

Teacher: Carmen Loughner		Subject/Grade: 5th grade accelerated math	
Date: October 26, 2017		Title of the Lesson: Add., Sub., Mult., Divide Equations	
Lesson Essential Question: When reading a word problem, how do you create and solve a whole number addition, subtraction, multiplication or division equation?		Topic or Big Idea: Students will be able to translate words into algebraic expressions, write and solve an equation to model a situation, use the arithmetic from the problem to generalize an algebraic solution, solve and check a one-step equation.	
Unit Essential Question: How are whole number equations written, solved, and checked?		Vocabulary: Algebraic expression, term, variable, coefficient, constant, and solution	
Introductory/Acquisition Lesson As a class, we will read a word problem. Based on the word problem, we will create, solve and check an equation.		Extending Thinking Lesson Students will be paired together based on similar ability (using PSSA data, pretest scores, and CDT data) to answer questions based on their ability level.	Assessment Lesson Teacher will be using informal assessment while students are creating an equation with the class and then while they are working on their tiered assignment.
Focus Students' Attention		Statement of Objective - <i>What should students know and do as a result of the lesson? (Component 1C)</i>	
		Student will be able to write, solve and graph whole number equations using various methods.	
Common Core Focus		Relevance/Rationale: <i>(Why are the outcomes of this lesson important in the real world? Why are these outcomes essential for future learning?) (Components 1A,1C)</i>	
		C.2.1.6.E.2 - Identify and choose appropriate processes to compute fluently with multi-digit numbers. CC.2.1.6.E.4: Apply and extend previous understandings of numbers to the system of rational numbers. CC.2.2.6.B.2: Understand the process of solving a one-variable equation or inequality and apply to real-world and mathematical problems. CC.2.2.6.B.3: Represent and analyze quantitative relationships between dependent and independent variables. CC.2.MP.1 : Make sense of problems and persevere in solving them. CC.2.MP.2 : Reason abstractly and quantitatively. CC.2.MP.3 : Construct viable arguments and critique the reasoning of others. CC.2.MP.4 : Model with mathematics. CC.2.MP.5 : Use appropriate tools strategically. CC.2.MP.6 : Attend to precision. CC.2.MP.7 : Look for and make use of structure. CC.2.MP.8 : Look for and make sense of regularity in repeated reasoning.	
Anticipatory Set /Activating Strategy		Do Now / Warm-up - <i>How will you engage students in learning? How will you connect the lesson to their prior knowledge? (Component 1E)</i>	
		<ul style="list-style-type: none"> Do Now: When you think of the mathematical term "equation" what words come to mind? Make a list of at least 4. 	

	<ul style="list-style-type: none"> Review the Do Now, list some student provided examples on the whiteboard. Close the Do Now by informing the students that the day's focus will be on reading and interpreting world problems in order to create, solve and check whole number equations. 			
Introductory / Short Lecture/ and/or Developmental Activities	<p>Teacher Directed Activities: (Teaching of the new concept) <i>How will you aid students in constructing meaning of new concepts? How will you introduce/model new skills or procedures? What instructional strategy(ies) will you introduce, re-introduce or utilize to ensure comprehension? (Component 1E)</i></p>			
	<ul style="list-style-type: none"> Get the classes' attention and explain the activity. "Today we will our knowledge of equations by reading word problems to create, solve, and check equations. This activity will be bringing all the concepts we have learned about equations together by solving a "mystery" The teacher will have a student read the "mystery" to the class. The class will work together with the teacher by reading a word problem and then create, solve and check the equation. The teacher will inform the student that tomorrow they will create their sandwich, but today they should be focusing with their partner to create, solve, and check the equation they make based on the given word problem. If partners believe their equations are accurate, they can raise hands to have TEACHER check. If they are accurate, they may put their solution to the given variable on the Promethean Board for the class to figure out the final equation that will solve the "mystery". If time remains, they can list which steps in their equation work will be the "layers" of their sandwich." TEACHER will divide students into groups of 2. TEACHER will distribute the world problems to each group in which they will need to create, solve and check an equation based on the word problem. TEACHER will then walk around the room and observe students' discussions and work. 			
Guided Practice	<p>Teacher-Monitored Activities: <i>What will students do together to use new concepts or skills? How will you assist students in this process? (Component 1E)</i></p>			
	Students work with teacher on first world problem to create, solve, and check an equation based on the given word problem.			
Independent Practice or Activities	<p>Practice Activities, Refinement, and Extension: <i>What opportunities will students have to use the new skills and concepts in a meaningful way? How will students expand and solidify their understanding of the concept and apply it to a real-world situation? How will students demonstrate their mastery of the essential learning outcomes? (Components 1E, 1F)</i></p>			
	Given their tiered word problems, students will work in same ability group to interpret problem in order to create, solve, and check an equation .			
Assessment / Closure <i>What does</i>	<table border="1"> <tr> <td> <p>Formative Assessment: How will you & your students know if they have successfully met the outcomes? What</p> </td> <td> <p>Closure Activities: How will you assist students in reflecting upon what they learned today and are</p> </td> <td> <p>Summative Assessment: How will you ensure that all students have mastered the identified learning indicators? How will you</p> </td> </tr> </table>	<p>Formative Assessment: How will you & your students know if they have successfully met the outcomes? What</p>	<p>Closure Activities: How will you assist students in reflecting upon what they learned today and are</p>	<p>Summative Assessment: How will you ensure that all students have mastered the identified learning indicators? How will you</p>
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<i>success on this lesson's outcomes look like?</i> <i>(Component 1F)</i>	specific criteria will be met in a successful product/process?	preparing for tomorrow's lesson? What homework will be assigned to help students practice, prepare, or elaborate on a concept or skill taught?	assess their learning daily? How will you assess their learning at the end of a unit?
	Writing of equation, solving, and checking based on the given word problem.	Compare and contrast equation.	Through the formative assessment and the closure activity.
Resources/ Materials:	<i>What texts, digital resources, & materials will be used in this lesson? (Component 1D)</i>		
	6 th grade mathematics textbook, class notes, word problems, math cups, Promethean Board, construction paper, markers, and glue.		
Access for All:	<i>How will you ensure that all students have access to and are able to engage appropriately in this lesson? Consider all aspects of student diversity - ELL, IEP, & Gifted, etc. (Components 1B, 1C, 1E)</i>		
	Students will receive direct instruction and pause for distributed summary throughout lesson. Guided practice will allow students to ask questions as they are learning the concept. As always collaboration amongst peers is encouraged. Students may refer to class notes at any time.		
Differentiation:	<i>What curriculum modifications and/or classroom accommodations will you make for Students with learning differences in your class? Be as specific as possible. (Component 1B, 1D)</i>		
	Tiered word problems based on ability.		
Reflection:			