2 Measure lengths indirectly and by iterating length units
- 1.G.2 Reason with shapes and their attributes

Grade 2

- 2.OA.1 Use addition and subtraction within 100.
- 2.OA.2 Fluently add and subtract within 20 using mental strategies.

2.NBT.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones.

2.NBT.4 Compare two three-digit numbers.

2.NBT.7 Add and subtract within 1000.

2.MD.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

2.MD.8 Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and cents symbols appropriately.

2.G.3 Partition circles and rectangles into two, three, or four equal shares.

Grade 3

3.OA.2 Represent and solve problems involving multiplication & division.

3.OA.7 Multiply and divide within 100.

3.OA. 8 Solve problems involving the four operations, and identify and explain patterns in arithmetic.

3. NBT.2 Use place value understanding and properties of operations to perform multi-digit arithmetic. 3.NF.1 Develop understanding of fractions as numbers.

3. MD.1 Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.

3.MD.3 Represent and interpret data.

3.MD.7-a Geometric measurement: understand concepts of area and relate area to multiplication and to addition.

3.G.2 Reason with shapes and their attributes

Grade 4

4.OA.3 Use the four operations with whole numbers to solve problems.

4.OA.4 Gain familiarity with factors and multiples.

4.NBT.2 Generalize place value understanding for multi-digit whole numbers.

4.NBT.5 Use place value understanding and properties of operations to perform multi-digit arithmetic.

4.NF.2 Extend understanding of fraction equivalence and ordering.

4.NF.6 Understand decimal notation for fractions, and compare decimal fractions.

4.MD.2 Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit

4.MD.5 a-b Geometric measurement: understand concepts of angle and measure angles.

4.G.2 Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

Grade 5

5.OA.1 Write and interpret numerical expressions

5.NBT.3a Understanding the place value system

5.NBT.6, 7: Perform operations with multi-digit whole numbers and with decimals to hundredths

5.NF.1 Use equivalent fractions as a strategy to add and subtract fractions

5.NF.6 Apply and extend previous understandings of multiplication and division to multiply and divide fractions

5.MD.1 Convert like measurement units within a given measurement system

5.MD.3b Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition

5.G.1 Graph points on the coordinate plane to solve real-world and mathematical problems

Grade 6

6.RP.3.B,C Understand ratio concepts and use ratio reasoning to solve problems

6.NS.1 Apply and extend previous understandings of multiplication and division to divide fractions by fractions

6.NS.7.B,C Apply and extend previous understandings of numbers to the system of rational numbers

6.EE.2 C Apply and extend previous understandings of arithmetic to algebraic expressions

6.EE.3 Apply and extend previous understandings of arithmetic to algebraic expressions

6.EE.7 Reason about and solve one-variable equations and inequalities

6.EE.9 Represent and analyze quantitative relationships between dependent and independent variables

6.G.1 Solve real-world and mathematical problems involving area, surface area, and volume

Grade 7

7EE.3, 4: Solve real -life and mathematical problems using numerical and algebraic expressions and equations

7RP.2C Analyze proportional relationships and use them to solve real world and mathematical problems.

7G.4, 5, 6: Solve real-life and mathematical problems involving angle measure, area, surface area and volume.

7NS.3Apply and extend previous understandings of operations with fractions to add, subtract, multiply and divide rational numbers.

7SP.1, 4, 5: Use random sampling to draw inferences about a population.

Grade 8

8.EE.7 solve linear equations in one variable

8.F.4 Construct a function to model a linear relationship between two quantities

8.EE.5 Graph proportional relationships, interpreting the unit rate as the slope of the graph

8.EE.8 Analyze and solve pairs of simultaneous linear equation.

8.EE.1 Know and apply the properties of integer exponents to generate equivalent numerical expressions

8.EE.2 Use square roots to represent solutions to equations of the form x squared = p

8.G.7 Apply the Pythagorean Theorem to determine unknown side lengths in right triangles.

<u>Algebra 1</u>

A1.1.1.1.2 Simplify Square Roots

A1.1.1.3 Use Exponents, roots, and/or absolute values to solve problems

A1.1.1.5 Simplify Expressions involving polynomials

A1.1.2.1 Write, Solve, and/or graph linear equations using various methods

A1.1.2.2 Write solve and/or graph systems of linear equation using various methods

- A1.1.1.1 Analyze and/or use patterns of relations
- A.1.2.1.2 Interpret and/or use linear functions and their equations, graphs, and/or tables

A1.2.2.1 Describe, compute, and/or use the rate of change (slope) of a line

Algebra 2

A2.1.1.1 Represent and/or use imaginary numbers in equivalent forms

A2.1.2.1 Use exponents, roots, and/or absolute values to represent equivalent forms or to solve problems

A2.1.2.2 Simplify expressions involving polynomials

A2.1.3.1 Write and/or solve non-linear equations using various methods

A2 2.1.1 Analyze and/or use patterns or relations

A2 2.2.1 Create, interpret, and/or use polynomial, exponential, and/or logarithmic functions and their equations, graphs, or tables

CC2.2.HS.C.4 Interpret the effects transformations have on functions and find the inverse of functions

A2.1.2.2.1 Factor algebraic expressions, including difference of squares and trinomials. Trinomials where a is not 0

Geometry

G.1.1.1 Identify and/or use parts of circles and segments associated with circles, spheres, and cylinders.

G.1.2.1 Recognize and/or apply properties of angles, polygons, and polyhedra.

G.1.3.2 Write formal proofs and/or use logic statements to construct or validate arguments.

G.2.1.1 Solve problems involving right triangles.

G.2.2.2 Use and/or develop procedures to determine or describe measures of perimeter, circumference, and/or area.

G.2.2.2 Use and/or develop procedures to determine or describe measures of perimeter, circumference, and/or area.

G.2.3.1 Use and/or develop procedures to determine or describe measures of surface area and/or volume.

G.2.2.1 Use and/or compare measurements of angles.

G.1.3.1 Use properties of congruence and similarity to solve problems with two and three dimensional figures

Analysis

A-SSE Writing expressions in equivalent forms to solve problems

A-APR Understand the relationship between zeros and factors of polynomials

A-REI Represent and solve equations and inequalities graphically

F-IF Interpret functions that arise in applications in terms of the context

F-IF Analyze functions using different representations

F-BF Build new functions from existing functions

F-TF Extend the domain of trigonometric functions using the unit circle

F-TF Model periodic phenomena with trigonometric functions

G-SRT Apply trigonometry to general triangles