

Content Area		Mathematics	Grade Level	6 <sup>th</sup>	
Course Name		6 <sup>th</sup> Grade Mathematics			
Term One: August 8 - October 11, 2022				11, 2022	
Instructional Days Unit Title		MS College and Career Readines	Standards	Instructional Resources	Assessment Resources
UNIT 1 Factors, Multiples and Division (Ready Lesson 11 & Lesson 8)	6.NS.4 Find the gr or equal to numbers le express a s as a multip factor. For 6.NS.2 Fluently div	reatest common factor of two who o 100 and the least common multi ess than or equal to 12. Use the di sum of two whole numbers 1-100 ole of a sum of two whole number <i>example, express 36 + 8 as 4(9 + 2</i> wide multi-digit numbers using the	le numbers less than le of two whole tributive property to vith a common facto with no common	Scaffolding Document & MS CCRS Resources for Mathematics	<u>Clever</u>
UNIT 2 Division of Fractions (Ready Math Lesson 6 & 7)	6.NS.1 Interpret an problems in visual fract example, cu fraction mo multiplicati 3/4 of 8/9 i chocolate v equally? Ho How wide i 1/2 square	nd compute quotients of fractions nvolving division of fractions by fra- ion models and equations to repre- reate a story context for $(2/3) \div (3,$ odel to show the quotient; use the ion and division to explain that $(2/3)$ is 2/3. (In general, $(a/b) \div (c/d) = ac-will each person get if 3 people shaow many 3/4-cup servings are in 2,is a rectangular strip of land with le-mi?$	and solve word ctions, e.g., by using sent the problem. For 4) and use a visual relationship between b) $\div$ (3/4) = 8/9 becaus /bc.) How much re 1/2 lb of chocolate 3 of a cup of yogurt? ngth 3/4 mi and area	ie	
UNIT 3 Decimal Operations (Ready Math Lesson 9 & 10)	6.NS.3 Fluently ad the standar	ld, subtract, multiply, and divide m rd algorithm for each operation.	ultidigit decimals usin	g	
UNIT 4	6.NS.5				



Understanding Positive and Negative Numbers (Ready Math Lesson 12)	Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in the real-world contexts, explaining the meaning of 0 in each situation.	
(Boody Moth Losson	0.NS./	
(Ready Math Lesson	Understand ordering and absolute value of rational numbers.	
13A & 130j	6.NS.9a	
	Apply and extend previous understanding of addition and	
	subtraction to add and subtract integers; represent addition and	
	subtraction on a horizontal or vertical number line diagram.	
	a. Describe situations in which opposite quantities combine to	
	make 0. For example, a hydrogen atom has 0 charge	
	because its two constituents are oppositely.	
	6.NS.9b	
	Apply and extend previous understanding of addition and	
	subtraction to add and subtract integers; represent addition and	
	subtraction on a horizontal or vertical number line diagram.	
	b. Understand p + q as the number located a distance $ q $	
	from p, in the positive or negative direction depending on	
	whether q is positive of negative. Show that a number and its opposite have a sum of $\Omega$ (are additive inverses)	
	Interpret sums of integers by describing real-world	
	contexts	
	6.NS.9c	
	Apply and extend previous understanding of addition and	
	subtraction to add and subtract integers; represent addition and	
	subtraction on a horizontal or vertical number line diagram.	
	c. Understand subtraction of integers as adding the additive	
	inverse, $p - q = p + (-q)$ . Show that the distance between	
	two integers on the number line is the absolute value of	
	their difference, and apply this principle in real-world	



	contexts. <b>6.NS.9d</b> Apply and extend previous understanding of addition and subtraction to add and subtract integers; represent addition and subtraction on a horizontal or vertical number line diagram. d. Apply properties of operations as strategies to add and subtract integers.		
UNIT 5 The Coordinate Plane (Ready Math Lesson 14)	<ul> <li>6.NS.6a</li> <li>Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. <ul> <li>a. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., -(-3) = 3, and that 0 is its own opposite.</li> </ul> </li> <li>6.NS.6b</li> <li>Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.</li> <li>6.NS.6c</li> <li>Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.</li> <li>6.NS.8</li> <li>Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distance between points with the same first coordinate or the same second coordinate.</li> </ul>		
	Academic Vocabulary	Mathematical Practices	

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6.NS.4 - Distributive Property, Equivalent Expression, Greatest Common Factor (GCF)	MP.1 - Make sense of problems and persevere in solving them.
Least Common Multiple (LCM)	CCSS.MATH.PRACTICE.MP1
6.NS.2 - Algorithm, Divide, Dividend, Division, Divisor, Multi-digit number, Partial	MP.2- Reason abstractly and quantitatively.
Quotient-Quotient, Remainder, Standard Algorithm	CCSS.MATH.PRACTICE.MP2
6 NS 1 - Multiplicative Inverse Reciprocal Visual Eraction Model	MP.3- Construct viable arguments and critique the reasoning of
6 NS 3 - Decimal Decimal Point Place Value	others. <u>CCSS.MATH.PRACTICE.MP3</u>
6 NS 5 - Credit Debit Integer Negative Desitive Zero	MP.4- Model with mathematics. <u>CCSS.MATH.PRACTICE.MP4</u>
6.NS.5 – Creail, Debit, Integer, Negative, Positive, Zero	MP.5- Use appropriate tools strategically.
6.NS.7 - Absolute value, Equal IO (=), Greater Inan (>), Greater Inan or Equal IO ( $\geq$ ),	CCSS.MATH.PRACTICE.MP5
Less Than (<), Less Than or Equal to Inequality (<)	MP.6- Attend to precision. CCSS.MATH.PRACTICE.MP6
6.NS.9 - Additive Inverse	MP.7- Look for and make use of structure.
6.NS.6 - Graph, Horizontal Line Diagram, Number Line Diagram, Opposite, Point,	CCSS.MATH.PRACTICE.MP7
Rational Number, Vertical Line Diagram	MP.8- Look for and express regularity in repeated reasoning.
6.NS.8 - Absolute Value, Coordinate Pair, Coordinate Plane, Graph, Ordered Pair,	CCSS.MATH.PRACTICE.MP8
Origin, Quadrant, X-Axis, Y-Axis	

District Term 1 Benchmark Assessment October 3 – 11, 2022			
Term Two: October 12 – December 21, 2022			
Instructional Days Unit Title	MS College and Career Readiness Standards	Instructional Resources	Assessment Resources
UNIT 6 Expressions (Ready Math Lesson 15, 16, & 17)	<ul> <li>6.EE.1 Write and evaluate numerical expressions involving whole-number exponents</li> <li>6.EE.2 Write, read, and evaluate expressions in which letters stand for numbers.</li> <li>a. Write expressions that record operations with numbers and with letters standing for numbers. For example, express the calculation "Subtract y from 5" as 5 – y</li> </ul>	Scaffolding Document & MS CCRS Resources for Mathematics	<u>Clever</u>



b. Identify parts of an expression using mathematical terms
(sum, term, product, factor, quotient, coefficient); view one
or more parts of an expression as a single entity. For
example, describe the expression 2(8 + 7) as a product of
two factors; view (8 + 7) as both a single entity and a sum of
two terms.
c. Evaluate expressions at specific values of their variables.
Include expressions that arise from formulas used in real-
world problems. Perform arithmetic operations, including
those involving whole-number exponents, in the
conventional order when there are no parentheses to
specify a particular order (Order of Operations). For
example use the formulas $V = s^3$ and $A = 6s^2$ to find the
volume and surface area of a cube with sides of lengths s =
1/2
72.
6.EE.6
Use variables to represent numbers and write expressions when
solving a real-world or mathematical problem; understand that a
variable can represent an unknown number, or, depending on the
purpose at hand, any number in a specified set.
<b>6.EE.3</b>
apply the properties of operations to generate equivalent expressions. For example, apply the distributive property to the
expression $3(2 + x)$ to produce the equivalent expression $6 + 3x$ .
apply the distributive property to the expression $24x + 18y$ to
produce the equivalent expression 6(4x + 3y); apply properties of
operations to y + y + y to produce the equivalent expression 3y.
6.EE.4
Identify when two expressions are equivalent (i.e., when the two
expressions name the same number regardless of which value is
substituted into them). For example, the expressions $y + y + y$ and $3y$



	are equivalent because they name the same number regardless of		
	which number v stands for		
UNIT 7	6.EE.5		
Equations &	Understand solving an <mark>equation</mark> or inequality as a process of		
Inequalities	answering a question: which values from a specified set, if any, make		
(Ready Math Lesson 18	the equation or inequality true? Use substitution to determine		
- 21)	whether a given number in a specified set makes an equation or		
	inequality true.		
	6.EE.7		
	Solve real-world and mathematical problems by writing and solving		
	equations of the form $x + p = q$ and $px = q$ for cases in which p, q, and		
	x are all nonnegative rational numbers.		
	<b>D.EL.</b> $\delta$		
	while an inequality of the form $x > c$ of $x < c$ to represent a		
	Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely		
	many solutions; represent solutions of such inequalities on number		
	line diagrams		
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	6.EE.9		
	Use variables to represent two quantities in a realworld problem		
	that change in relationship to one another; write an equation to		
	express one quantity, thought of as the dependent variable, in terms		
	of the other quantity, thought of as the independent variable.		
	Analyze the relationship between the dependent and independent		
	variables using graphs and tables, and relate these to the equation.		
	For example, in a problem involving motion at constant speed, list		
	and graph ordered pairs of distances and times, and write the		
	equation d = 65t to represent the relationship between distance and		
	time.		
	Academic Vocabulary	Mathematical Practices	
6.EE.1 – Base, Exponen	t, Exponential Form, Numerical Expression, Standard Form	MP.1 - Make sense of problems	and persevere in solving them.

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<ul> <li>6.EE.2a &amp; 2b – Coefficient, Constant, Difference, Expression, Factor, Product, Quotient, Substitute, Sum, Term, Variable</li> <li>6.EE.2c - Algebraic Expression, Evaluate, Expression, Formula, Numerical Expression, Substitution, Variable</li> <li>6.EE.6 - Algebraic Expression, Expression, Variable</li> <li>6.EE.3 - Associative Property, Commutative Property, Distributive Property, Equivalent Expression, Factor, Identity Property, Like Terms, Number Property, Zero Property</li> <li>6.EE.4 - Associative Property, Commutative Property, Distributive Property, Equivalent Expression, Factor, Identity Property, Like Terms, Number Property, Substitute, Zero Property</li> <li>6.EE.5 - Equation, Evaluate, Inequality, Substitution, True Equation, True Inequality</li> <li>6.EE.7 - Equation, Evaluate, Inequality, Substitution, Variable</li> <li>6.EE.8 - Condition, Constraint, Equation, Evaluate, Graph, Inequality, Infinite, Infinitely Many Solutions, Number Line Diagram, Solution, Substitution, Variable</li> <li>6.EE.9 - Dependent Variable, Independent Variable</li> </ul>		MP.2- Reason abstractly and quantitatively. <u>CCSS.MATH.PRACTICE.MP2</u> MP.3- Construct viable arguments and critique the reasoning of others. <u>CCSS.MATH.PRACTICE.MP3</u> MP.4- Model with mathematics. <u>CCSS.MATH.PRACTICE.MP4</u> MP.5- Use appropriate tools strategically. <u>CCSS.MATH.PRACTICE.MP5</u> MP.6- Attend to precision. <u>CCSS.MATH.PRACTICE.MP6</u> MP.7- Look for and make use of structure. <u>CCSS.MATH.PRACTICE.MP7</u> MP.8- Look for and express regularity in repeated reasoning. <u>CCSS.MATH.PRACTICE.MP8</u>	
	District First Semester Benchmark Ass December 13 – 21, 2022	sessment	
Term Three: January 5 – March 17, 2023			
Instructional Days Unit Title	MS College and Career Readiness Standards	Instructional Resources	Assessment Resources

UNIT 86.RP.1CleverRatios & Proportional RelationshipsUnderstand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."Scaffolding Document & MS CCRS Resources for Mathematics				
Ratios & Proportional RelationshipsUnderstand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."Scaffolding Document & MS CCRS Resources for MathematicsSolutionMathematics	UNIT 8	6.RP.1		Clever
Relationshipsa ratio relationship between two quantities. For example, "The ratioMS CCRS Resources for(Ready Math Lesson 1 - 5)of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."MS CCRS Resources for Mathematics	<b>Ratios &amp; Proportional</b>	Understand the concept of a ratio and use ratio language to describe	Scaffolding Document &	
(Ready Math Lesson 1 –       of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."       Mathematics	Relationships	a ratio relationship between two quantities. For example, "The ratio	MS CCRS Resources for	
5) every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."	(Ready Math Lesson 1 –	of wings to beaks in the bird house at the zoo was 2:1, because for	<b>Mathematics</b>	
received, candidate C received nearly three votes."	5)	every 2 wings there was 1 beak." "For every vote candidate A		
		received, candidate C received nearly three votes."		
6.RP.2		6.RP.2		
Understand the concept of a unit rate a/b associated with a ratio a:b		Understand the concept of a unit rate a/b associated with a ratio a:b		
with b≠0, and use rate language in the context of a ratio relationship.		with b≠0, and use rate language in the context of a ratio relationship.		



	<ul> <li>For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is ¾ cup of flour for each cup of sugar." "We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger."</li> <li>6.RP.3</li> <li>Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.</li> </ul>	
UNIT 9 Geometry (Ready Math Lesson 22- 25)	<ul> <li>6.G.1</li> <li>Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.</li> <li>G.3</li> <li>Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving realworld and mathematical problems.</li> </ul>	
	<ul> <li>6.G.2</li> <li>Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas V=lwh and V=bh to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.</li> <li>6.G.4</li> <li>Represent three-dimensional figures using nets made up of</li> </ul>	



	rectangles and triangles, and use the nets to find the surface area of		
	these figures. Apply these techniques in the context of solving real-		
	world and mathematical problems.		
Academic Vocabulary 6.RP.1 - Ratio, Part-to-Part, Part-to-Whole 6.RP.2 - Equivalent Ratios, Rate, Unit Rate 6.RP.3 – Percent 6.G.1 – Area, Composite Figure, Equilateral Triangle, Formula, Isosceles Triangle, Parallelograms, Quadrilateral, Rhombus, Right Triangle, Trapezoid 6.G.3 – Base, Edge, Length, Polygon, Side, Vertex (Vertices) 6.G.2 – Base, Height, Length, Right Rectangular Prism, Unit Cube, Volume, Width 6.G.4 – Net, Surface Area, Three-Dimensional Figure		Mathematical Practices         MP.1 - Make sense of problems and persevere in solving them. <u>CCSS.MATH.PRACTICE.MP1</u> MP.2- Reason abstractly and quantitatively. <u>CCSS.MATH.PRACTICE.MP2</u> MP.3- Construct viable arguments and critique the reasoning of others. <u>CCSS.MATH.PRACTICE.MP3</u> MP.4- Model with mathematics. <u>CCSS.MATH.PRACTICE.MP4</u> MP.5- Use appropriate tools strategically. <u>CCSS.MATH.PRACTICE.MP5</u> MP.6- Attend to precision. <u>CCSS.MATH.PRACTICE.MP6</u> MP.7- Look for and make use of structure. <u>CCSS.MATH.PRACTICE.MP7</u> MP.8- Look for and express regularity in repeated reasoning. <u>CCSS.MATH.PRACTICE.MP8</u>	
	District Final Benchmark Assessm March 2 – 10, 2023	lent	
	Term Four: March 13– May 24, 2	023	
Instructional Days Unit Title	MS College and Career Readiness Standards	Instructional Resources	Assessment Resources
UNIT 10 Statistics and Probability (Ready Math Lesson 26- 29)	<ul> <li>6.SP.1</li> <li>Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. For example, "How old am I?" is not a statistical question, but "How old are the students in my school?" is a statistical question because one anticipates variability in students' ages.</li> <li>6.SP.2</li> </ul>	Scaffolding Document & MS CCRS Resources for Mathematics	<u>Clever</u>



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	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. <b>6.SP.3</b> 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 with a single number.		
	<ul> <li>6.SP.4</li> <li>Display numerical data in plots on a number line, including dot plots, histograms, and box plots.</li> <li>6.SP.5a</li> <li>Summarize numerical data sets in relation to their context such as by: <ul> <li>a. Reporting the number of observations.</li> <li>6.SP.5b</li> </ul> </li> <li>Summarize numerical data sets in relation to their context such as by: b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.</li> <li>6.SP.5c</li> <li>Summarize numerical data sets in relation to their context such as by: c. Giving quantitative measures of center (median, and/or mean) and variability (interquartile range), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.</li> <li>6.SP.5d</li> <li>Summarize numerical data sets in relation to their context such as by: d. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.</li> </ul>		
	Academic Vocabulary	Mathematical Practices	
6.SP.1 - Categorical Data, Data, Numerical Data, Qualitative, Quantitative, Statistical Question, Statistics 6.SP.2 – Center, Data Set, Distribution, Spread		MP.1 - Make sense of proble <u>CCSS.MATH.PRACTICE.MP1</u>	ms and persevere in solving them.
<b>U.J.</b> Wiedli, Wieulall,	Measure of variation, Mode, Nalige		

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6.SP.4 - Box-and-Whisker Plot, Box Plot, Dot Plot, Frequency Table, Histogram, Interquartile Range, Outlier, Quartile, Skewed, Symmetrical 6.SP.5 – Deviation, Mean Absolute Deviation	<ul> <li>MP.2- Reason abstractly and quantitatively.</li> <li><u>CCSS.MATH.PRACTICE.MP2</u></li> <li>MP.3- Construct viable arguments and critique the reasoning of others. <u>CCSS.MATH.PRACTICE.MP3</u></li> <li>MP.4- Model with mathematics. <u>CCSS.MATH.PRACTICE.MP4</u></li> <li>MP.5- Use appropriate tools strategically.</li> <li><u>CCSS.MATH.PRACTICE.MP5</u></li> <li>MP.6- Attend to precision. <u>CCSS.MATH.PRACTICE.MP6</u></li> <li>MP.7- Look for and make use of structure.</li> <li><u>CCSS.MATH.PRACTICE.MP7</u></li> <li>MP.8- Look for and express regularity in repeated reasoning.</li> <li><u>CCSS.MATH.PRACTICE.MP8</u></li> </ul>
End-of-Year Assessments	