HPISD Curriculum
(MATH, GRADE 8)

EST. NUMBER OF DAYS: 11

UNIT NAME	UNIT 3: ALGEBRAIC EQUATIONS AND INEQUALITIES	
Unit Overview	Algebraic reasoning and solving equations and inequalities	
Generalizations/Enduring Understandings	Operations can be used efficiently and flexibly to solve meaningful problems. Relationships among elements in a problem situation can be expressed in an equation or an inequality and that equation or inequality can be used to solve the problem.	
Concepts	Variables: Mathematical situations and structures can be translated and represented abstractly using variables, expressions, equations, and inequalities. Equations and Inequalities: Rules of arithmetic and algebra can be used together with notions of equivalence to transform equations and inequalities so solutions can be found.	
Guiding/Essential Questions	How can algebraic expressions be used to represent problem situations? How can verbal phrases be translated into numerical equations or inequality? How are properties of operations and equivalence used to solve algebraic equations and inequalities?	
	Performance Levels	*Learning Progression* (*** **Decision Point)**
Learning Targets	LEVEL 4: **_LEVEL 3:_** LEVEL 2:	
	LEVEL 4: **_LEVEL 3:_** LEVEL 2:	
Formative Assessments	*Title*	
Summative Assessments	*Title*	
	TEKS	
TEKS *(Grade Level)* **/ Specifications**	**TEKS: Readiness Standards**	**TEKS: Supporting Standards**
	8.8(C) Model and solve one--variable equations with variables on both	**8.8(A)** Write one--variable equations or inequalities with variables on both sides

	sides of the equal sign that represent mathematical and real--world problems using rational number coefficients and constants	that represent problems using rational number coefficients and constants **8.8(B)** Write a corresponding real--world problem when given a one--variable equation or inequality with variables on both sides of the equal sign using rational number coefficients and constants

TEKS Process Standards

8.1(A) apply mathematics to problems arising in everyday life, society, and the workplace

8.1(B) use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution

8.1(C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems

8.1(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate

8.1(E) create and use representations to organize, record, and communicate mathematical ideas

8.1(F) analyze mathematical relationships to connect and communicate mathematical ideas

8.1(G) display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication

| **Processes and Skills** | •Translate a written statement into the equivalent algebraic expression or equation.
•Translate an algebraic expression or equation into an equivalent written statement.
•Combine like terms to simplify | •Algebraic expressions involve a variable that can represent any value.
•Algebraic equations involve an unknown and can be solved to determine the value of the unknown. |

	expressions and when solving equations. •Evaluate an expression for a given number. •Solve equations (one and two-step) with rational numbers. •Recognize how properties of operations are applied to solve algebraic equations.
Topics	Combining Like Terms Distributive Property Solving (one-step and two-step) equations with rational numbers Writing equations and expressions
Language of Instruction	equation evaluate expression like terms solve unknown variable
State Assessment Connections	
National Assessment Connections	
Resources	