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**Coal City Unit District #1**  
**Algebra 1**  
**Math Curriculum**

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**MA.A1:1 Students will demonstrate an understanding of numbers and quantities.**  
**(9-12:N.RN.1, N.RN.2, N.RN.3, A.SSE.2)**

MA.A1:1-1 Write and simplify using the properties of rational exponents.

MA.A1:1-2 Simplify expressions involving radicals.

MA.A1:1-3 Perform operations with irrational numbers (*radical, p*)

**MA.A1:2 Students will demonstrate the ability to see structure in expressions.**  
**(9-12:A.SSE.1a, A.SSE.1b, A.SSE.2, A.SSE.3b)**

MA.A1:2-1 Interpret parts of an expression.

MA.A1:2-2 Factor polynomials.

MA.A1:2-3 Evaluate an expression given within a context.

**MA.A1:3 Students will demonstrate an understanding of arithmetic with polynomials and rational expressions. (9-12:A.APR.1)**

MA.A1:3-1 Add, subtract, and multiply polynomials.

MA.A1:3-2 Perform operations with rational expressions involving multiple variables and exponents.

**MA.A1:4 Students will demonstrate an understanding of creating equations.**  
**(9-12:A.CED.1, F.LE.5, F.BF.1, F.IF.3)**

MA.A1:4-1 Write an equation or inequality from a situation and solve.

MA.A1:4-2 Create equations to represent relationships between quantities.

MA.A1:4-3 Write a function given a table of values or a graph.

**MA.A1:5 Students will demonstrate reasoning with equations and inequalities.**  
**(9-12:A.SSE.3a, A.CED.4, A.REI.1, A.REI.2, A.REI.3, A.REI.4, A.REI.5, A.REI.6, F.IF.8a, F.IF.8b)**

MA.A1:5-1 Solve quadratic equations.

MA.A1:5-2 Solve linear equations.

MA.A1:5-3 Solve rational equations.

MA.A1:5-4 Solve radical equations.

MA.A1:5-5 Solve inequalities.

MA.A1:5-6 Solve systems of equations with 2 variables.

**MA.A1:6 Students will demonstrate an understanding of interpreting functions. (9-12:F.IF.1, F.IF.2, F.IF.6, I.IF.9, F.LE.1a, F.LE.1, F.LE.1b, F.LE.3)**

- MA.A1:6-1 Identify independent variables, dependent variables, and function notation.
- MA.A1:6-2 Evaluate functions given the rule.
- MA.A1:6-3 Estimate or find the rate of change of a linear function.
- MA.A1:6-4 Compare functions given a graph or a rule.

**MA.A1:7 Students will interpret categorical and quantitative data. (9-12: S.ID.1, S.ID.2, S.ID.6c)**

- MA.A1:7-1 Create histograms, box-plots, and stem and leaf plots for a given situation.
- MA.A1:7-2 Determine appropriate central tendency for given data.
- MA.A1:7-3 Predict information from a given set of data.

**MA.A1:8 Students will demonstrate an understanding of graphs. (9-12: A.CED.2, A.CED.3, A.REI.10, A.REI.11, A.REI.12, F.IF.4, F.IF.5, F.IF.7)**

- MA.A1:8-1 Graph data in 2 variables using appropriate values.
- MA.A1.8-2 Graph a function by creating a table.
- MA.A1.8-3 Graph a system of linear inequalities.
- MA.A1.8-4 Identify the characteristics of a given graph, points, or data.