STUDENT LEARNING MAP – MATH 5 – UNIT 1

Unit Topic: Whole Number and Decimal Computation and Estimation

Standards:
SOL 5.4 – **Create** and **solve** single- and multistep practical problems involving addition, subtraction, multiplication and division of whole numbers (**calculator allowed).**
SOL 5.7 – **Evaluate** whole number numerical expressions, using the order of operations limited to parentheses, addition, subtraction, multiplication, and division. **(no calculator)**
SOL 5.1 – Given a decimal through thousandths, **round** to the nearest whole number, tenth, or hundredth.
SOL 5.5a - **Estimate** and **determine** the product and quotient of two numbers involving decimals (**no calculator)**
SOL 5.5b – **Create** and **solve** single- and multistep practical problems involving addition, subtraction, multiplication of decimals and create and solve single-step practical problems involving the division of decimals. (**calculator allowed).**

Unit Essential Question: How do I use my understanding of number relationships to solve problems involving the four operations?

Unit Dates: August 30 - October 19 **Assessment Date:** October 17 **Duration:** 36 days

Lesson 1 Focus Whole Number Operations and Problem Solving **Standards (calculator)** SOL 5.4 – Whole Number Problem Solving **Students Will Know…** **-** Properties of addition and multiplication - Division of whole numbers with and without remainders - To estimate before solving any problem to check for reasonableness **Key Content Vocabulary** sum, difference, product, quotient, remainder, estimate **Key Academic Vocabulary** interpret, estimate, create, solve, infer, reasonable	**Students Will Be Able To…** - **Create** and **solve** single-step and multi-step practical problems involving all four operations, with and without remainders. - **Estimate** the sum, difference, product, and quotient of whole numbers. - **Interpret** the quotient and remainder using the context of practical problems	**Lesson Essential Question 1** **How do I estimate and then find the sum, difference, product, and quotient of two whole numbers to solve practical problems?**
Lesson 2 Focus (no calculator) Order of Operations **Standards** SOL 5.7 – Order of Operations **Students Will Know…** **-** Grouping symbols include: parentheses, brackets, braces, and fraction bars - Expressions are numerical sentences without equal signs **Key Content Vocabulary** evaluate, expression, operations, grouping symbols, parentheses, **Key Academic Vocabulary** simplify, describe, justify	**Students Will Be Able To…** - **Simplify** whole number numerical expressions, limited to parentheses, addition, subtraction, multiplication and division using the order of operations. - **Describe** which operation is completed first, which is second, etc. when given a whole number expression involving more than one operation. - **Analyze** a simplified expression to determine if solved accurately and to **identify** where errors occur	**Lesson Essential Question 2** **How do I evaluate expressions using the order of operations?**
Lesson 3 Focus Decimal Rounding and Place Value	**Students Will Be Able To…**	**Lesson Essential Question 3**

Standards SOL 5.1 – Decimal Rounding/Place Value **Students Will Know…** **-** Decimal places values represent a number that is less than 1. **-** A decimal point separates whole number place values from decimal place values. - Any decimal less than 1 should include a leading zero - A number line can be used to round numbers down to the nearest thousandths **Key Content Vocabulary** Place value, decimal, whole number, round, tenths, hundredths, thousandths **Key Academic Vocabulary** determine, number line	- **Round** to the nearest whole number, tenth, or hundredth when given a decimal through the thousandths - **Identify** numbers that are correctly rounded to a given place.	**How do I use my understanding of place value to round decimals?**
Lesson 4 Focus Multiplying and Dividing Decimals (including modeling) **Standards (no calculator)** SOL 5.5a – Multiplying and Dividing Decimals **Students Will Know…** **-** Division is the operation of making equal groups or shares. - Multiplication is the operation of making repeated groups of addition. - to annex only one zero when dividing with decimals **Key Content Vocabulary** factors, product, divisor, dividend, quotient, remainder, annex, array, fair share **Key Academic Vocabulary** estimate, determine, model, evaluate, inverse	**Students Will Be Able To…** **- Estimate** and **determine** the product of two numbers: factors do not exceed two digits by two digits and products do not exceed the thousandths place. **- Estimate** and **determine** the quotient of two numbers: divisors are single digit whole numbers or tenths, and quotients do not exceed 4 digits. **- Model** multiplication and division of decimals and whole numbers using multiple representations.	**Lesson Essential Question 4** **How do I estimate and determine the product or quotient of two numbers (including decimals) to solve practical problems?**
Lesson 5 Focus Decimal Operations with Problem Solving **Standards (calculator)** SOL 5.5b – Decimal Operations w/ Problem Solving **Students Will Know…** **-** Operations with decimals are performed the same way as operations with whole numbers. **Key Content Vocabulary** sum, difference, product, quotient, remainder, estimate **Key Academic Vocabulary** interpret, estimate, create, solve, infer, reasonable	**Students Will Be Able To…** - **Create** and **solve** single-step and multi-step practical problems involving the addition, subtraction, and multiplication of decimals. - **Create** and **solve** single-step practical problems involving division of decimals.	**Lesson Essential Question 5** **How do I estimate and then find the sum, difference, product and quotient of two numbers (including decimals) to solve practical problems?**