**BASIC 9**

**WEEKLY LESSON PLAN – WEEK 2**

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| **Strand:** | Number | | | **Sub-Strand:** | | | | | Numbers: Ratios and Proportion | | | |
| **Content Standard:** | B9.1.4.1 Apply the understanding of ratio, rate and proportions to solve problems that involve  rates, ratios, and proportional reasoning and use it to solve real-world mathematical problems | | | | | | | | | | | |
| **Indicator (s)** | B9.1.4.1.1 Represent proportional relationships by equations  B9.1.4.1.2 Use proportional relationships to solve multistep ratio and percent problems, examples: simple interest, tax, discount and commissions, NHIL, depreciation, insurance, etc | | | | | | **Performance Indicator**: Learners can find unit rates. | | | | | |
| **Week Ending** | 19-01-2024 | | | | | | | | | | | |
| **Class** | B.S.9 | | **Class Size:** | |  | | | **Duration:** | | |  | |
| **Subject** | Mathematics | | | | | | | | | | | |
| **Reference** | Mathematics Curriculum, Teachers Resource Pack, Learners Resource Pack, Textbook. | | | | | | | | | | | |
| **Teaching / Learning Resources** | Graph, Poster, Charts, videos. | | | | | **Core Competencies:** | | | | * Critical Thinking and Problem Solving   Communication and Collaboration. | | |
| **DAY/DATE** | **PHASE 1 : STARTER** | **PHASE 2: MAIN** | | | | | | | | | | **PHASE 3: REFLECTION** |
| **MONDAY** | Assist Learners to write ratios using different notations. | 1. Learners brainstorm to write word notations, number notations and fraction notation for ratios. 2. Discuss examples of real-world situations involving ratios with the Learners. 3. Demonstrate on writing ratios for real-world situations.   **Example 1;**  There are 2 boys and 3 girls. The ratio of boys to girl is … Solution **Step 1:**  The word notation for the ratio of boys to girls is 2 is to 3  **Step 2:**  The number notation for the ratio of boys to girls is 2:3  **Step 3:**  The fraction notation for the ratio of boys to girls is 2323  **Step 4:**  Ratio of boys to girls is 2:3 and the ratio of girls to boys is 3:2  **Example 2;**  There are 3 apples and 4 oranges; Find the ratio of oranges to all fruits Solution **Step 1:**  There are 3 apples and 4 oranges. The total number of fruits = 3 + 4 = 7  **Step 2:**  So the ratio of oranges to all fruits is 4:7 | | | | | | | | | | Through questions and answers, conclude the lesson.  **Exercise;**  Write the ratio for the following;   1. A soccer team played 19 games and won 10. What is the ratio of the number of wins to the number of games played? 2. On the high school chess team there are 5 girls and 8 boys. What is the ratio of girls to boys on the chess team? |
| **WEDNESDAY** | Learners brainstorm to identify statements that describe a ratio. | 1. Assist Learners to simplify ratio of whole numbers. 2. Learners in small groups to discuss and simplify ratio of decimals. 3. Discuss with the Learners about how to find unit price.   The **unit price** of an item is the cost per unit of the item. We divide the price of certain number of units of an item by the number of units to find the unit price of that item.  For **example**, to find the unit price of 12 ounces of soup that costs $2.40, divide $2.40 by 12 ounces, to get unit price of soup as $0.20 per ounce.  Often, we are asked to determine which of two given items is a **"better buy"**. In such cases, the unit price of each item is found and then, their unit prices are compared. The item with the smaller unit price is considered as the "better buy".   * If you buy 6 bags of bananas for $33.72, find the unit price of a bag of bananas. * If a pet store sells 8 mice for $13.20, what is the unit price of a mouse? * If a video game store sells 6 old games for $68.70, find the unit price of a video game | | | | | | | | | | Learners brainstorm to calculate the unit price price**.**  **Exercise;**   1. If Sheena buys 5 bags of apples for $12.25, what is the unit price of bag of apples? 2. If at a toy store, 2 board games cost $15.80, what is the unit price of a board game? |
| **FRIDAY** | Demonstrate on solving unite rate Problems with a double number line diagram. | 1. Show Learners a video that explains how to solve unit rate problems using a double number line diagram. 2. Learners brainstorm to solve for missing values in a rate problem by setting up a double number line 3. Assist learners to solve for missing values in a rate problem by setting up a table.   **How to solve for missing values in a rate problem by setting up a double number line?** 1. Find the unit rate - a ratio with a denominator of 1. 2. Use the unit rate to calculate an equivalent rate using multiplication. Example: Oranges were on super sale at the store. Juan bought 12 oranges for $4. At this rate, how many oranges could he buy with $1? How many could he buy with $10?  **Using unit rate to solve real world and mathematical problems.**  To solve unit rate problems, a teacher organized a one-minute contest for the students in her class. The challenges in the contest are foot tapping, eye blinking and finger snapping.   1. During the foot tapping challenge, Alice tapped her foot 30 times in 15 seconds. At this rate, how many times could Alice tap her foot in 1 minute (60 seconds)? At what rate was Alice tapping her foot (taps per second)? 2. Peter tapped his foot 48 times in 30 seconds. At this rate, how many times could Peter tap his foot in 1 minute (60 seconds)? At what rate was Peter tapping his foot (taps per second)? 3. During the eye blinking challenge, Sandra blinked her eyes 12 times in 10 seconds. At this rate, how many times could Sandra blink her eyes in 1 minute (60 seconds)? At what rate was Sandra blinking her eyes (blinks per second)? 4. James blinked his eyes 18 times in 20 seconds. At this rate, how many times could James blink his eyes in 1 minute (60 seconds)? At what rate was James blinking his eyes (blinks per second)?   **Answers**   1. Alice could tap her foot 120 times in 1 minute (60 seconds). A rate of 2 taps per second and can be written as 2:1. 2. Peter could tap his foot 96 times in 1 minute (60 seconds). A rate of 1.6 taps per second and can be written as 1.6:1. 3. Sandra could blink her eyes 72 times in 1 minute (60 seconds). A rate of 1.2 blinks per second can be written as 1.2:1. 4. James could blink his eyes 54 times in 1 minute (60 seconds). A rate of 0.9 blinks per second and can be written as 0.9:1\*\*.\*\* | | | | | | | | | | Reflect on finding missing values in rate problems.  **Exercise;**  Solve the Unit Rate Problems   1. 3 pounds of peaches cost $6. How many pounds of peaches could be bought for $24? 2. 2 cantaloupes cost $5. How much would 6 cantaloupes cost? 3. 1 pound of tomatoes cost $2.99. How much would 4 pounds cost? 4. 2 watermelons cost $8. How many watermelons could be bought for $16? 5. A 2-pound container of blueberries cost $5.00. At that rate, what would be the cost of a 1-pound container of blueberries? 6. 10 mangos cost $10. What is the unit cost for the mangos? 7. A 16-ounce container of strawberries cost $3.20. What is the unit cost for 1 ounce of strawberries? 8. A pineapple cost $2.99. How much would 3 pineapples cost? |

**Name of Teacher: School: District:**