

HPISD CURRICULUM
(MATH, GRADE 8)

EST. NUMBER OF DAYS: 15

UNIT NAME	UNIT 1: REAL NUMBERS	
Unit Overview	Operations with real numbers.	
Generalizations/Enduring Understandings	<p>The nature of a mathematical situation and the numerical values involved determine the most appropriate form of numbers to use.</p> <p>Operations can be used efficiently and flexibly to solve meaningful problems.</p>	
Concepts	<p>Equivalence: Any number, measure, numerical expression, algebraic expression, or equation can be represented in an infinite number of ways that have the same value.</p> <p>Basic Facts/Algorithms: Basic facts and algorithms for operations with rational numbers use notions of equivalence to transform calculations into simpler ones.</p>	
Guiding/Essential Questions	<p>What determines the most appropriate form of number to use?</p> <p>Why are operational conventions necessary?</p> <p>How are fractions, decimals, and percents similar and how are they different?</p>	
	<i>Performance Levels</i>	<i>Learning Progression (***) Decision Point)</i>
Learning Targets	LEVEL 4: <u>LEVEL 3:</u> LEVEL 2:	
	LEVEL 4: <u>LEVEL 3:</u> LEVEL 2:	
Formative Assessments	<i>Title</i>	
Summative Assessments	<i>Title</i>	
	TEKS	

	TEKS: Readiness Standards	TEKS: Supporting Standards
	8.2(D) Order a set of real numbers arising from mathematical and real-world contexts.	8.2(A) Extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of real numbers
	TEKS Process Standards	
TEKS	<p>8.1(A) apply mathematics to problems arising in everyday life, society, and the workplace</p> <p>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</p> <p>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</p> <p>8.1(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate</p> <p>8.1(E) create and use representations to organize, record, and communicate mathematical ideas</p> <p>8.1(F) analyze mathematical relationships to connect and communicate mathematical ideas</p> <p>8.1(G) display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication</p>	
Processes and Skills	<p>Add, subtract, multiply, and divide fractions, decimals, and percents</p> <p>Select appropriate forms of rational numbers to solve problems. Apply properties of operations to simplify computations.</p> <p>Apply mental math strategies for operations on rational numbers. Determine the absolute value of a given integer.</p> <p>Use order of operations to solve problems.</p> <p>Compare and order real numbers given in a variety of numerical forms.</p>	<p>Common fraction-decimal-percent equivalents</p> <p>PEMDAS</p> <p>Operations with fractions, decimals, and integers</p>
Topics	<p>Absolute value</p> <p>Decimal operations</p> <p>Exponents properties of operations</p> <p>Fraction-decimal-percent conversions fraction operations</p> <p>Integer operations</p> <p>Order of operations</p>	
Language of Instruction	<p>absolute value</p> <p>Associative Property</p> <p>Commutative Property</p> <p>Distributive Property</p> <p>equivalence</p> <p>exponents</p>	

	integer rational numbers
State Assessment Connections	
National Assessment Connections	
Resources	