

SAU9 Math Competencies						
Grades 9-12						
Numbers & Number Systems Students will expand their understanding of number systems, thinking flexibly and attending to precision and reasonableness.	Symbolic Expression Students will reason abstractly and manipulate symbolic expressions and models to represent relationships and interpret expressions, equations, and inequalities in terms of a given context (including real-world phenomena) for determining unknown values.	Reasoning & Computational Strategies Students will expand the use of computational strategies and algorithms, using evidence to support authentic application.	Algebraic Functions, Patterns, & Relations Students will make use of patterns, relations, and functions to interpret, compare and analyze pure and applied situations, using the information to make conjectures and support conclusions.	Data Analysis, Probability & Statistics Students will apply statistical methods and reasoning to summarize, represent, analyze and interpret categorical and quantitative data, including addressing authentic, applied scenarios. Students will apply the rules of probability to determine the likelihood of a given outcome or to make decisions.	Geometry Students will solve problems involving spatial reasoning using properties of two and three-dimensional figures to analyze, represent, and model geometric relationships in pure/theoretical and authentic, applied contexts.	
Grades 7&8						
Numbers & Number Systems Students will expand their understanding of number systems thinking flexibly and attending to precision and reasonableness when solving problems using rational and irrational numbers.	Symbolic Expression Students will reason abstractly and manipulate symbolic expressions to represent relationships and interpret expressions and equations in terms of a given context for determining an unknown value.	Reasoning & Computational Strategies Students will expand the use of computational strategies, algorithms, and proportional reasoning to rational and irrational numbers.	Algebraic Functions, Patterns, & Relations Students will make use of structure to describe and compare situations that involve proportionality, change, or patterns and use the information to make conjectures and justify conclusions/solutions.	Data Analysis, Probability & Statistics Students will design investigations and conduct probability experiments involving populations.	Geometry Students will solve problems involving reasoning using properties of two- and three-dimensional shapes to analyze, represent, and model geometric relationships in pure/theoretical and authentic applied contexts.	
Grades 5&6						
Numbers & Number Systems Students will expand their understanding of number systems, thinking flexibly and attending to precision and reasonableness when solving problems using rational numbers.	Symbolic Expression Students will reason abstractly and manipulate symbolic expressions to represent relationships and interpret expressions and equations in terms of a given context for determining an unknown value.	Reasoning & Computational Strategies Students will expand the use of computational strategies, algorithms, and proportional reasoning to rational numbers.	Algebraic Func., Patterns, & Relations Students will make use of structure to describe and compare situations that involve change or patterns and use the information to make conjectures and justify conclusions/solutions.	Data Analysis, Probability & Statistics Students will design investigations and gather data involving data sets.	Geometry Students will solve problems involving reasoning using properties of two- and three-dimensional shapes to analyze, represent, and model geometric relationships in authentic applied contexts.	
Grade 3&4						
Numbers & Number Systems Students will demonstrate an understanding of number systems, thinking flexibly and attending to precision and reasonableness when solving problems using whole numbers, fractions, and decimals.	Symbolic Expression Students will reason abstractly and quantitatively, recognizing and making appropriate use of mathematical symbols and expressions for a variety of purposes, including variables.	Reasoning & Computational Strategies Students will apply additive, multiplicative, and fractional reasoning using multiple strategies (algorithms, models, manipulatives) to solve authentic applied problems.	Algebraic Functions, Patterns, & Relations Students will make use of structure to represent, analyze, and generalize change or patterns in various contexts using models and justifications.	Data Analysis, Probability & Statistics Students will gather, represent, and interpret data related to particular/single context, including authentic applications.	Geometry Students will use attributes of two- and three-dimensional complex figures to solve authentic applied problems.	Measurement Students will use measurement tools, units, and attributes to describe and compare objects, situations, or events, and to solve authentic applied measurement problems.
Grades K-2						
Numbers & Number Systems Students will demonstrate an understanding of the nature of numbers, thinking flexibly and attending to precision and reasonableness when solving problems using whole numbers.	Symbolic Expression Students will reason abstractly and quantitatively, recognizing and making appropriate use of mathematical symbols and expressions for different purposes.	Reasoning & Computational Strategies Students will apply additive reasoning using multiple strategies (algorithms, models, manipulatives) to solve authentic, applied problems.		Data Analysis, Probability & Statistics Students will gather, represent, and interpret data related to particular/single unit scale, including authentic applications.	Geometry Students will recognize and use attributes of two- and three-dimensional figures to solve problems.	Measurement Students will use standard and nonstandard measurement tools, units, and attributes to describe and compare objects, authentic applied situations, or events, and to solve measurement problems.