ST. LOUIS PUBLIC SCHOOLS

Language Companion to the DESE Math Model Curriculum, Grade 2

Developed as part of Saint Louis Public Schools
"Math Success for ELLs" grant,
a partnership between Webster University, Magic House,
and Saint Louis Public Schools ESOL Program,
funded by the US department of Education

Grade 5- Multiply and Divide Multi-Digit Numbers

Essential Measurable Learning Objective	Language Objectives	Sentence Frames
Students will apply the strategy used to compute a given multiplication problem.	Students will explain the strategy orally using logical connectors (*and, that, so*). Students will explain in writing a multiplication problem as groups of an amount, using *–ing endings* as a noun & verb ending.	I made __ groups of __ ____that equal ___. Example: *I made 6 groups of 5 counters that equal 30.* Multiplying __ x __ = __ means: I am combining __ groups of __ (*items*) = __(*items*) Example: *Multiplying 3 x 15 means I am combining 3 groups of 15 students to equal 45 students.*

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Students will represent and recognize division using various models.	Students will explain orally a representation using past tense verbs. Students will describe division verbally using the language of multiplication (*inverse operation*).	I divided ___ ____(objects) into __ equal groups. Example: *I divided 20 counters into 4 groups.* When I am dividing ___ by ____, I ask myself, "How many times would I multiply ___ *(the divisor)* to equal ____ *(part or the entire dividend*)?" or "How many groups of _____ (*the divisor*) are in _____ (*the dividend*)?"
Students will apply properties of operations.	Students will articulate the characteristics of specific multiplication and division properties using an *if …then* statement. Students will explain verbally the process of composing and decomposing numbers using present tense verbs.	The _____ property of multiplication/division tells me that if the equation _____, then I know that the equation ___ is true because _____. The _____ property of _____ states that _____. The _____ property allows me

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		to change the equation __ (*x*, ÷) __ to _____. Example: *The distributive property allows me to change the equation 25 x 118 into (20 x 118) + (5 x 118).*
Students will demonstrate fluency with efficient procedures for division of whole numbers.	Students will describe in writing the process using sequence words: *first, then, next, finally, after, last*.	First ____. Next ____. Then ____. Last ____.
Students will apply and describe the strategy used to compute a multi-digit division problem.	Students will explain orally and in writing the division strategy using complete sentences.	The strategy I used to divide __÷__ was _____ because ____.
Students will represent a mathematical situation as a number sentence.	Students will write a word problem using a given number sentence and read it to a partner without the number sentence. Students will listen to a partner's word problem and create a number sentence using that information. Students will orally justify the number sentences using "I agree… because…" or "I disagree…because…"	The number sentence I generated is _____. It is correct because _____. I agree/disagree with your number sentence because _____.
Students will model problem situations using representations.	Students will explain in writing how the representation models the given problem using	My representation models this division/multiplication problem because _____.

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	complete sentences.	

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Grade 5- Adding and Subtracting Fractions

Essential Measurable Learning Objective	Language Objective	Sentence Frame
Students will recognize and generate equivalent forms of commonly used fractions.	Students will compare commonly used fractions orally with a partner using complete sentences. Students will justify in writing whether fractions are equivalent using a complete a sentence.	I know that _____ and _____ are/are not equivalent because _____. I know ___ is equivalent to ____ because _____.
Students will demonstrate fluency with efficient procedures for adding and subtracting fractions with unlike denominators.	Students will explain orally and in writing the process using sequence words from a word bank.	Word Bank first then next after second finally last
Students will use benchmarks, models, and equivalent forms to judge the size of fractions.	Students will explain verbally how to compare fractions using comparative adjectives: *greater than, equal to, less than*. Students will justify their reasoning in writing using complete sentences.	I determined _____ was greater than/equal to/ less than _____ because _____. ___ is _____ (*greater than, equal to, less than*) _____ because ____ is closer to ___ than _____. Example: *7/8 is greater than 2/3 because 7/8 is closer to 1 whole than 2/3.*
Students will estimate and justify sums and differences of fractions.	Students will articulate in small groups their estimation justification using target vocabulary: *estimate, estimation, reasonable, about, sum, difference*.	I estimate the sum/difference of ____ and ____ to be about ____. My estimate is reasonable because _____.
Students will model problem situations and draw conclusions.	Students will read a problem situation and debate orally their conclusion using logical connectors such as: *because, therefore, if/then*.	I conclude _____ is the best representation because _____.

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Grade 5- Write and Interpret Numerical Expressions

Essential Measurable Learning Outcome	**Language Objective**	**Sentence Frame**
The students will use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.	Students will list the order of operations for a dictated numerical expression and share orally with a partner, using target vocabulary: *parentheses, exponents, multiplication, division, addition, and subtraction*. Students will write the order of operations using appropriate suffixes: *-tion, -ion*.	To solve this numerical expression, I need to follow these steps using the order of operations _____, _____, _____, _____, _____ and then _____.
The students will write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.	Students will listen to a dictated numerical expression and write in word form using target vocabulary: *less than, more than, times…*	Another way to represent _____ (*numerical expression*) is __(*word form*). Example: Another way to represent 5+2 is two more than five.

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Grade 5- Understanding the Place Value System

Essential Measurable Learning Objective	Language Objective	Sentence Frame
Students will use the place value system to round decimals to any place and describe the effects of multiplication and division on decimals.	Students will describe orally the process of rounding decimals to a given place using an *if…then* statement. Students will explain in writing the effect of multiplication and division on a number using the vocabulary: *larger, smaller, multiply, divide*.	If you round to the _____ place, then the rounded number will be____ because_____. If you_____ a decimal, the number will be _____ because_____.
Students will use place value knowledge to read and write decimals to the thousandths.	Students will write decimals in word form using target vocabulary: *tenths, hundredths, thousandths*. Students will read decimals in word form orally, using correct target vocabulary.	This decimal is _____. There are ___ tenths, ____hundredths, and ____ thousandths.
Students will use the place value system to recognize and generate equivalent forms of decimals to the thousandths place	Students will listen to a given decimal, write an equivalent decimal, and explain their reasoning using target vocabulary: *equivalent, tenths, hundredths, thousandths*.	_____ is equivalent to _____ because_____.
Students will recognize equivalent representations for the same number and generate them by decomposing and composing numbers, including expanded and exponential notation.	Students will listen to a given decimal, write an equivalent decimal, and explain their reasoning using target vocabulary: *equivalent, tenths, hundredths, thousandths*. Student will write in word form numbers in the millions using target vocabulary: *hundred, thousand, and million*.	_____ is equivalent to _____ because_____. The number _____ (*standard form*) is written as _____ (word form).

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	Students will justify answers to exponential notation problems orally with a partner using complete sentences.	$\underline{X^x}$ is equivalent to _____ because _____.
Students will describe the effects of multiplying and dividing whole numbers as well as the relationship between two operations.	Students will explain in writing the effect of multiplication or division on a number and then share orally with a partner using comparative adjectives and complete sentences. Students will explain in writing the inverse relationship between multiplication and division and then share orally with a partner using complete sentences.	If you ____ (*multiply/divide*) a number, the _____ (*product/quotient*) will be _____ (*bigger/smaller*) because_____. Multiplication and division are related because _____.

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Grade 5- Graphing Points on the Coordinate Plane

Essential Measurable Learning Objective	**Language Objective**	**Sentence Frame**
Students will use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates.	Students will label in writing and orally identify the parts of a coordinate system using target vocabulary: *x-axis, y-axis, ordered pair, intersection, origin, perpendicular lines, coordinates, horizontal, vertical*.	This part is the _____. In a coordinate system, the _____ is _____.
Students will describe how to plot and show the relationship between the axes and the coordinate points.	Students will describe orally the axes and coordinate point relationship using sequencing words.	First, start ____(*at the origin*). Next, move ____ to the right/left. Finally, move ____ up/down. This is the plot of the ordered pair.

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Grade 5- Converting Like Measurement Units within a Given Measurement System

Essential Measurable Learning Objectives	**Language Objectives**	**Sentence Frames**
Students will convert from one unit to another within a system of linear measurement	Students will discuss verbally with a partner the strategy using the vocabulary: *convert, length, inches, feet, yard, centimeter, millimeter, meter, kilometer, mile.* Students will explain in writing the steps to convert the two units of measurement using sequence terms: *first, then, next, finally*.	To convert _____ into _____, I have to _____. That means that __ _____ is equivalent to/the same as ___ _____. If there are __ ____ in ___ _____, then there are _ ___ in _ ____. First ____. Next ___. My answer is ___.
The student will convert from one unit to another with a system of measurement (mass and weight).	Students will explain the strategy utilized verbally using the vocabulary: *convert, mass, weight, volume, pounds, ounces, cup, pint, quart, gallon, liter, kiloliter, milliliter.* Students will explain in writing the process using sequence terms: *to begin, second, then, last.*	To convert _____ into _____, I have to _____. That means that __ _____ is equivalent to/the same as ___ _____. If there are __ ____ in ___ _____, then there are _ ___ in __ _____. To begin, ____. Next ___. My answer is ___.

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