Curriculum Unit Template
Taneyville R-II School
2022-2023

Grade : 6th   **Subject: Math**   **Quarter: 1/2 - Semester 1**

Unit 1 Title: Decimal Operations

Standards	Vocabulary	Activities/Resources	Formative/Summative Assessments
6.NS.B.2 Demonstrate fluency with addition, subtraction, multiplication and division of decimals. 5.NBT.A Use place value system understanding to perform operations with multi-digit whole numbers to billions and decimals to thousandths 5.NBT.A.5 Round numbers from billions to thousandths place. 5.NBT.A.6 Add and subtract multi-digit whole numbers and decimals to the thousandths place, and justify the solution 5.NBT.A.7 Multiply multi-digit whole numbers and decimals to the hundredths place, and justify the solution. 5.NBT.A.8 Divide multi-digit whole numbers and decimals to the hundredths place using up to two-digit divisors and four-digit dividends, and justify the solution. 6.NS.B.1 Demonstrate fluency with division of multi-digit whole numbers.	● Difference ● Dividend ● Divisor ● Product ● Quotient ● Sum ● Whole number	Lessons 1- 5 Student Handouts Activities: ● Adding and subtracting decimals task cards ● Adding and subtracting decimals scavenger hunt ● Multiplying decimals mazes ● Multiplying and dividing decimals he said/she said ● Dividing decimals solve and color ● Decimal operations performance task Unit 1 Study Guide Unit 1 Test	**Formative:** ● Homework 1-5 ● iReady **Summative:** ● Decimal Operations quiz ● Unit 1 Assessment ● Study Island

2022-2023

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Unit 2 Title: Fraction Operations

Standards	Vocabulary	Activities/Resources	Formative/Summative Assessments

6.NS.A Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
6.NS.A.1 Compute and interpret quotients of positive fractions.
6.NS.A.1.a Solve problems involving division of fractions by fractions.
5.NF.A.1 Understand that parts of a whole can be expressed as fractions and/or decimals.
5.NF.B.3 Solve problems involving addition and subtraction of fractions and mixed numbers with unlike denominators, and justify the solution.
	● Difference
	● Product
	● Quotient
	● Rational number
	● Reciprocal
	● Sum
	● Whole number
		Student Handouts 1-6
		   Activities:
		   ● LCM and GCF puzzle
		   ● Adding and subtracting fractions stations
		   ● Multiplying fractions he said/she said
		   ● Dividing Fractions solve and color
		   ● Dividing fractions task cards 2
		   ● Fractions operations performance task
			Formative:
			   ● Homework 1-6
			   ● iReady
			Summative:
			   ● Fraction operations I quiz
			   ● Fraction Operations 2 quiz
			   ● Study Island lessons
			   ● Unit 2 test

Unit 3 Title: The Number System

Standards	Vocabulary	Activities/Resources	Formative/Summative Assessments
6.NS.C Apply and extend previous understandings of numbers to the system of rational numbers 6.NS.C.5 Use positive and negative numbers to represent quantities. 6.NS.C.2 Locate a rational number as a point on the number line. 6.NS.C.2.a Locate rational numbers on a horizontal or vertical number line 6.NS.C.2.b Write, interpret and explain problems of ordering of rational numbers. 6.NS.C.2.c Understand that a number and its opposite (additive inverse) are located on opposite sides of zero on the number line	● Absolute value ● Inequality ● Integer ● Opposite ● Rational number ● Whole number	Student Handouts 1-6 Unit Study Guide **Activities**: ● Comparing Rational Numbers task cards ● Ordering rational numbers task cards ● Absolute value cut and paste ● Numerical expressions review - find it, fix it	**Formative**: ● Homework 1-6 ● iReady **Summative**: ● Ordering rational numbers Quiz ● Unit 3 Test ● Study Island lessons

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Unit 4 Title: Ratios

Standards	Vocabulary	Activities/Resources	Formative/Summative Assessments
6.RP.A Understand and use ratios to solve problems 6.RP.A.1 Understand a ratio as a comparison of two quantities and represent these comparisons. 6.RP.A.3.a. Create tables of equivalent ratios, find missing values in the tables and plot the pairs of values on the coordinate plane	● Equivalent ratio ● Proportion ● Ratio ● Ratio table ● Scale factor	Student Handouts 1-7 Unit Study Guide **Activities**: ● Intro to ratios - Fruit Loop lab ● Equivalent ratios solve and color ● Tape diagram cut and paste ● Ratio application puzzle train ● Ratio application task cards ● Ratios unit performance task	**Formative**: ● Homework 1-7 ● iReady **Summative**: ● Ratios quiz ● Unit 4 Test ● Study Island

Unit 5 Title: Rates and Percents

Standards	Vocabulary	Activities/Resources	Formative/Summative Assessments
6.RP.A Understand and use ratios to solve problems 6.RP.A.2 Understand the concept of a unit rate associated with a ratio, and describe the meaning of unit rate. 6.RP.A.3.b Solve unit rate problems. 6.RP.A.3.c Solve percent problems. 6.RP.A.3.d Convert measurement units within and between two systems of measurement	● Percent ● Proportion ● Rate ● Ratio ● Unit rate	Student Handouts 1-10 Unit study guide **Activities**: ● Intro to rates bubble gum lab ● Measurement conversions find someone who ● Converting fractions, decimals, percents cards ● Modeling percents ● Fractions, decimals, percents solve and color ● Percent of a number task cards ● Percent application he said/she said ● Scavenger hunt ● Percent review - spin to 10	**Formative**: ● Homework 1-10 ● iReady **Summative**: ● Rates - quiz 1 ● Percents - quiz 2 ● Unit 5 test ● Study island

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Grade : 6th   **Subject: Math**   **Quarter: 3/4 - Semester 2**

Unit 6 Title: Coordinate plane

Standards	Vocabulary	Activities/Resources	Formative/Summative Assessments
6.NS.C Apply and extend previous understandings of numbers to the system of rational numbers. 6.GM.A.3 Solve problems by graphing points in all four quadrants of the Cartesian coordinate plane. 6.NS.C.1 Use positive and negative numbers to represent quantities. 6.NS.C.2. Locate a rational number as a point on the number line. 6.NS.C.2.a Locate rational numbers on a horizontal or vertical number line. 6.NS.C.2.b Write, interpret and explain problems of ordering of rational numbers 6.NS.C.2.c Understand that a number and its opposite (additive inverse) are located on opposite sides of zero on the number line 6.NS.3 Understand that the absolute value of a rational number is its distance from 0 on the number line 6.GM.A.3.a Understand signs of numbers in ordered pairs as indicating locations in quadrants of the Cartesian coordinate plane 6.GM.A.3b that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes 6.GM.A.3c Find distances between points with the same first coordinate or the same second coordinate 6.GM.A.3d Construct polygons in the Cartesian coordinate plane	● Absolute value ● Coordinate plane ● Integer ● Opposite ● Origin ● quadrant	Student Handouts 1-6 Unit study guide **Activities**: ● Locating ordered pairs cut and paste ● Graphing on the coordinate plane task cards ● Applications on the coordinate plane scavenger hunt ● Coordinate plane performance task	**Formative**: ● Homework 1-6 ● iReady **Summative**: ● Mini-quiz 1 ● Mini-quiz 2 ● Study island ● Unit 6 test

Unit 7 Title: Expressions

Standards	Vocabulary	Activities/Resources	Formative/Summative Assessments
6.EEI.A Apply and extend previous understandings of arithmetic to algebraic expressions. 6.EEI.A.1 Describe the difference between an expression and an equation 6.EEI.A.2 Create and evaluate expressions involving variables and whole number exponents. 6.EEI.A.2.a. Identify parts of an expressions using mathematical terminology 6.EEI.A.2.b Evaluate expressions at specific values of the variables 6.EEI.A.2.c Evaluate non-negative rational number expressions 6.EEI.A.2.d Write and evaluate algebraic expressions 6.EEI.A.3.e Understand the meaning of the variable in the context of the situation 6.EEI.A.3 Identify and generate equivalent algebraic expressions using mathematical properties.	● Associative property ● Commutative property ● Distributive property ● Equivalent ● Evaluate ● Expression ● Identity property ● Simplify ● variable	Student Handouts 1-6 Unit Study Guide **Activities**: ● Intro to exponents cut and paste ● Order of operations scavenger hunt ● Order of operations solve and color ● Equivalent expressions modeling activity ● Evaluating expressions with variables task cards ● Distributive property puzzle ● Writing expressions card match ● Expressions unit review stations	**Formative**: ● Homework 1-6 ● iReady **Summative**: ● Expressions Quiz ● Unit 7 Test ● Study Island

Curriculum Unit Template
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Unit 8 Title: Equations and Inequalities

Standards	Vocabulary	Activities/Resources	Formative/Summative Assessments
6.EEI.B Reason about and solve one-variable equations and inequalities. 6.EEI.C Represent and analyze quantitative relationships between dependent and independent variables 6.EEI.B.1 Use substitution to determine whether a given number in a specified set makes a one-variable equation or inequality true. 6.EEI.B.2 Understand that if any solutions exist, the solution set for an equation or inequality consists of values that make the equation or inequality true 6.EEI.B.3 Write and solve equations using variables to represent quantities, and understand the meaning of the variable in the context of the situation 6.EEI.B.4 Solve one-step linear equations in one variable involving non-negative rational numbers 6.EEI.B.5 Recognize that inequalitites may have infinitely many solutions 6.EEI.B.5.a Write an inequality in the form x>c, x<c, x$\geq$c or x$\leq$c to represent a constraint or condition 6.EEI.B.5.b Graph the solution set of an inequality 6.EEI.C.1 Identify and describe relationships between two variables that change in relationship to one another 6.EEI.C.1.a Write an equation to express one quantity, the dependent variable, in terms of the other quantity, the independent variable 6.EEI.C.1.b Analyze the relationship between the dependent and independent variables using graphs, tables and equations and relate these representations to each other	- Less than - Less than/equal to - Greater than - Greater than/equal to - Equal - Closed circle - Open circle	Student Handouts 1-7 Unit Study Guide **Activities**: - One step equations scavenger hunt - One step equations solve and color - Independent vs. dependent variables scavenger hunt - One step inequalities puzzle - Inequalities task cards - Inequalities cut and paste - Equations and inequalities unit review stations	**Formative**: - Homework 1-5 - iReady **Summative**: - One step equations mini quiz 1 - One step equations mini quiz 2 - One step equations quiz - Unit 8 test - Study Island

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Unit 9 Title: Geometry

Standards	Vocabulary	Activities/Resources	Formative/Summative Assessments
6.GM.A Solve problems involving area, surface area and volume 6.GM.4 Solve problems using nets. 6.GM.A.1 Find the area of polygons by composing or decomposing the shapes into rectangles or triangles 6.GM.A.2 Find the volume of right rectangular prisms 6.GM.A.2.a Understand that the volume of a right rectangular prism can be found by filling the prism with multiple layers of the base 6.GM.A.2.b Apply V= l*w*h and V-Bh to find the volume of right rectangular prisms 6.GM.4a Represent three-dimensional figures using nets made up of rectangles and triangles 6.GM.4b Use nets to find the surface area of three-dimensional figures whose sides are made up of rectangles and triangles	● Area ● Net ● Lateral surface area ● Parallelogram ● Rectangular prism ● Total surface area ● Trapezoid ● Triangle ● Quadrilateral ● volume	Student Handouts 1-10 Unit study guide **Activities**: ● Modeling area formulas area book ● Area of quadrilaterals spin to 10 ● Area of triangles solve and color ● Area of composite figures solve and color ● 3D figures guess my figure ● Surface area cut and paste ● Volume of rectangular prisms task cards ● Geometry unit review scavenger hunt	**Formative**: ● Homework 1-10 ● iReady **Summative**: ● Area quiz ● Surface area quiz ● Unit 8 test ● Study Island

2022-2023

Unit 10 Title: Data and Statistics

Standards	Vocabulary	Activities/Resources	Formative/Summative Assessments
6.DSP.A Develop understanding of statistical variability. 6.DSP.B Summarize and describe distributions 6.DSP.A.1 Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. 6.DSP.A.2 Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread and overall shape 6.DSP.A.3 Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary from a single number 6.DSP.B.1 Display and interpret data 6.DSP.B.1.a Use dot plots, histograms and box plots to display and interpret numerical data 6.DSP.B.1.b Create and interpret circle graphs 6.DSP.B.2 Summarize numerical data sets in relation to the context 6.DSP.B.2.a Report the number of observations 6.DSP.B.2.b Describe the nature of the attribute under investigation, including how it was measured and its units of measurement 6.DSP.B.2.c Give quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context of the data 6.DSP.B.2.d Analyze the choice of measures of center and variability based on the shape of the data distribution and/or the context of the data	- Box plot - Center - Dot plot - Interquartile range - Median - Mean - Shape - spread	Student Handouts 1-8 Unit study guide **Activities**: - Statistical questions cut and paste - Measures of center find someone who - Measures of variability solve and color - Histograms scavenger hunt - Box plots he said/she said - Data and statistics unit performance task	**Formative**: - Homework 1-8 - iReady **Summative**: - Data and statistics quiz - Study Island - Unit 10 Test

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