SECOND TERM WEEKLY LESSON NOTES

WEEK 5

Date: 10ᵗʰ JUNE, 2022		**Period:**	**Subject:** Mathematics	
Duration:			**Strand:** Algebra	
Class: B7		**Class Size:**	**Sub Strand:** Algebraic Expressions	
Content Standard: B7.2.2.1 Simplify algebraic expressions involving the four basic operations and substituting values to evaluate algebraic expressions.			**Indicator:** B7.2.2.1.1 Create simple algebraic expressions using simple logic to translate a set of instructions into an algebraic expression.	**Lesson:** 1 of 2
Performance Indicator: Learners can identify the unknown in a problem; represent the problem with an equation; and solve the problem concretely			**Core Competencies:** Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)	
References: Mathematics Curriculum Pg. 35-36				

Phase/Duration	Learners Activities	Resources
PHASE 1: **STARTER**	Using questions and answers, review to find out what learners already know about Algebraic Expressions. Share learning indicators and introduce the lesson.	
PHASE 2: **NEW LEARNING**	Brainstorm learners for the meaning of Algebra Algebra is a way to work out problems with unknown values. Look at this question $5 + ? = 8$ We already know the answer, but only know one part of the question, the other is unknown. We are already used to "blank boxes" and "dashes" for representing the unknown number. But in Algebra, it is replaced with a variable such as (a, b, c, x, y etc.) Hence this how the question will be written $$5 + a = 8$$ We call this an Equation. Equation is a mathematical question which involves two parts with an equal sign in between. Let's see how we can solve problems using Algebra. E.g. *A farmer cultivates apples on a large scale of land. He plucks them when they ripped for sale.* *On a particular tree, he plucked 15 ripped apples and 8 apples were left on the tree. So how many apples were there on the tree?*	Counters, bundle and loose straws base ten cut square, Bundle of sticks

	Let's use the letter "a" to represent the total number of apples on the tree. Thus a – 15 = 8 (a-15) is on one side of the equal sign and the other side 8 as the answer. To work out for "a", we need to isolate "a", so that is on its own. Have learners to get rid of the (-15). So we add the inverse of (-15), that is (+15) to both side of the equation. a-15+15=8+15 a-15+15=8+15 a=8+15 a= 23 Have learners to conclude that the total number of apples on the tree was 23. So if the farmer pluck 15, it will be left with 8. Guide learners to solve for x in simple equations e.g. x + 3 = 6 x + 1+5 = 7 **Assessment**: Give similar problems for learners to write the mathematical equation statements of the problem	
PHASE 3: **REFLECTION**	Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson. Take feedback from learners and summarize the lesson.	

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Performance Indicator:	Core Competencies:
Performance Indicator: Learners can create a problem for a given equation	**Core Competencies:** Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)

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Phase/Duration	Learners Activities	Resources
PHASE 1: **STARTER**	Revise with learners on the previous lesson. Call volunteer learners to the board to solve sample questions. Introduce the lesson by sharing performance indicators.	
PHASE 2: **NEW LEARNING**	Guide learners to create word problems for equations. e.g. Jenny has 7 marbles and ken has 5. How many do they have together? The quantities here are Jenny's marbles, ken's marbles and total marbles. The relationship between the three is Jenny's Marbles + Ken's Marbles = Total Marbles $\quad$ 7 $\quad$ + $\quad$ 5 $\quad$ = _____ Let learners solve several examples. Let learners now consider this problem; e.g. Jenny and Ken together have 37 marbles, and ken has 15. How many does jenny have? The relationship between the quantities is the same as the above. Jenny's Marbles + Ken's Marbles = Total Marbles $\quad$ _____ $\quad$ + $\quad$ 15 $\quad$ = $\quad$ 37 The problem requires we find Jenny's marbles which we don't know. So we represent Jenny's marbles as "a" $\quad$ a $\quad$ + $\quad$ 15 $\quad$ = $\quad$ 37 Guide learners to solve the equation	Counters, bundle and loose straws base ten cut square, Bundle of sticks

	Introduce learners to more complex word problems. Consider this example.:	
	Example: *Peny, Keny And Peny together have 51 marbles. Keny has double as many marbles as Jenny has, and Peny has 12. How many does Jenny have?*	
	The relationship between the quantities is the same as the above. However we need to denote the number of Jeny's and Keny's marbles with something. Jenny's marbles are unknown, so we can denote that with the variable "*n*". then Keny has 2n marbles.	
	$$\text{Jenny's Marbles} + \text{Ken's Marbles} + \text{Peny's marbles} = \text{Total Marbles}$$ $$n + 2n + 12 = 51$$	
	Guide learners to solve the equation.	
	Ask learners to describe stories that the equation $14 - x = 9$ could represent.	
	That is: henry has 14 oranges in his bag. He gave some of the oranges to his friends. He now has 9 oranges left. How many oranges did he give to his friends?	
	Let learners describe stories to represent the following equations. a. *1+15=9+x* b. *8+x=3+12* c. *4+5=11-x* d. *3+x=13-2*	
	<u>Assessment</u> Solve the puzzle	
PHASE 3: REFLECTION	Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson. Take feedback from learners and summarize the lesson.	