

DAILY LESSON LOG OF M7SP-IVh-1 (Week Seven-Day 1)

School		Grade Level	Grade 7
Teacher		Learning Area	Mathematics
Teaching Date and Time		Quarter	Fourth
I. OBJECTIVES	Objectives must be met over the week and connected to the curriculum standards. To meet the objectives, necessary procedures must be followed and if needed, additional lessons, exercises and remedial activities may be done for developing content knowledge and competencies. These are assessed using Formative Assessment Strategies. Valuing objectives support the learning of content and competencies and enable children to find significance and joy in learning the lessons. Weekly objectives shall be derived from the curriculum guides.		
A. Content Standards	The learner demonstrates understanding of key concepts, uses and importance of Statistics, data collection/gathering and the different forms of data representation, measures of central tendency, measures of variability, and probability.		
B. Performance Standards	The learner is able to collect and organize data systematically and compute accurately measures of central tendency and variability and apply these appropriately in data analysis and interpretation in different fields.		
C. Learning Competencies/ Objectives	Learning Competency: Calculates the measures of variability of grouped and ungrouped data. (M7SP-IVh-1) Learning Objectives: 1. Define terms related to measures of variability. 2. Calculates the measures of variability (range and mean deviation) of ungrouped data. 3. Demonstrate appreciation on the importance of the measures of variability.		
II. CONTENT	Measures of Variability		
III. LEARNING RESOURCES	Grade 8 Teacher's Guide and Learner's Module		
A. References			
1. Teacher's Guide	Pages		
2. Learner's Materials	Pages 507 – 521		
3. Textbook pages			
4. Additional Materials from Learning Resource (LR) portal			
B. Other Learning Resources			
IV. PROCEDURES	These steps should be done across the week. Spread out the activities appropriately so that pupils/students will learn well. Always be guided by demonstration of learning by the pupils/ students which you can infer from formative assessment activities. Sustain learning systematically by providing pupils/students with multiple ways to learn new things, practice the learning, question their learning processes, and draw conclusions about what they learned in relation to their life experiences and previous knowledge. Indicate the time allotment for each step.		

A. Review previous lesson or presenting the new lesson	Letting the students answer the exercise. Which taste is better? 1. A housewife surveyed canned ham for a special family affair. She picked 5 cans each from two boxes packed by a company A and company B. Both boxes have the same weights in kilograms of the canned ham packed by two companies (sample A and sample B). Sample A: 0.97, 1.00, 0.94, 1.03, 1.11 Sample B: 1.06, 1.01, 0.88, 0.90, 1.14 Help the housewife choose the best sample by doing the following procedure: - Arrange the weight in numerical order. - Find the mean weight of each sample. - Analyze the spread of the weights of each sample from the mean. - Which sample has weights closer to the mean? - If you were to choose from these two samples, which would you prefer? Possible answer from the students: - Sample A : 0.94, 0.97, 1.00, 1.03, 1.11 Sample B: 0.88, 0.90, 1.01, 1.06, 1.14 - Sample A: mean 1.01 Sample B: mean 0.998 - Sample A's mean weight is closer to the given weights than that of sample B. - Sample A - Sample A
B. Establishing a purpose for the lesson	The teacher lets the students realize that there is a need to test the spread of data other than the measures of central tendency.
C. Presenting examples/ instances of the new lesson	Let the students answer the problem: 1. The following are the daily wages of 8 factory workers of garments of two garments factories, factory A and factory B. Find the difference of highest salary with the lowest salary in each factory: Factory A: 400, 450, 520, 380, 482, 495, 575, 450 Factory B: 450, 400, 450, 480, 450, 450, 400, 672 Answers: Factory A – 193 Factory B – 272
D. Discussing new concepts and practicing new skills #1	The teacher then explain to the students that getting the difference of two data is also getting the Range of the data where: Range is the difference of the largest value and the smallest value. It is also the simplest measure of variability. Do the activity by pair: Find the range of the given: 3, 8, 16, 12, 4, 5, 7, 15 25, 32, 9, 18, 12, 30, 28, 22 8.5, 6.2, 12, 4.2, 14, 9.1, 15.3 Answers: 13 23 11.1
E. Discussing new concepts and practicing new skills #2	The teacher introduces another measure of variability and define. The Mean Deviation – a measure of dispersion, computed by taking the arithmetic mean of the absolute values of the differences between observed values of a variable and the variable's mean.

To compute the Mean Deviation of an ungrouped data, we use the formula:

$$\text{M.D.} = \frac{\sum |x - \bar{x}|}{N}$$

Where:

M.D. is the mean deviation

x is the individual score

$\bar{x}$ is the mean; and

N is the number of scores.

$|x - \bar{x}|$ is the absolute value of the deviation from the mean

Procedure:

1. Find the mean for all the cases.
2. Find the absolute difference between each score and the mean.
3. Find the sum of the differences and divide it by N .
4. Solve for the mean deviation by dividing the result in step 3 by N .

Example:

1. Find the mean deviation of the following data: 12, 17, 13, 18, 18, 15, 14, 17, 11

Step 1. Find the mean ($\bar{x}$).

$$\bar{x} = \frac{\sum x}{N} = \frac{12+17+13+18+18+15+14+17+11}{9} = \frac{135}{9} = 15$$

Step 2. Find the absolute difference between each score and the mean.

$$\begin{aligned}|x - \bar{x}| &= |12 - 15| = 3 \\&= |17 - 15| = 2 \\&= |13 - 15| = 2 \\&= |18 - 15| = 3 \\&= |18 - 15| = 3 \\&= |15 - 15| = 0 \\&= |14 - 15| = 1 \\&= |17 - 15| = 2 \\&= |11 - 15| = 4\end{aligned}$$

Step 3. Find the sum of the differences and divide it by N .

$$\begin{aligned}\sum |x - \bar{x}| &= |12 - 15| = 3 \\&= |17 - 15| = 2 \\&= |13 - 15| = 2 \\&= |18 - 15| = 3 \\&= |18 - 15| = 3 \\&= |15 - 15| = 0 \\&= |14 - 15| = 1 \\&= |17 - 15| = 2 \\&= |11 - 15| = 4\end{aligned}$$

$$\sum |x - \bar{x}| = 20$$

4. Solve for the mean deviation by dividing the result in step 3 by N .

$$\text{M.D.} = \frac{\sum |x - \bar{x}|}{N} = \frac{20}{9} = 2.22$$

F. Developing mastery (leads to formative assessment 3)	Working in pairs, the teacher lets the students perform the following activity. Calculate the mean deviation of the scores in Mathematics Third Quarter Test of 5 students: 34, 21, 16, 38, 36. (Show your step by step process) Answer : Step 1. Find the mean ($\bar{x}$). $\bar{x} = \frac{\sum x}{N} = \frac{34+21+16+38+36}{5} = \frac{145}{5} = 29$ Step 2. Find the absolute difference between each score and the mean. $ x - \bar{x} = 34 - 29 = 5$ $= 21 - 29 = 8$ $= 16 - 29 = 13$ $= 38 - 29 = 9$ $= 36 - 29 = 7$ Step 3. . Find the sum of the differences and divide it by N. $\sum x - \bar{x} = 34 - 29 = 5$ $= 21 - 29 = 8$ $= 16 - 29 = 13$ $= 38 - 29 = 9$ $= 36 - 29 = 7$ $\sum x - \bar{x} = 42$ 4.Solve for the mean deviation by dividing the result in step 3 by N. $\text{M.D.} = \frac{\sum x - \bar{x} }{N} = \frac{42}{5} = 8.4$
G. Finding practical applications of concepts and skills in daily living	
H. Making generalizations and abstractions about the lesson	The teacher reiterates that mean deviation gives a better approximation than the range. The range is not suitable measure for variability because its value can fluctuate greatly even with a change in just a single value, either the highest or the lowest.
I. Evaluating Learning	The teacher will ask the students to calculate the range and the mean deviation. 1. The weights in kilograms of 10 students: 52, 55, 50, 55, 43, 45, 40, 48, 45, 47. Answers: 1. Range: $55 - 40 = 15$ Mean Deviation: Step 1. Find the mean ($\bar{x}$). $\bar{x} = \frac{\sum x}{N} = \frac{52+55+50+55+43+45+40+48+45+47}{10} = \frac{480}{10} = 48$ Step 2. Find the absolute difference between each score and the mean. $ x - \bar{x} = 52 - 48 = 4$ $= 55 - 48 = 7$ $= 50 - 48 = 2$ $= 55 - 48 = 7$ $= 43 - 48 = 5$

	$= 45 - 48 = 3$ $= 40 - 48 = 8$ $= 48 - 48 = 0$ $= 45 - 48 = 3$ $= 47 - 48 = 1$ Step 3. . Find the sum of the differences and divide it by N. $\sum x - \bar{x} = 52 - 48 = 4$ $= 55 - 48 = 7$ $= 50 - 48 = 2$ $= 55 - 48 = 7$ $= 43 - 48 = 5$ $= 45 - 48 = 3$ $= 40 - 48 = 8$ $= 48 - 48 = 0$ $= 45 - 48 = 3$ $= 47 - 48 = 1$ $\sum x - \bar{x} = 40$ 4.Solve for the mean deviation by dividing the result in step 3 by N. $\text{M.D.} = \frac{\sum x - \bar{x} }{N} = \frac{40}{10} = 4$
J. Additional activities or remediation	
V. REMARKS	
VI. REFLECTION	<i>Reflect on your teaching and assess yourself as a teacher. Think about your students' progress. What works? What else needs to be done to help the pupils/students learn? Identify what help your instructional supervisors can provide for you so when you meet them, you can ask them relevant questions.</i>
A. No. of learners who earned 80% of the evaluation	
B. No. of learners who require additional activities for remediation who scored below 80%	
C. Did the remedial lesson work? No. of learners who have caught up with the lesson.	
D. No. of learners who continue to require remediation	
E. Which of my teaching strategies worked well? Why did these work?	

F. What difficulties did I encounter which my principal or supervisor can help me solve?	
G. What innovation or localized materials did I use/ discover which I wish to share with other teachers	Localization and Contextualization) F. Developing mastery (leads to formative assessment 3)

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