GRADE 10 DAILY LESSON LOG	School		Grade Level	10
	Teacher		Learning Area	MATHEMATICS
	Teaching Dates and Time		Quarter	FOURTH

	Session 1	Session 2	Session 3	Session 4
I. OBJECTIVES				
1. Content Standards	The learner demonstrates understanding of key concepts of measures of position.			
2. Performance Standards	The learner is able to conduct systematically a mini-research applying the different statistical methods.			
3. Learning Competencies Objectives	Illustrate quartile as a measure of position. (**M10SP-Ia-1)** **Objectives:** efine Statistics and some basic statistical terms. ferentiate descriptive from inferential statistics. entify population, sample and variable from the given data. d. Show the use and importance of statistics in real life through differentiated instruction.	Illustrate quartile as a measure of position. (**M10SP-Ia-1)** **Objectives:** ntify some uses and importance of statistics in life. b. Show the use and importance of statistics in life through differentiated activities.	ate quartile as a measure of position. (**M10SP-Ia-1)** Compute quartile of ungrouped data; (**M10SP-Ib-1)** Interpret quartile of ungrouped data; (**M10SP-Ic-1)** **Objectives:** a. Illustrate quartile as a measure of position. b. Compute quartile of ungrouped data. c. Interpret quartile of ungrouped data.	ate quartile as a measure of position. (**M10SP-Ia-1)** Compute quartile of ungrouped data; (**M10SP-Ib-1)** pret quartile of ungrouped data; **SP-Ic-1)** Solve problems involving quartile of ungrouped data. (**M10SP-Id-e-1)**

			d. Practice accuracy and mental alertness in computing quartile value.	a. Illustrate quartile as a measure of position. b. Compute quartile of ungrouped data. c. Interpret quartile of ungrouped data. d. Practice accuracy and mental alertness in computing quartile value.
II. CONTENT	**Introduction to Statistics**	**Uses and Importance of Statistics**	**Measures of Positions: Quartile of Ungrouped Data**	**Measures of Positions: Quartile of Ungrouped Data**
III. LEARNING RESOURCES				
A. References				

1. Teacher's Guide			pp. 322-328	pp. 322-328
2. Learner's Materials			pp. 364-372	pp. 364-372
3. Textbook	Elementary Statistics text/workbook by Carmela O. Zamora- Reyes, Lorelei B. Ladao-Saren, pp. 1-2, 7-12, 65, 67, 69-70, 73-74	Elementary Statistics text/workbook by Carmela O. Zamora- Reyes, Lorelei B. Ladao-Saren, pp. 1-2, 7-12, 65, 67, 69-70, 73-74		
4. Additional Materials from Learning Resources (LR) portal	PowerPoint Presentation Laptop Downloaded Video from You Tube Manila Paper and Marker Show-Me-Board Chalk and Eraser	PowerPoint Presentation Laptop Downloaded Video from You Tube Used papers	PowerPoint Presentation Laptop Manila Paper and Marker Activity Sheets	PowerPoint Presentation Laptop Manila Paper and Marker Activity Sheets
B. Other Learning Resources	https://www.youtube.com/watch?v=MXaJ7sa7q-8 http://www.mathworksheetscenter.com/mathtips/statsareimportant.html https://familyfeudhelper.wordpress.com/category/game-questions/ https://hobbylark.com/party-games/family-feud-quiz-free-questions-and-answers	https://www.youtube.com/watch?v=_VebHaYXw9k http://www.mathworksheetscenter.com/mathtips/statsareimportant.html	https://www.academia.edu/23840588/A_Brief_Lesson_Plan_for_demo	
IV. PROCEDURES				
A. Reviewing previous lesson or presenting the new lesson	"Survey Says…" (GAME) -Group students into 5	Cabbage Ball (Review)	Divide the class in five groups.	**Drill:** Find the median of the following sets of data:

	-Give each a show-me-board, chalk and eraser -Survey questions will be asked, students will have to guess the top answer to the survey. 1. Name something parents tell their kids not to waste. 2. Name something people like to do when listening to music 3. Name something people buy to show they are successful 4. Name an article of clothing you can't wash in the washing machine 5. Name a recreational activity traditionally done in hot weather	-In used papers, write some questions about the previous topic. -Crumpled papers to form a cabbage ball. -While the music is playing pass on the cabbage ball. -When the music stops, whoever is holding the cabbage ball will peel off a piece of paper and answer the question written on it. -The game continues until the last question was answered.	Have each group act out the logic problem: Five students are standing in line. Loida is not the last. Tonette is directly ahead of Angie. Jay-jay has a girl directly in front of him and directly behind him. Jezlyn is not last. Jay-jay is somewhere ahead of Angie. Name the students in order from first to last. The group to answer the problem correctly earns 10 points.	1. 5 5 5 2. 1 100 1000 3. 27 19 22 30 4. 14 23 18 25 30
B. Establishing a purpose for the lesson	What is a survey? Why do we conduct survey? What do these gathered data tell us? How do we relate this to math? Did you know that we were using statistics? Now what is statistics?	Why do we need study statistics? What is the use of it in our life?	Let the class categorize the arranged students based from the characteristic that the teacher will instruct them	**Direction:**Arrange the following participants in the "Karakol" using their height in cm in ascending order. 

				Alyanna: 152 Cardo: 157 Mia: 172 Tristan: 162 Supremo:165 Georgia: 150 Rome: 167 Emma 170 How can we use quartile of ungrouped data in solving real-life problems?
C. Presenting examples/Instances of the new lesson	Watch a video about statistics https://www.youtube.com/watch?v=MXaJ7sa7q-8 List as many terms as possible that were	Watch a video about use and importance of statistics in real life. https://www.youtube.com/watch?v=_VebHaYXw9k	Discussion on the definition of measures of position and quartile. **Measures of Position**	Example 1.Find the lower quartile and the upper quartile of the set of heights of our participants in the "Karakol"

	mentioned in the video and their definitions.		- are techniques that divide a set of data into equal groups - the different measures of positions are quartile, decile and percentile **Quartile** - are the three values of the variable that divide an ordered data set into four equal parts Presentation on how to compute quartile value of an ungrouped data using Linear Interpolation.	Solution: ● Arrange scores in ascending order 150 152 157 162 165 167 168 170 172 ● The least value of the data is 150 and the greatest value of the data is 172. ● The middle value of the data is 165. ● The lower quartile is the value that is between the least value and the middle value. So, the lower quartile is from 152 to 162.

				• The upper quartile is the value that is between the greatest value and the middle value. So, the upper quartile is from 167 to 170 Example 2. Find Q_1, Q_2, and Q_3 of the given distribution using Linear Interpolation. *Solution:* a. First, arrange the scores in ascending order. 150 152 157 162 165 167 168 170 172 b. Second, locate the position of the score in the distribution. Position of Q_1 = $\frac{1}{4}$(n + 1)

				$= \frac{1}{4}(9 + 1)$ $= \frac{1}{4}(10)$ $= 2.5$ Since the result is a decimal number, interpolation is needed. c. Third, interpolate the value to obtain the 1st quartile. **Steps of Interpolation** Step 1: Subtract the 2nd data from the 3rd data. 157 – 152 = 5 Step 2: Multiply the result by the **decimal part** obtained in the second step (Position of Q_1). 5(0.5) = 2.5 Step 3: Add the result in *step 2*, to the 2nd or smaller number. 152 + 2.5 = 154.5 Therefore, the value of Q_1 = 154.5 To get Q_3

				Solution: a. First, arrange the scores in ascending order. 150 152 157 162 165 167 168 170 172 b. Second, locate the position of the score in the distribution. Position of Q_3 = $\frac{3}{4}$(n + 1) = $\frac{3}{4}$(9 + 1) =$\frac{3}{4}$(10) = 7.5 Since the result is a decimal number, interpolation is needed. c. Third, interpolate the value to obtain the 3rd quartile. **Steps of Interpolation** Step 1: Subtract the 7th data from the 8th data. 170 - 168 = 2

				Step 2: Multiply the result by the **decimal part** obtained in the third step (Position of Q_3). 2(0.5) = 1 Step 3: Add the result in *step 2*, (1), to the 7^{th} or smaller number. 168 + 1 = 169 Therefore, the value of Q_3 = 169
D. Discussing new concepts and practicing new skills # 1	Group Activity -Group students in five. -Through lottery method, assign a statistical term to be defined by each group. Statistical Terms: VARIABLES DESCRIPTIVE STATISTICS INFERENTIAL STATISTICS POPULATION SAMPLE	Enumerate some uses and importance of statistics in real life.	Mrs. Cottingham held a Scrabble competition among selected students in Grade 10 Soriano. The following are the scores of the participants after the event: 24 23 27 28 33 35 29 32 36 38 Find the following then interpret the results: 1. lower quartile 2. second quartile 3. upper quartile	Find the first quartile (*Q*1), second quartile (*Q*2), and the third quartile (*Q*3), given the scores of 10 students in their Mathematics activity using Linear Interpolation. Interpret the result. 4 9 7 14 10 8 12 15 6 11
E. Discussing new concepts and practicing new skills # 2	Group Presentation Follow up discussion			In Example 1:

	Differentiate descriptive statistics from inferential statistics. Determine the population, sample and variable from the given data.			1. What is quartile? 2. How can you find the lower quartile of the distribution? 3. How can you find the upper quartile of the distribution? 4. What methods can we use to find the quartile of a distribution? 5. How do we interpret the computed quartile in a given distribution? 6. If the height of the participant belongs to the lower quartile, where will you position him/her in the Karakol?

				7. How can we solve problems involving quartile? In example 2: 1. How can we find quartile using Linear Interpolation? 2. What are the steps in finding quartile using Linear interpolation method? 3. How do we interpret the computed quartile in a given distribution?
F. Developing mastery (leads to Formative Assessment 3)				Find the first quartile ($Q1$), second quartile ($Q2$), and the third quartile ($Q3$), given the scores of 10 students in their Mathematics

				activity using Linear Interpolation. 4 9 7 14 10 8 12 15 6 11
G. Finding practical application of concepts and skills in daily living	Enumerate importance and uses of statistics Divide the class in 5 groups. Aside from the enumerated uses and importance of statistics, what do you think, as a student of statistics, is the use or importance of statistics in your life? Group 1 - Show the importance or use of statistics in life through a song/rap Group 2 - Show the importance or use of statistics in life through short skit/commercial Group 3 - Show the importance or use of statistics in life through hugot lines/poem Group 4	Divide the class in 5 groups. Aside from the enumerated uses and importance of statistics, what do you think, as a student of statistics, is the use or importance of statistics in your life? Group 1 - Show the importance or use of statistics in life through a song/rap Group 2 - Show the importance or use of statistics in life through short skit/commercial Group 3 - Show the importance or use of statistics in life through hugot lines/poem Group 4 - Show the importance or use	Give different activities for different group of learners to adhere Differentiated Instruction. (*see attachment)*	StarStruck is a reality talent search in GMA 7. One of the contestants of the said program is Arra San Agustin who is a Caviteña. In order to express our support, an FB page was developed for Princess. The following are the number of likes of Princessin Facebook for ten days: 15000 12000 10000 9000 12500 11000 13000 14000 13500 15500 Given this, let's compute for the lower (Q_1) and upper(Q_2) quartiles of the data using Linear Interpolation.

	- Show the importance or use of statistics in life through news report Group 5 Show the importance or use of statistics in life through an interview	of statistics in life through news report Group 5 Show the importance or use of statistics in life through an interview		
H. Making generalizations and abstractions about the lesson	STATISTICS – collection and interpretation of data; use to measure and analyze variability VARIABLES- is a characteristic of interest measurable on each and every individual in the universe -what we measure to each individual DESCRIPTIVE STATISTICS – deals with the method of organizing, summarizing and presenting a mass of data so as to yield meaningful information INFERENTIAL STATISTICS – taking a sample and analyzing the sample to make judgment or claims about a population.	Some uses and importance of Statistics 1. Surveys are designed to collect early returns on election day to forecast the outcome of an election 2. Consumers are samples to provide information for predicting product preference 3. The research physician conducts experiments to determine the effect of various drugs and controlled environmental conditions on humans in order to infer the appropriate method of treatment of a particular disease. 4. Weather Forecasts. Do you watch the weather forecast sometime during the day? How do you use that information? Have	**The Quartile for Ungrouped Data** The quartiles are the score points which divide a distribution into **four equal parts**. Twenty-five percent (25%) of the distribution are below the first quartile, fifty percent (50%) are below the second quartile, and seventy-five percent (75%) are below the third quartile. $Q_1$is called the lower quartile and $Q_3$is the upper quartile. $Q_1<Q_2<Q_3$, where $Q_2$is the median. a. 25% of the data has a value ≤ Q_1 b. 50% of the data has a value ≤ X or Q_2 c. 75% of the data has a value ≤ Q_3	**The Quartile for Ungrouped Data** The quartiles are the score points which divide a distribution into **four equal parts**. Twenty-five percent (25%) of the distribution are below the first quartile, fifty percent (50%) are below the second quartile, and seventy-five percent (75%) are below the third quartile. $Q_1$is called the lower quartile and $Q_3$is the upper quartile. $Q_1<Q_2<Q_3$, where $Q_2$is the median. a. 25% of the data has a value ≤ Q_1

	POPULATION – total amount of things - Set of all individuals under study SAMPLE – refers to a small part of the population that is used for study	you ever heard the forecaster talk about weather models? These computer models are built using statistics that compare prior weather conditions with current weather to predict future weather. 5. Emergency Preparedness. What happens if the forecast indicates that a hurricane is imminent or that tornadoes are likely to occur? Emergency management agencies move into high gear to be ready to rescue people. Emergency teams rely on statistics to tell them when danger may occur.	**Formula:** Position of $\mathbf{Q_k}=\frac{k}{4}(n+1)$ wherein k = nthpartition n= number of cases a. First, arrange the scores in ascending order. b. Second, locate the position of the score in the distribution. If the result is a decimal number, interpolation is needed. c. Third, interpolate the value to obtain the 1st quartile. **Steps of Interpolation** Step 1: Subtract the 2nd data from the 3rd data. Step 2: Multiply the result by the **decimal part** obtained in the second step (Position of Q_1). Step 3: Add the result in *step 2*, to the 2nd or smaller number.	b. 50% of the data has a value ≤ X or Q_2 c. 75% of the data has a value ≤ Q_3 **Formula:** Position of $\mathbf{Q_k}=\frac{k}{4}(n+1)\frac{k}{4}(n+1)$ wherein k = nthpartition n= number of cases a. First, arrange the scores in ascending order. b. Second, locate the position of the score in the distribution. If the result is a decimal number, interpolation is needed. c. Third, interpolate the value to obtain the 1st quartile. **Steps of Interpolation** Step 1: Subtract the 2nd data from the 3rd data. Step 2: Multiply the result by the **decimal**

<table>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>part obtained in the second step (Position of Q_1).
Step 3: Add the result in step 2, to the 2nd or smaller number.</td>
</tr>
<tr>
<td>I. Evaluating learning</td>
<td>A. Identify the word/s refer to the following:
1. It refers to a small part of the population that is used for study.
2. It refers to a characteristic of interest measurable on each and every individual in the universe.
3. It refers to the collection and interpretation of data; use to measure and analyze variability.
4. It refers to the set of all individuals under study.
5. It refers to taking a sample and analyzing the sample to make judgment or claims about a population.
B. Identify the population and variable from the given data.
1. A group of students taking Statistics conducted a study on the</td>
<td>5 points

Reflect on your life; identify how statistics help you in making sound decisions.</td>
<td>Solve for Q1, Q2 and Q3. Interpret your answer.
The following data give the accumulated number of hours spent by 16 students of Grade 10 Lara in doing their assignments and projects last week:
<table>
<tr><th>Student</th><th>No. of Hours</th><th>Student</th><th>No. of Hours</th></tr>
<tr><td>A</td><td>7</td><td>I</td><td>18</td></tr>
<tr><td>B</td><td>9</td><td>J</td><td>15</td></tr>
<tr><td>C</td><td>7</td><td>K</td><td>9</td></tr>
<tr><td>D</td><td>10</td><td>L</td><td>8</td></tr>
<tr><td>E</td><td>12</td><td>M</td><td>3</td></tr>
</table></td>
<td>Zumba is regarded as a good stress reliever and fat-burning dance and fitness exercise.It provides a workout for the whole body and builds up good cardiovascular respiratory system. A study was conducted in Cavite State University to determine the average exercise intensity and energy expenditure during a 40-minute Zumba class. A sample of twenty students showed the following energy expenditure (in Kcal) throughout the session:
350 280
300 290 400
360 270 330
295 260</td>
</tr>
</table>

	effect of boy-girl relationship to the academic performance of the students. 2. From all students registered this semester, the Mathematics Department would like to know how many students like mathematics. 3. Information will be collected to new voters from 2020 election to identify their opinion regarding politics in the Philippines.		<table><tr><td>F</td><td>5</td><td>N</td><td>13</td></tr><tr><td>G</td><td>11</td><td>O</td><td>8</td></tr><tr><td>H</td><td>11</td><td>P</td><td>9</td></tr></table>	310 305 365 370 390 320 340 350 275 420 Find the lower and upper quartiles of the data using Linear Interpolation.
J. Additional activities for application or remediation	□ What are the different measures of position? □ Define each.	□ What are the different measures of position? □ Define each.	A. Observe around your community. Make a problem involving quartiles based from what you have observed. Solve your own problem. B. Answer the following questions? 1. What is decile? 2. How to solve for the decile of ungrouped data?	A. Observe around your community. Make a problem involving quartiles based from what you have observed. Solve your own problem. B. Answer the following questions? 1. What is decile? 2. How to solve for the decile of ungrouped data?
V. REMARKS				

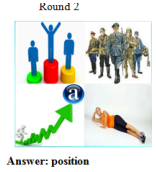
VI. REFLECTION				
A. No. of learners who earned 80% in the evaluation				
B. No. of learners who require additional activities for remediation who scored below 80%				
C. Did the remedial lessons work? No. of learners who have caught up with the lesson				
E. Which of my teaching strategies worked well? 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?				

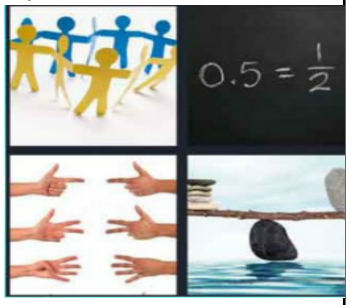
GRADE 10 DAILY LESSON LOG	**School**		**Grade Level**	**10**
	Teacher		**Learning Area**	**MATHEMATICS**
	Teaching Dates and Time		**Quarter**	**FOURTH**

	Session 1	**Session 2**	**Session 3**	**Session 4**
I. OBJECTIVES				
4. Content Standards	The learner demonstrates understanding of key concepts of measures of position.			
5. Performance Standards	The learner is able to conduct systematically a mini-research applying the different statistical methods.			
6. Learning Competencies Objectives	Illustrate decile as a measure of position; (**M10SP-Ia-1)** Compute decile of ungrouped data; (**M10SP-Ib-1)**	Illustrate decile as a measure of position; (**M10SP-Ia-1)** Compute decile of ungrouped data; (**M10SP-Ib-1)**	ate percentile as a measure of position. (**M10SP-Ia-1)** Compute percentile of ungrouped data; (**M10SP-Ib-1)**	ate percentile as a measure of position. (**M10SP-Ia-1)** Compute percentile of ungrouped data; (**M10SP-Ib-1)**

	Interpret decile of ungrouped data; (**M10SP-Ic-1)** Solve problems involving decile of ungrouped data. (**M10SP-Id-e-1)** a. illustrate decile as a measure of position; b. compute decile of ungrouped data; c. interpret decile of ungrouped data; d. and solve problems involving decile of ungrouped data	Interpret decile of ungrouped data; (**M10SP-Ic-1)** Solve problems involving decile of ungrouped data. (**M10SP-Id-e-1)** a. illustrate decile as a measure of position; b. compute decile of ungrouped data; c. interpret decile of ungrouped data; d. and solve problems involving decile of ungrouped data	Interpret percentile of ungrouped data; (**M10SP-Ic-1)** Solve problems involving percentile of ungrouped data. (**M10SP-Id-e-1)** a. Illustrate percentile as a measure of position. b. Compute percentile of ungrouped data. c. Interpret percentile of ungrouped data. d. Practice accuracy and mental	Interpret percentile of ungrouped data; (**M10SP-Ic-1)** Solve problems involving percentile of ungrouped data. (**M10SP-Id-e-1)** a. Illustrate percentile as a measure of position. b. Compute percentile of ungrouped data.

			alertness in computing percentile value.	c. Interpret percentile of ungrouped data. d. Practice accuracy and mental alertness in computing percentile value.
II. CONTENT	**Measures of Positions: Decile of Ungrouped Data**	**Measures of Positions: Decile of Ungrouped Data**	**Measures of Positions: Percentile of Ungrouped Data**	**Measures of Positions: Percentile of Ungrouped Data**
III. LEARNING RESOURCES				
C. References				
5. Teacher's Guide	pp. 328 - 330	pp. 328 - 330	331 – 334	331 – 334
6. Learner's Materials	pp. 373-375	pp. 373-375	376 – 379	376 – 379
7. Textbook				
8. Additional Materials from Learning Resources (LR) portal	PowerPoint Presentation Laptop Manila Paper and Marker Activity Sheets	PowerPoint Presentation Laptop Manila Paper and Marker Activity Sheets	PowerPoint Presentation Laptop Manila Paper and Marker Activity Sheets	PowerPoint Presentation Laptop Manila Paper and Marker Activity Sheets

D. Other Learning Resources	http://mba-lectures.com/statistics/descriptive-statistics/258/relationship-between-quartiles-deciles-and-percentiles.html	http://itfeature.com/statistics/the-deciles-are-the-values-nine-in-numbers-of-the-variable		http://mba-lectures.com/statistics/descriptive-statistics/258/relationship-between-quartiles-deciles-and-percentiles.html
IV. PROCEDURES				
A. Reviewing previous lesson or presenting the new lesson	**"4 pics 1 word "** (Integrative approach) Measurement  Positio  Divide	Review 1. Define decile? 2. How to calculate then interpret the value of decile of ungrouped data? 3. Compare quartile from decile.	Activity 2: Study and Explain Direction: Study and answer the following situations and then explain your answer. 1. In a 100-item test, the passing mark is the 3rd quartile. What does it imply? 2. In a 70-item test, Joshua got a score of 50 which is the third quartile. What does it mean? 3. Kerry is a secretary in one big company in Metro Manila. His salary is in the 7th decile. Should Kerry be glad about his salary or not?	Review Drill The ten souvenir shops located at Picnic Groove in Tagaytay City have the following daily sales, Php7200, Php7600, Php6900, Php8200, Php7200, Php9200, Php7800, Php8700, Php9800, and Php8000. What is P_{75} and what does it imply?

	 Ten  Equal  Parts  **COMPLETE ME**			

<table>
<tr>
<td></td>
<td>Using some words you have unlocked from the previous activity, complete the sentence by putting the appropriate word from the blank.
Divide, ten, decile, nine
Quartile is the 3 scores which divide the data into 4 equal parts.
_____ is _____ score which _____ the data into ____ equal parts.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Establishing a purpose for the lesson</td>
<td>COMPLETE ME
Using some words you have unlocked from the previous activity, complete the sentence by putting the appropriate word from the blank.
Divide, ten, decile, nine
Quartile is the 3 scores which divide the data into 4 equal parts.
_____ is _____ score which _____ the data into ____ equal parts.</td>
<td>Group Work

Alden has an assignment to ask at random 10 students in their school about their grades in Mathematics in the First Quarter. The data are given in the table below:

<table>
<tr><th>Name</th><th>Grade</th><th>Name</th><th>Grade</th></tr>
<tr><td>Amor</td><td>85</td><td>Marimar</td><td>75</td></tr>
<tr><td>Inna</td><td>78</td><td>Lea</td><td>90</td></tr>
<tr><td>Angelo</td><td>81</td><td>Clark</td><td>88</td></tr>
<tr><td>Eduardo</td><td>85</td><td>Sergio</td><td>90</td></tr>
<tr><td>Claudia</td><td>79</td><td>Jack</td><td>87</td></tr>
</table>
Find the value and interpret the following:
1. D1</td>
<td>If quartile is the 3 scores which divide the data into a hundred equal parts, What do you call the scores which divide the data into a hundred equal parts?</td>
<td>The first decile is the 10th percentile (P_{10})
$Q_2=D_5=P_{50}$ = Median</td>
</tr>
</table>

		2. D3 3. D5 4. D7 5. D8		
C. Presenting examples/Instances of the new lesson	AlingMarie is a fish vendor in Salinas market. She sells tinapa and daing, her sales in the first 10 days in this year are listed below. Her average sale per day lies on the 4th decile. 360 520 300 440 460 540 560 580 620 200 a. Find the 4th decile *Solution:* 1. First, arrange the scores in ascending order. 200 300 360 440 460 540 520 560 580 600	**The Deciles for Ungrouped Data** The deciles are the nine score points which divide a distribution into ten equal parts. They are deciles and are denoted as *D*1, *D*2, *D*3,…*D*9. They are computed in the same way that the quartiles are calculated. The computed value will be rounded off to the nearest integer. *D*1 –10% lies below it and 90% lies above it. *D*2 –20% lies below it and 80% lies above it. *D*3 –30% lies below it and 70% lies above it. *D*4–40% lies below it and 60% lies above it. *D*5–50% lies below it and 50% lies above it. *D*6–60% lies below it and 40% lies above it. *D*7–70% lies below it and 30% lies above it.	Using interpolation, the method which is same with calculating quartile and decile, find the 30th percentile of the following test scores of a random sample of 10 students. Edward – 12 Jhondel – 9 Lance – 11 Rean – 14 Rammick – 13 Jonelyn – 11 Marynell – 11 Mickaela – 12 Jerose – 9 Giolie – 11 about P_{70}?	**Percentile for Ungrouped Data** Percentile are the ninety-nine score points which divide a distribution into one hundred equal parts It is characterize values according to percentage. Position of P_1 =1/100 (n+1)

	2. Second find its D_2 position, use the formula and round off to the nearest integer. Position of**D_k=** $\frac{k}{10}(n+1)$**th** Wherein k = unit partition n= number of cases Position of D_4 = $\frac{4}{10}$(n + 1)th = $\frac{4}{10}$(10 + 1)th =$\frac{4}{10}$(11)th = 4.4th The computed value is with decimal which is 4.4so we need to do linear interpolation. 3.Interpolating/ locating the exact position of the score. Step 1: subtract the 4th data from the 5th data 460 — 440 = 20 Step 2: multiply the result by the decimal part obtained in the	*D*8–80% lies below it and 20% lies above it. *D*9–90% lies below it and 10% lies above it. **Formula:** Position of**D_k=** $\frac{k}{10}(n+1)$ Wherein k = unit partition n= number of cases		

	second step (position of 2nd decile) .4(20) = 8 Step 3: add the result in step 2 by the 3rd or smaller number/value 440+8 = 448 Value of 4th decile = 448 Interpreting the result AlingMarie should be happy with her sale because 60% of her sale is above the average sale			
D. Discussing new concepts and practicing new skills # 1			The scores of Ms. Universe candidates from seven judges were recorded as follows: 8. 45, 9. 20, 8. 56, 9. 13, 8. 67, 8. 85, and 9. 17. Find the 60th percentile or P_{60} of the judges' scores. What is the P_{35} of the judges' scores?	These are following test scores of a random sample of ten students: 35 42 40 28 15 23 33 20 18 28. Find the 30th percentile or P_{30} Solution: 15 18 20 23 28 28 33 35 40 42 Position of P_{30} = 30/100 (n+1) = 30/100 (10+1) = 3/10 (11) = 3.3 = **3** **P_{30} = 20**

E. Discussing new concepts and practicing new skills # 2	Aling Nena sells *Kalamay Buna* in the town plaza. The following are the number of pieces of *Kalamay Buna* Aling Nena sold for ten days: 35 25 50 20 40 45 30 35 40 30 Find the 3rd decile. Find the 7th decile	Find the 3rd decile or *D*3 of the following test scores of a random sample of ten students: 35 , 42 , 40 , 28 , 15 , 23 , 33 , 20 , 18 and 28.		Mr. Darwin take a sample score of 15 students in all the sections he handle the following are came from their score in unit test: 30, 24, 26, 12, 11, 24, 30, 15, 30, 18, 20, 17, 21, 25, and 22. Find 10^{th} Percentile (P_{10}), 60^{th} percentile (P_{60}) and 80^{th} percentile (P_{80}) Solution: 11, 12, 15, 17, 18, 20, 21, 22, 24, 24, 25,26, 30, 30, 30. Position of P_{10}= 10/100 (n+1) =10/100 (15+1) = 1/10 (16) = 16/10 = 1.6 = 2 **P_{10}= 12** Position of P_{80} = 80/100 (n+1)

<table>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>= 80/100 (15+1)
= 4/5 (16)
= 64/5
= 12.8
= 13
P_{80}=30</td>
</tr>
<tr>
<td>F. Developing mastery (leads to Formative Assessment 3)</td>
<td>Analysis:
How did you find and interpret the result of
a. third decile
b. seventh decile?</td>
<td>Analysis:
How did you find and interpret the result of the third decile?</td>
<td>Evaluate the following percentile using the data gathered about the last quarter’s exam scores of some selected students.

17 16 21 20 24
18 22 21 25 30

• P_{70}
• P_{75}

P_{80}</td>
<td>Mary Ann collected the heights of a random sample of 30 students. The following heights are in centimeters. Find P_{30}, $P_{50,}$ and P_{70}
90, 91, 91, 92, 95, 96, 96, 97, 98, 98, 98, 99, 99, 100, 100, 101, 101, 102, 103, 105, 87, 105, 87, 106, 88 , 107, 89, 107, 89 and 112.</td>
</tr>
<tr>
<td>G. Finding practical application of concepts and skills in daily living</td>
<td>The height of grade 10 students was recorded in their physical education class.
150 170 165
155 158 163
168 174 178
180</td>
<td>Group activity
(Collaborative approach)
Teacher will sort the class into three groups, and each group has specific task to do.

Situation:
The municipality of Rosario Cavite conducted a survey to</td>
<td>A total of 5000 people visited Robinson’s Place General Trias over 12 hours.

<table><tr><td>Time (hrs.)</td><td>People</td></tr><tr><td>2</td><td>500</td></tr><tr><td>4</td><td>1000</td></tr></table></td>
<td>Mr. Darwin conducted a 60 items test in his lesson measures of ungrouped data (quartile, decile, percentile). A random sample of 15 students got the following scores 17, 52, 47, 60, 37, 28, 55, 56, 25, 32,</td>
</tr>
</table>

	Find the value then interpret the result of the following: 1. D3 2. D8 3. D9	check the health of the youth by surveying boys with age ranging from 16-18 years old. Because based on last year's survey the malnutrition in Rosario was _____ so the local government invited a nutritionist to conduct a seminar on how they are going to prevent malnutrition. Task 1: the normal weight of a 16 year old boy is 134 pounds/60.78 kg 10 students were interviewed and their weight was recorded. If mike weight's lies on the third decile. Is his weight normal, above or below normal? 100 110 112 120 134 136 145 150 162 Task 2: each group will be given 5 minutes to work out their task after giving the allotted time each will be given 3 minutes for the execution of their work.	6 | 1300 8 | 2500 10 | 3600 12 | 5000 Estimate the 40^{th} percentile (when 40% of the visitor's had arrived)	46, 28, 55, 35, 35, and 20 Find $P_{30,}$ P_{60}, and P_{80}.

		Team boy abunda Make a talk-show tackling the malnutrition and interview a nutritionist and a mother. Give resolutions and advices. Team Marian rivera Make a role playing showing the common cause of malnutrition in our country. And give a resolution. Team Sarah Geronimo Assume that you are the nutritionist make a jingle encouraging students to eat healthy foods and how are they going to avoid malnutrition (you can sing and dance)		
H. Making generalizations and abstractions about the lesson	**The Deciles for Ungrouped Data** The deciles are the nine score points which divide a distribution into ten equal parts. They are deciles and are denoted as *D*1, *D*2, *D*3,…*D*9. They are computed in the same way that the quartiles	**The Deciles for Ungrouped Data** The deciles are the nine score points which divide a distribution into ten equal parts. They are deciles and are denoted as *D*1, *D*2, *D*3,…*D*9. They are computed in the same way that the quartiles are calculated. The computed value will be	The Percentile for Ungrouped Data The percentiles are the ninety-nine score points which divide a distribution into one hundred equal parts, so that each part represents each data set. It is used to characterize values	**The Percentile for Ungrouped Data** The percentiles are the ninety-nine score points which divide a distribution into one hundred equal parts, so that each part represents each data set. It is used to characterize values

	are calculated. The computed value will be rounded off to the nearest integer. *D*1 –10% lies below it and 90% lies above it. *D*2 –20% lies below it and 80% lies above it. *D*3 –30% lies below it and 70% lies above it. *D*4–40% lies below it and 60% lies above it. *D*5–50% lies below it and 50% lies above it. *D*6–60% lies below it and 40% lies above it. *D*7–70% lies below it and 30% lies above it. *D*8–80% lies below it and 20% lies above it. *D*9–90% lies below it and 10% lies above it. **Formula:** Position of $\mathbf{D_k}=\frac{k}{10}(n+1)$ Wherein k = unit partition n= number of cases	rounded off to the nearest integer. *D*1 –10% lies below it and 90% lies above it. *D*2 –20% lies below it and 80% lies above it. *D*3 –30% lies below it and 70% lies above it. *D*4–40% lies below it and 60% lies above it. *D*5–50% lies below it and 50% lies above it. *D*6–60% lies below it and 40% lies above it. *D*7–70% lies below it and 30% lies above it. *D*8–80% lies below it and 20% lies above it. *D*9–90% lies below it and 10% lies above it. **Formula:** Position of $\mathbf{D_k}=\frac{k}{10}(n+1)$ Wherein k = unit partition n= number of cases	according to the percentage below them. The percentiles determine the value for 1%, 2%, …, 99% of the data. P_{30} or the 30th percentile of the data means 30% of the data have values less than or equal to P_{30} .	according to the percentage below them. The percentiles determine the value for 1%, 2%, …, 99% of the data. P_{30} or the 30th percentile of the data means 30% of the data have values less than or equal to P_{30}.
I. Evaluating learning	Ariel has an assignment to ask	Given 50 multiple-choice items in their final test in	Joan has an assignment to ask at random 10 of her classmates about	Find the sixty fifth percentile$\left(P_{65}\right)$, forty

<table>
<tr>
<td></td>
<td>at random 10 students in their school about their grades in Mathematics in the First Quarter. The data are given in the table below:

<table>
<tr><th>Name</th><th>Grade</th><th>Name</th><th>Grade</th></tr>
<tr><td>Amor</td><td>78</td><td>Marimar</td><td>82</td></tr>
<tr><td>Inna</td><td>80</td><td>Lea</td><td>90</td></tr>
<tr><td>Angelo</td><td>81</td><td>Clark</td><td>88</td></tr>
<tr><td>Eduardo</td><td>85</td><td>Sergio</td><td>83</td></tr>
<tr><td>Claudia</td><td>75</td><td>Jack</td><td>87</td></tr>
</table>

Find & interpret
the result of
1. D3
2. D5
3. D7</td>
<td>Mathematics, the scores of 30 students are the following:

23 38 28 46 22 20 18 34 36 35 45 48 16 22 27 25 29 31 30 25 44 21 18 43 21 26 37 29 13 37

Find & interpret
the result of
1. D1
2. D6
3. D9</td>
<td>their grades in Math. The data are given on the table below.

<table>
<tr><td>Students</td><td>Grades</td></tr>
<tr><td>1</td><td>89</td></tr>
<tr><td>2</td><td>76</td></tr>
<tr><td>3</td><td>75</td></tr>
<tr><td>4</td><td>88</td></tr>
<tr><td>5</td><td>75</td></tr>
<tr><td>6</td><td>72</td></tr>
<tr><td>7</td><td>84</td></tr>
<tr><td>8</td><td>80</td></tr>
<tr><td>9</td><td>75</td></tr>
<tr><td>10</td><td>81</td></tr>
</table>

Evaluate:
P_{30}
P_{50}
If the passing mark is P_{50}, how many got the passing grade?</td>
<td>fourth percentile$\left(P_{44}\right)$ and the ninety second percentile$\left(P_{92}\right)$, given the weight of 15 students in a class

John – 70
Mark – 45
Joseph – 52
Marie – 58
Luke – 55
Joshua – 43
Gloria – 62
Angelica - 75</td>
</tr>
<tr>
<td>J. Additional activities for application or remediation</td>
<td>Cut article/clipping in newspaper that involves measure of position. Try to get the 2nd decile and 8thdecile of the given data. Prepare for a short</td>
<td>Preparatory Question: What will happen to the position of a score in a distribution if you divide it into 100 equal parts?</td>
<td>Answer Activity 12:
You’re My World, p. 377.
Mathematics Learners’ Module</td>
<td>Study:
Measures of position for grouped data (quartile)</td>
</tr>
</table>

	presentation of your output in class.			
V. REMARKS				
VI. REFLECTION				
A. No. of learners who earned 80% in the evaluation				
B. No. of learners who require additional activities for remediation who scored below 80%				
C. Did the remedial lessons work? No. of learners who have caught up with the lesson				
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?				

	GRADE 10	School		Grade Level	10
	DAILY LESSON LOG	Teacher		Learning Area	MATHEMATICS

	Teaching Dates and Time		Quarter	FOURTH

	Session 1	Session 2	Session 3	Session 4
I. OBJECTIVES				
7. Content Standards	The learner demonstrates understanding of key concepts of measures of position.			
8. Performance Standards	The learner is able to conduct systematically a mini-research applying the different statistical methods.			
9. Learning Competencies Objectives	Solves problems involving measures of positions (**M10SP-IVd-e-1)** a. Differentiate grouped from ungrouped data; b. Complete the needed information in the FDT; c. Interpret the data in the FDT	1.Illustrate quartile as a measure of position for grouped data; (**M10SP-IVa-1)** 2. Compute quartile for grouped data; (**M10SP-IVb-1)** 3. Interpret quartile for grouped data; (**M10SP-IVc-1)** 4. Solve problems involving quartiles for grouped data. (**M10SP-IVd-e-1)** a. Determine the position of data using Mendenhall method or	Illustrate decile as a measure of position for grouped data. **(M10SP-IV-a-1)** a. Illustrate decile for grouped data. b. Differentiate decile from quartile. c. Complete the frequency distribution table. d. Interpret the FDT.	1.Illustrate decile as a measure of position for grouped data; (**M10SP-IVa-1)** 2. Compute decile for grouped data; (**M10SP-IVb-1)** 3. Interpret decile for grouped data; (**M10SP-IVc-1)** 4. Solve problems involving decile for grouped data. (**M10SP-IVd-e-1)** olve problems involving decile of grouped data

		by interpolation in quartiles b. Solve problems involving quartile of grouped data c. Interpret and appreciate measures of position in solving real life problems.		terpret the decile score for grouped data. alue accumulated knowledge as means of new understanding.
II. CONTENT	**Measures of Position for Grouped Data**	**Quartile for Grouped Data**	**Decile for Grouped Data**	**Decile for Grouped Data**
III. LEARNING RESOURCES				
E. References				
9. Teacher's Guide			340 – 341	340 – 341
10. Learner's Materials	385-386	385-387	388 – 389	388 – 389
11. Textbook				
12. Additional Materials from Learning Resources (LR) portal	PowerPoint Presentation Laptop Manila Paper and Marker Activity Sheets	Power point Presentation Laptop Manila Paper and Marker Activity Sheets	Power point Presentation Laptop Manila Paper and Marker Activity Sheets	Powerpoint Presentation, laptop, activity sheets
F. Other Learning Resources	https://en.wikipedia.org/wiki/Frequency_distribution			
IV. PROCEDURES				

<table>
<tr>
<td>A. Reviewing previous lesson or presenting the new lesson</td>
<td>Direction: Arrange the following words to determine the words that you will encounter as we discussed our topic for today.

1. FEUNCYEQR
2. BUDRESIANO
3. GOPDEUR
4. DTAA
5. RNEGA
6. ITRALVEN
7. CMLTVEIAUU</td>
<td>Direction: Complete the table by supplying the class size (i), number of cases (N), lower boundaries (LB) and less than cumulative frequencies (<cf)
<table><tr><th>Class Interval</th><th>Frequency</th></tr><tr><td>20-24</td><td>4</td></tr><tr><td>15-19</td><td>1</td></tr><tr><td>10-14</td><td>2</td></tr><tr><td>5-9</td><td>3</td></tr><tr><td>i=_____</td><td>N=_____</td></tr></table></td>
<td>SHARADES

Each group will have two (2) words to be guessed. For the first round, 2 minutes is the allotted time, and 1 minute is allotted for the second round.</td>
<td>Recapitulation of the lesson. (Cabbage Ball)

- How to locate the decile class?
- What does cf_b mean?
- What does f_{Dk} mean?
- How to calculate the decile score of grouped data?
- If the D_4 score is 39.14, what does it mean?</td>
</tr>
<tr>
<td>B. Establishing a purpose for the lesson</td>
<td>Observe the table below and compare it to the ungrouped data.
<table><tr><th>Scores</th><th>Frequency</th></tr><tr><td>46-50</td><td>4</td></tr><tr><td>41-45</td><td>8</td></tr><tr><td>36-40</td><td>11</td></tr><tr><td>31-35</td><td>9</td></tr><tr><td>26-30</td><td>12</td></tr><tr><td>21-25</td><td>6</td></tr></table></td>
<td>Recall that quartiles divide the distribution into four equal parts.
The steps in computing the median are similar to that Q_1 and Q_3. In finding the median, we first need to determine the median class. In the same manner, the Q_1 and Q_3class must be determined first before computing for the value of Q_1 and Q_3. The Q_1 class is the</td>
<td>Based on the listed words that you have guessed during the first activity, construct a sentence that will simply define a decile.</td>
<td></td>
</tr>
</table>

<table>
<tr>
<td></td>
<td></td>
<td>class interval where the $\frac{N}{4}$th score is contained, while the class interval that contains the $\frac{3N}{4}$th score is the Q_3 class.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Presenting examples/Instances of the new lesson</td>
<td>One way to avoid dispersion of numbers is to group the scores into class intervals.

Frequency distribution is a table that displays the frequency of various outcomes in a sample.</td>
<td>Given the data in our previous activity, find Q_1 of the distribution?
Solution:
a) Determine the i, N, LB, <cf of the distribution

<table>
<tr><th>Class Interval</th><th>(f)</th><th>LB</th><th><cf</th></tr>
<tr><td>51-60</td><td>5</td><td>50.5</td><td>31</td></tr>
<tr><td>41-50</td><td>6</td><td>40.5</td><td>26</td></tr>
<tr><td>31-40</td><td>7</td><td>30.5</td><td>20</td></tr>
<tr><td>21-30</td><td>10</td><td>20.5</td><td>13</td></tr>
<tr><td>11-20</td><td>3</td><td>10.5</td><td>3</td></tr>
<tr><td>i=10</td><td>N= 31</td><td></td><td></td></tr>
</table>

a) Find Q_1 class

Position of Q_1 class = $\frac{kN}{4}$ = $\frac{1(31)}{4}$ = 7.75</td>
<td>Complete the table.

Research Club is conducting a mini research regarding the age of some grade ten students. The table below shows you the number of students with their corresponding age.
<table>
<tr><th>Age</th><th>F</th></tr>
<tr><td>22-23</td><td>2</td></tr>
<tr><td>20-21</td><td>6</td></tr>
<tr><td>18-19</td><td>15</td></tr>
<tr><td>16-17</td><td>28</td></tr>
<tr><td>14-15</td><td>34</td></tr>
</table>

Extend the table by determining the LB and <cf.</td>
<td>▸ Complete the table given and find the D6 and D9 class.

<table>
<tr><th>SCORES</th><th>F</th><th>LB</th><th><CF</th></tr>
<tr><td>41-45</td><td>11</td><td></td><td></td></tr>
<tr><td>36 - 40</td><td>6</td><td></td><td></td></tr>
<tr><td>31 – 35</td><td>9</td><td></td><td></td></tr>
<tr><td>26 – 30</td><td>7</td><td></td><td></td></tr>
<tr><td>21 - 25</td><td>8</td><td></td><td></td></tr>
<tr><td>16 - 20</td><td>4</td><td></td><td></td></tr>
</table>
</td>
</tr>
</table>

		This means we need to find a class interval where the 7.75^{th} score is contained. Note that the 4^{th} to 13^{th} scores belong to the 21-30 class interval, thus 7.75 also contained therein. b) Compute for Q_1 $Q_k = LB + \left[\frac{\frac{kN}{4} - <c_{f_b}}{f_{Qk}}\right] i$ $Q_1 = 20.5 + \left[\frac{7.75-3}{10}\right] 10$ $Q_1 = 20.5 + 4.75$ $Q_1 = 25.25$ **Therefore, 25% of the vendors have sales less than or equal to 25.25.**		
D. Discussing new concepts and practicing new skills # 1		ANALYSIS: 1. What are the steps in finding the quartile of grouped data? 2. How do we	$D_k = \frac{LB + (\frac{kN}{10} - <cf)}{fD_k} \times i$ Compare the given formula to the formula	

<table>
<tr><td></td><td></td><td>interpret the computed quartile?</td><td>used in computing for the quartile.

What are the needed data to complete the formula?</td><td></td></tr>
<tr><td>E. Discussing new concepts and practicing new skills # 2</td><td></td><td>Mrs.Mojica conducted a Scrabble competition with 10 participants. Find the 1st, 2nd and 3rd quartile

<table><tr><th>Scores</th><th>Frequency</th></tr><tr><td>31-35</td><td>1</td></tr><tr><td>26-30</td><td>2</td></tr><tr><td>21-25</td><td>3</td></tr><tr><td>16-20</td><td>2</td></tr><tr><td>11-15</td><td>2</td></tr><tr><td></td><td></td></tr></table></td><td>Using the given table regarding the age of some grade ten students, please compute for the following:

(a) D_2
(b) D_5</td><td></td></tr>
<tr><td>F. Developing mastery (leads to Formative Assessment 3)</td><td>Shown below in the table are the scores of 60 students in the 30-point Math quiz. Complete the table.

<table><tr><th>S</th><th>F</th><th>LB</th><th><CF</th></tr><tr><td>28-29</td><td>1</td><td></td><td></td></tr><tr><td>26-27</td><td>3</td><td></td><td></td></tr></table></td><td>Zumba is regarded as a good stress reliever and fat-burning dance and fitness exercise. It provides a workout for the whole body and builds up good cardiovascular</td><td>Interpret the computed value of D_2 and D_5.</td><td></td></tr>
</table>

24-25	3		
22-23	3		
20-21	6		
18-19	6		
16-17	8		
14-15	6		
12-13	10		
10-11	14		

respiratory system. A study was conducted in Cavite State University to determine the average exercise intensity and energy expenditure during a 40-minute Zumba class. A sample of twenty students showed the following energy expenditure (in Kcal) throughout the session:

Energy Expenditure (in Kcal)	f
250- 299	2
200- 249	8
150- 199	6
100- 149	4

Find the Q_1 and Q_3. Interpret the result

G. Finding practical application of concepts and skills in daily living

Grades	Frequency
95-99	3
90-94	2
85-89	1
80-84	1
75-79	3

Dennis and Christine scored 32 and 23, respectively, in the National Career Assessment Examination (NCAE). The determining factor for a college

GROUP ACTIVITY

Divide the class into 5 groups. Give each group problem to solve.

The table below shows the distribution of the

Alden has an assignment to ask at random 10 students in their school about their grades in Mathematics in the Third Quarter. The data are listed in the table below.

Find Q_1 and Q_3, then interpret the result.

scholarship is that a student's score should be in the top 10% of the scores of his/her graduating class. The students in the graduating class obtained the following scores in the NCAE.

NCAE Scores	f
39-41	6
36-38	7
33-35	9
30-32	13
27-29	22
24-26	10
21-23	9
18-20	7
15-17	8
12-14	4
9-11	2
6-8	1
3-5	1

1. Complete the table by filling in the values of LB (lower boundaries) and <cf (less than cumulative frequency). Explain how you arrived at your answers.

daily rates of 80 factory workers from different companies.

Daily Rate	No of Workers
P70 – P79	28
P60 – P69	14
P50 – P59	12
P40 – P49	8
P30 – P39	11
P20 – P29	7
	N = 80

Group 1 Solve for D3
Group 2 Solve for D6
Group 3 Solve for D7
Group 4 Solve for D4
Group 5 Solve for D9

			2. Find the 7th decile of the set of data. 3. Interpret your result.	
H. Making generalizations and abstractions about the lesson	In statistics, a **frequency distribution** is a table that displays the frequency of various outcomes in a sample. Each entry in the table contains the frequency or count of the occurrences of values within a particular group or interval, and in this way, the table summarizes the distribution of values in the sample	**The Quartile for Grouped Data** In computing the quartiles of grouped data, the following formula is used: **Formula:** $Q_k = LB + \left[\frac{\frac{kN}{4} - <c_{f_b}}{f_{Qk}}\right] i$ where: *LB* = lower boundary of the Q_k class *N* = total frequency $<c_{fb}$ = cumulative frequency of the class before the $Q_k$class f_{Qk}= frequency of the Q_k class *i* = size of class interval *k* = nth quartile, where *n* = 1, 2, and 3	**The Decile for Grouped Data** Decile is the way/technique of dividing the distribution into 10 equal parts. The following formula is being used in computing for the decile of grouped data. $D_k = \frac{LB + (\frac{kN}{10} - <cf)}{fD_k} \times i$	**The Decile of Grouped Data** Decile is the way/technique of dividing the distribution into 10 equal parts. The following formula is being used in computing for the decile of grouped data. $D_k = \frac{LB + (\frac{kN}{10} - <cf)}{fD_k} \times i$
I. Evaluating learning	The table below shows the number of customers who went on the coffee shop for the last 2 months.	"Nagmahal, Nasaktan, Nagsayaw" is a reality talent search in Showtime in ABS-CBN. One of the	A survey was conducted for 100 grade ten students about their grades for the third	A survey was conducted for 100 grade ten students about their grades for the third

<table>
<tr>
<td></td>
<td>Complete the needed information in this FDT.
<table>
<tr><th># days</th><th>F</th><th>LB</th><th><CF</th></tr>
<tr><td>49-60</td><td>25</td><td></td><td></td></tr>
<tr><td>37-48</td><td>15</td><td></td><td></td></tr>
<tr><td>25-36</td><td>30</td><td></td><td></td></tr>
<tr><td>13-24</td><td>10</td><td></td><td></td></tr>
<tr><td>1-12</td><td>20</td><td></td><td></td></tr>
</table>
</td>
<td>contestants of the said program is Arra San Agustin who is a Caviteña. In order to express our support, an FB page was developed for Princess. The table below shows the number of likes of Princess in Facebook for ten days:
<table>
<tr><th>Likes (in thousands)</th><th>Frequency</th></tr>
<tr><td>31-35</td><td>2</td></tr>
<tr><td>26-30</td><td>1</td></tr>
<tr><td>21-25</td><td>4</td></tr>
<tr><td>16-20</td><td>2</td></tr>
<tr><td>11-15</td><td>1</td></tr>
</table>
Find the second quartile of the distribution, then interpret the result</td>
<td>grading period. The table below shows you.
<table>
<tr><th>Age</th><th>F</th></tr>
<tr><td>96-100</td><td>2</td></tr>
<tr><td>91-95</td><td>14</td></tr>
<tr><td>86-90</td><td>18</td></tr>
<tr><td>81-85</td><td>33</td></tr>
<tr><td>76-80</td><td>17</td></tr>
<tr><td>70-75</td><td>16</td></tr>
</table>
Compute for the following and interpret the computed value:

(a) D_3
(b) D_7</td>
<td>grading period. The table below shows you.
<table>
<tr><th>Age</th><th>F</th></tr>
<tr><td>96-100</td><td>2</td></tr>
<tr><td>91-95</td><td>14</td></tr>
<tr><td>86-90</td><td>18</td></tr>
<tr><td>81-85</td><td>33</td></tr>
<tr><td>76-80</td><td>17</td></tr>
<tr><td>70-75</td><td>16</td></tr>
</table>
Compute for the following and interpret the computed value:

(a) D_4
(b) 6</td>
</tr>
<tr>
<td>J. Additional activities for application or remediation</td>
<td></td>
<td>Conduct a mini-research on student’s performance in the 3rd periodical examination in Mathematics 10. Apply the knowledge and skills you have</td>
<td>Using the table given on your quiz, solve for D_8 and interpret.

Study about the percentile for grouped data.</td>
<td>Study about the percentile for grouped data.</td>
</tr>
</table>

		learned in this lesson to evaluate and interpret test results and to make/formulate meaningful decisions based on the results to resolve the difficulties that you have encountered in the subject.		
V. REMARKS				
VI. REFLECTION				
A. No. of learners who earned 80% in the evaluation				
B. No. of learners who require additional activities for remediation who scored below 80%				
C. Did the remedial lessons work? No. of learners who have caught up with the lesson				
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?				

GRADE 10 **DAILY LESSON LOG**	**School**		**Grade Level**	**10**
	Teacher		**Learning Area**	**MATHEMATICS**
	Teaching Dates and Time		**Quarter**	**FOURTH**

	Session 1	**Session 2**	**Session 3**	**Session 4**
I. OBJECTIVES				
10. Content Standards	The learner demonstrates understanding of key concepts of measures of position.			

11. Performance Standards	The learner is able to conduct systematically a mini-research applying the different statistical methods.			
12. Learning Competencies Objectives	1.Illustrate percentile as a measure of position for grouped data; (**M10SP-IVa-1)** 2. Compute percentile for grouped data; (**M10SP-IVb-1)** 3. Interpret percentile for grouped data; (**M10SP-IVc-1)** 4. Solve problems involving percentile for grouped data. (**M10SP-IVd-e-1)** a. Illustrate percentile as measure of position for grouped data. b. Solve problems involving percentile of grouped data terpret percentile score for grouped data	Solve problems involving quartile, decile and percentile for grouped data. (**M10SP-IVd-e-1)** a. Solve problems involving percentile of grouped data terpret and appreciate measures of position in solving real life problems.	earner formulates statistical mini-research. **M10SP-IVf-g-1** fine research. umerate the parts of a research report. ue accumulated knowledge as means of new understanding.	earner formulates statistical mini-research. **M10SP-IVf-g-1** ferentiate quantitative from qualitative research ue the importance of research in research in life.

	alue accumulated knowledge as means of new understanding.			
II. CONTENT	**PERCENTILE FOR GROUPED DATA**	**MEASURES OF POSITION FOR GROUPED DATA**	**RESEARCH AND ITS PARTS**	**QUANTITATIVE AND QUALITATIVE RESEARCH**
III. LEARNING RESOURCES				
G. References				
13. Teacher's Guide	341-343	394-402		
14. Learner's Materials	390-392	392- 400		
15. Textbook				
16. Additional Materials from Learning Resources (LR) portal	Powerpoint Presentation, laptop, activity sheets	Powerpoint Presentation, laptop, activity sheets	Powerpoint Presentation, laptop, activity sheets, ball, pictures, music	Powerpoint Presentation, laptop, activity sheets
H. Other Learning Resources			LCTG https://kupdf.com/download/lesson-plan-in-practical-research-1_59f1a04ae2b6f5562ee809bb_pdf	https://kupdf.com/download/lesson-plan-in-practical-research-1_59f1a04ae2b6f5562ee809bb_pdf

<table>
<tr><td></td><td></td><td></td><td>https://www.youtube.com/watch?v=yt6XXDF7xaQ

https://www.youtube.com/watch?v=IO4wAzxdL2M</td><td></td></tr>
<tr><td>IV. PROCEDURES</td><td></td><td></td><td></td><td></td></tr>
<tr><td>A. Reviewing previous lesson or presenting the new lesson</td><td>bitulation of the lesson:

the test scores of 50 students in Mathematics, calculate the first quartile and 7th decile.

<table><tr><td>Scores</td><td>Frequency</td></tr><tr><td>46-50</td><td>4</td></tr><tr><td>41-45</td><td>8</td></tr><tr><td>36-40</td><td>11</td></tr><tr><td>31-35</td><td>9</td></tr><tr><td>26-30</td><td>12</td></tr><tr><td>21-25</td><td>6</td></tr></table></td><td>ONE WORD

- Words will be flushed on the monitor.
- Students will have to give one word that for them best describes the given word.

MATH
HIGH SCHOOL
STATISTICS
QUARTILE
PERCENTILE
DECILE TEACHER IN MATH</td><td></td><td>w of the previous lesson</td></tr>
</table>

<table>
<tr>
<td>B. Establishing a purpose for the lesson</td>
<td>Look at the pictures shown below.
 
-Do you recognize them?

-Did you take the National Career Assessment Examination (NCAE) when you were in Grade 9? If so, what was your score?

-Did you know your rank?

-Have you thought of comparing your academic performance with that of your classmates?</td>
<td>hat's the meaning of this?

ide the class into five groups
er discussing all the measures of position, write a good definition of the different measures of position then present it through a SONG.</td>
<td>Activity – A Picture that Paints a Thousand Words

Directions: The teacher will flash set of pictures one at a time. While the first picture is shown, the teacher will play a music and pass a ball to the students. As the music stops, the one holding the ball will form a question or problem about the given picture. The procedure is repeated until the last picture.</td>
<td>ACTIVITY

Group Activity –Critique Me if You Can

Directions: Divide the class into several groups. Give each group two samples of research report to read and evaluate. Use the given checklist to evaluate the two samples.</td>
</tr>
<tr>
<td>C. Presenting examples/Instances of the new lesson</td>
<td>Mrs. Mojica conducted a Scrabble competition with 10 participants.

<table><tr><td>Scores</td><td>Frequency</td></tr><tr><td>31-35</td><td>1</td></tr></table></td>
<td>ollowing is a distribution for the number of employees in 45 companies belonging to a certain industry. Calculate the third quartile, 85th percentile, and 4th decile of the number of</td>
<td>ANALYSIS

Questions for Processing:

1. How will you find the answers or solutions to the questions or</td>
<td>ANALYSIS

Ask the following questions:

1. What are your important observations</td>
</tr>
</table>

	<table><tr><td>26-30</td><td>2</td></tr><tr><td>21-25</td><td>3</td></tr><tr><td>16-20</td><td>2</td></tr><tr><td>11-15</td><td>2</td></tr><tr><td></td><td></td></tr></table> ng your prior knowledge on how to solve for Quartile and Decile of grouped data, how would you locate the position of the percentile scores?	employees given the number of companies. <table><tr><th>Number of Employees</th><th>Number of Companies</th></tr><tr><td>41 – 45</td><td>11</td></tr><tr><td>36 – 40</td><td>6</td></tr><tr><td>31 – 35</td><td>9</td></tr><tr><td>26 – 30</td><td>7</td></tr><tr><td>21 – 25</td><td>8</td></tr><tr><td>16 – 20</td><td>4</td></tr></table>	problems you have formulated? 2. Is research applicable in these situations? 3. Do you have any idea about the methods of research that we can use in these situations?	about the two research samples? 2. Which of the two aims to test the hypothesis and look for cause and effect? What about to explore? 3. Which of the two is subjective? Is objective? Why? 4. What is the data collection technique used in sample 1? In sample 2? 5. Which is analyzed statistically? Which is not? 6. In terms of outcome, which has the measurable results? 7. Based on your evaluation, which do you think is a qualitative research? Which is a quantitative research? Why?

<table>
<tr>
<td>D. Discussing new concepts and practicing new skills # 1</td>
<td>GROUP ACTIVITY

-Divide the group in five.

-Using your prior knowledge on how to solve for the quartile and decile of grouped data, solve for the 60th percentile score given the data below.

-Each group may ask questions on how the other groups obtained their answers.

Mrs. Mojica conducted a Scrabble competition with 10 participants.

<table>
<tr><th>Scores</th><th>Frequency</th></tr>
<tr><td>31-35</td><td>1</td></tr>
<tr><td>26-30</td><td>2</td></tr>
<tr><td>21-25</td><td>3</td></tr>
<tr><td>16-20</td><td>2</td></tr>
<tr><td>11-15</td><td>2</td></tr>
<tr><td></td><td></td></tr>
</table>
</td>
<td></td>
<td>ABSTRACTION

Ask the students: “What does RESEARCH mean to you?”

Watch a video to know more about what research mean.</td>
<td>TRACTION

scuss the quantitative and qualitative research</td>
</tr>
</table>

E. Discussing new concepts and practicing new skills # 2	1. What is percentile? 2. How would you locate the percentile class of grouped data? 3. What is the formula for solving the percentile of grouped data?		GROUP ACTIVITY: Group students into 5. Have students arrange the parts of research paper in order.	Activity – Chart It On Directions: Complete the chart with needed information on the distinguishable characteristics of quantitative and qualitative research. Ask the following questions: 1. What makes quantitative research different from qualitative research? 2. Is it possible for these methods of research to be utilized in one study alone? 3. Which of the two is important? Why? 4. In what aspect/situation of your life can you apply quantitative research? Qualitative research?

<table>
<tr>
<td>F. Developing mastery (leads to Formative Assessment 3)</td>
<td>Dennis and Christine scored 32 and 23, respectively, in the National Career Assessment Examination (NCAE). The determining factor for a college scholarship is that a student’s score should be in the top 10% of the scores of his/her graduating class. The students in the graduating class obtained the following scores in the NCAE.

<table>
<tr><th>NCAE Scores</th><th>F</th></tr>
<tr><td>39-41</td><td>6</td></tr>
<tr><td>36-38</td><td>7</td></tr>
<tr><td>33-35</td><td>9</td></tr>
<tr><td>30-32</td><td>13</td></tr>
<tr><td>27-29</td><td>22</td></tr>
<tr><td>24-26</td><td>10</td></tr>
<tr><td>21-23</td><td>9</td></tr>
<tr><td>18-20</td><td>7</td></tr>
<tr><td>15-17</td><td>8</td></tr>
<tr><td>12-14</td><td>4</td></tr>
<tr><td>9-11</td><td>2</td></tr>
<tr><td>6-8</td><td>1</td></tr>
<tr><td>3-5</td><td>1</td></tr>
</table>
</td>
<td></td>
<td>Enumerate and discuss the parts of research report.</td>
<td></td>
</tr>
</table>

	1. Complete the table by filling in the values of LB (lower boundaries) and <cf (less than cumulative frequency). Explain how you arrived at your answers. 2. Find the 72nd percentile of the set of data. 3. Interpret your result.			
G. Finding practical application of concepts and skills in daily living		GROUP ACTIVITY k your classmates about their Science, English, and Mathematics grades. ather all the data from your classmates by listing. en, construct a frequency distribution of a grouped data. (use i = 5). lculate the following: t quartile h decile th percentile		**APPLICATION** Group Activity – Qualitative vs Quantitative Sorting Activity Directions: Decide whether the following topics or research questions is qualitative or quantitative. Sort and paste them on the chart provided. How do the fishermen of Rosario, Cavite view “trawling” method of fishing?

		erpret each result - Group Presentation		🎬High School Students: Then and Now 🎬How do the students feel about K to 12 curriculum? 🎬What percentage of student-participants of the study is taking the TVL strand? 🎬What is the degree of satisfaction of students taking the different SHS tracks? 🎬The Why and How of ICT Use QUANTITATIVE | QUALITATIVE

H. Making generalizations and abstractions about the lesson	**The Percentile of Grouped Data** In computing the percentiles of grouped data, the following formula is used: **Formula:** $P_k = LB + \left[\frac{\frac{kN}{100} - <c_{f_b}}{f_{Pk}}\right] i$ where: *LB* = lower boundary of the P_k class *N* = total frequency $<c_{fb}$ = cumulative frequency of the class before the $P_k$class f_{Pk}= frequency of the P_k class *i*= size of class interval *k* = nth percentile, where *n* = 1, 2, 3…..99	**MEASURES OF POSITION FFOR GROUPED DATA** QUARTILE $Q_k = LB + \left[\frac{\frac{kN}{4} - <c_{f_b}}{f_{Qk}}\right] i$ where: *LB* = lower boundary of the Q_k class *N* = total frequency $<c_{fb}$ = cumulative frequency of the class before the $Q_k$class f_{Qk}= frequency of the Q_k class *i* = size of class interval *k* = nth quartile, where *n* = 1, 2, and 3 DECILE $D_k = \frac{LB + (\frac{kN}{10} - <cf)}{fD_k} \times i$ where: *LB* = lower boundary of the D_k class *N* = total frequency $<c_{fb}$ = cumulative frequency of the class before the D_k class	Close the session by summarizing the concept on the definition of research and parts of a research report.	Close the session by summarizing the concept on the difference between qualitative and quantitative research.

		F_{Dk}= frequency of the D_k class i = size of class interval k = nth decile, where n = 1, 2, 3, 4, 5, 6, 7, 8, 9 PERCENTILE $P_k = LB + \left[\frac{\frac{kN}{100} - <c_{f_b}}{f_{Pk}}\right] i$ where: LB = lower boundary of the P_k class N = total frequency $<c_{fb}$ = cumulative frequency of the class before the P_k class F_{Pk}= frequency of the P_k class i = size of class interval k = nth percentile, where n = 1, 2, 3, 4, 5, 6, 7, 8, 9...99		
I. Evaluating learning	"Nagmahal, Nasaktan, Nagsayaw" is a reality talent search in Showtime in ABS-CBN. One of the contestants of the said program is Arra San Agustin who is a Caviteña. In order to express our support, an FB page was developed for Princess. The table	1-4-3 LIST In this activity, you will be asked to complete the 1 – 4 – 3 chart. Write down what is being asked regarding the different measures of position. (1) One thing I really love about this topic		Determine whether the following statements tell about qualitative research or quantitative research. 1. In quantitative research, data are analyzed through descriptive and/or inferential statistics.

<table>
<tr>
<td></td>
<td>below shows the number of likes of Princess in Facebook for ten days:

<table><tr><th>Likes (in thousands)</th><th>Frequency</th></tr><tr><td>31-35</td><td>2</td></tr><tr><td>26-30</td><td>1</td></tr><tr><td>21-25</td><td>4</td></tr><tr><td>16-20</td><td>2</td></tr><tr><td>11-15</td><td>1</td></tr></table>
Find the P60 of the distribution, then interpret the result</td>
<td>_____

(4) Four important reasons why I love this topic
_____
_____
_____
_____

(3) Three things I still need to understand about this topic
_____
_____
_____</td>
<td></td>
<td>2. Qualitative research is often subjective.

3. Quantitative studies are conducted in small/limited scope.

4. Qualitative research is exploratory in nature.

5. Qualitative research designs aim at an in depth understanding of human behavior.</td>
</tr>
<tr>
<td>J. Additional activities for application or remediation</td>
<td>Answer Activity 3: That's My Place on page 394, Mathematics Learners' Module
1. P25
2. P65
3. 85
Then interpret the result</td>
<td>Study for the long quiz on Monday</td>
<td>Name the types of research.</td>
<td>Search one example title of qualitative research and one example of quantitative research</td>
</tr>
<tr>
<td>V. REMARKS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VI. REFLECTION</td>
<td colspan="2"></td>
<td colspan="2"></td>
</tr>
<tr>
<td>A. No. of learners who earned 80% in the evaluation</td>
<td colspan="2"></td>
<td colspan="2"></td>
</tr>
</table>

B. No. of learners who require additional activities for remediation who scored below 80%		
C. Did the remedial lessons work? No. of learners who have caught up with the lesson		
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?		

GRADE 10 DAILY LESSON LOG	School		Grade Level	10
	Teacher		Learning Area	MATHEMATICS
	Teaching Dates and Time		Quarter	FOURTH

	Session 1	Session 2	Session 3	Session 4
I. OBJECTIVES				
13. Content Standards	The learner demonstrates understanding of key concepts of measures of position.			
14. Performance Standards	The learner is able to conduct systematically a mini-research applying the different statistical methods.			
15. Learning Competencies Objectives	earner formulates statistical mini-research. **M10SP-IVf-g-1** earner uses appropriate measures of position and other statistical methods in analyzing and interpreting research data. **P-IVh-j-1**	earner formulates statistical mini-research. **M10SP-IVf-g-1** earner uses appropriate measures of position and other statistical methods in analyzing and interpreting research data. **P-IVh-j-1**	earner formulates statistical mini-research. **M10SP-IVf-g-1** earner uses appropriate measures of position and other statistical methods in analyzing and interpreting research data. **P-IVh-j-1**	earner formulates statistical mini-research. **M10SP-IVf-g-1** earner uses appropriate measures of position and other statistical methods in analyzing and interpreting research data. **P-IVh-j-1**

	ntify the characteristics of a good research topic. eate a research topic. ue accumulated knowledge as means of new understanding	ntify an initial research topic that might be too broad or too narrow. cate and retrieve preliminary information on research topic.	eck and analyze the initial research topic/tile t and improve research topic/tile	esent research topic/title olain and defend research topic/tile
II. CONTENT	**Research Topic**	**Workshop (Formulating Research Topic/Title)**	**Checking and Editing of Research Topic/Title**	**Presentation of Research Topic/Title**
III. LEARNING RESOURCES				
I. References				
17. Teacher's Guide				
18. Learner's Materials				
19. Textbook				
20. Additional Materials from Learning Resources (LR) portal	Powerpoint Presentation, laptop, activity sheets			

J. Other Learning Resources	http://eloquentscience.com/2009/08/excerpt-chapter-3-writing-an-effective-title/	Library Google		http://eloquentscience.com/2009/08/excerpt-chapter-3-writing-an-effective-title/
IV. PROCEDURES				
A. Reviewing previous lesson or presenting the new lesson	w of the previous lesson	**GAME** **(PINOY HENYO)** r this activity, you are going to be paired up. ce paired, two images will be handed to each person. e images will be covered with post-it notes. thout looking at your image, you will tape the paper image just below your neck (on top of your chest). ce your image is taped on to your chest carefully, remove the post-it note that is covering the image, but make sure the image is still taped to you. Remember you cannot see your own image; however, you will	ng of experiences regarding the library activity yesterday.	guidelines on the presentation of output.

		be able to see your partner's image. plain that each pair will get a broad category (cancer, alcoholism, mental health, or weight issues). Explain that the two images for each pair should be put together to create one narrow topic. Begin to ask your partner questions about the image that is taped to your chest. You can ask anything you want. "Am I a person?" "Am I a symbol?" etc. Your partner will answer your questions in any manner to help you guess your image. Both of you can take turns asking questions going back and forth until you both guess the correct image. our partner guesses the correct image, have your partner take it off so that		

		both of you can view the image. ur partner may still not know his or her image, so have that partner keep on asking questions until you get the correct image. ce you both have guessed the correct image, notice that a topic can be formed from your particular category. For example, from the images we took a broad category such as mental health and narrowed it to postpartum depression. xplain that each person had half of the narrowed topic and by putting the two images together it formed a narrow topic. nce all pairs are done, debrief the activity by asking each student to sum		

		up his or her experience in a few sentences.		
B. Establishing a purpose for the lesson	**TIVITY** up Activity ction: Divide the class into 5 groups. The teacher will flash topic one at a time. Have each group identify if the given topic is researchable or not.	ANALYSIS: Was it hard to guess the image? What is easy to guess the image? Did you find ways to ask questions to narrow a category into a topic?	Checking and editing of research topic/title will be done per group of researchers.	sentation of outputs will be done per group.
C. Presenting examples/Instances of the new lesson	**LYSIS** he following questions: hat are your observations about the researchable topics and not researchable topics? hen are topics researchable? hat do you think make up a good research topic?	**ACTIVITY:** Venue: Library/ Computer Laboratory 1. Start with your textbook. 2. Explore the library using books, journals, and on-line databases. 3. Use keyword searches to find articles on the topic/subject. Use specific databases related to your topic. (e.g., If you are writing about health, use a		

		health database to start and see how many articles come up in your search results.) 4. Search the web carefully. The most credible sites belong to universities (.edu), the government (.gov), and well-known organizations (.org). 5. Contact a librarian who can provide guidance during your search if you still need help with how to use databases or how to locate journal articles.		
D. Discussing new concepts and practicing new skills # 1	**ABSTRACTION** Discuss how to identify a research topic			
E. Discussing new concepts and practicing new skills # 2	"Q and A" Complete the statement below: "I believe, ladies and gentlemen that a good research topic/title is			

	_____. And I thank you!"			
F. Developing mastery (leads to Formative Assessment 3)	Discussion the characteristics of a good research topic.			
G. Finding practical application of concepts and skills in daily living	**Research Project Proposal** Fill out this worksheet and turn it in. 1. I would like to research the following topic: _____ _____ _____ _____ 2. I am interested in this topic because: _____ _____ _____ ___			

	3. List at least three *specific* resources that you have found that may be useful to your research. *One* of these sources may be a website: 1. _____ _____ __ 2. _____ _____ _____ 3. _____ _____ _____ 4. Based on my preliminary research, I have chosen to focus on the following aspect of my topic: _____ _____			

	_____ _____ 5. I have chosen this focus because: _____ _____ _____ ___ ur answer to the following question will constitute your argument. Your argument may change as you do more research on and think more deeply about your topic. 6. How is your topic interesting or important? Are there unresolved questions relating to your topic? How might you approach these questions?			

	_____ _____ _____ *(The exercise was adapted from a worksheet designed by Professor Elizabeth Korn for students enrolled in ENG 101C/105C.)*			
H. Making generalizations and abstractions about the lesson	Close the session by summarizing the concept on how to formulate a research topic/problem.			
I. Evaluating learning				
J. Additional activities for application or remediation				
V. REMARKS				
VI. REFLECTION				

A. No. of learners who earned 80% in the evaluation				
B. No. of learners who require additional activities for remediation who scored below 80%				
C. Did the remedial lessons work? No. of learners who have caught up with the lesson				
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?				

	Teaching Dates and Time		Quarter	FOURTH

	Session 1	Session 2	Session 3	Session 4
I. OBJECTIVES				
16. Content Standards	The learner demonstrates understanding of key concepts of measures of position.			
17. Performance Standards	The learner is able to conduct systematically a mini-research applying the different statistical methods.			
18. Learning Competencies Objectives	earner formulates statistical mini-research. **M10SP-IVf-g-1** earner uses appropriate measures of position and other statistical methods in analyzing and interpreting research data. **SP-IVh-j-1** fine research problem rmulate research problem. ue accumulated knowledge as means of new understanding	earner formulates statistical mini-research. **M10SP-IVf-g-1** earner uses appropriate measures of position and other statistical methods in analyzing and interpreting research data. **P-IVh-j-1** ntify initial research questions that might be too broad or too narrow. cate and retrieve preliminary information on research topic.	earner formulates statistical mini-research. **M10SP-IVf-g-1** earner uses appropriate measures of position and other statistical methods in analyzing and interpreting research data. **P-IVh-j-1** eck and analyze the initial research questions. t and improve research questions	earner formulates statistical mini-research. **M10SP-IVf-g-1** earner uses appropriate measures of position and other statistical methods in analyzing and interpreting research data. **P-IVh-j-1** esent research questions plain and defend research questions

II. CONTENT	**Writing Research Problem**	**Workshop (Writing Statement of the problem)**	**Checking and Editing of Statement of the problem**	**Presentation of the Statement of the problem**
III. LEARNING RESOURCES				
K. References				
21. Teacher's Guide				
22. Learner's Materials				
23. Textbook				
24. Additional Materials from Learning Resources (LR) portal	Powerpoint Presentation, laptop, activity sheets			
L. Other Learning Resources				
IV. PROCEDURES				
A. Reviewing previous lesson or presenting the new lesson			ng of experiences in writing the statement of the problem.	
B. Establishing a purpose for the lesson	**TIVITY**	**ACTIVITY:**		

	up Activity ction: Divide the class into 5 groups. The teacher will flash topic one at a time. Have each group identify if the given topic is researchable or not.	Venue: Library/ Computer Laboratory 1. Start with your textbook. 2. Explore the library using books, journals, and on-line databases. 3. Use keyword searches to find articles on the topic/subject. Use specific databases related to your topic. (e.g., If you are writing about health, use a health database to start and see how many articles come up in your search results.) 4. Search the web carefully. The most credible sites belong to universities (.edu), the government (.gov), and well-known organizations (.org). 5. Contact a librarian who can provide guidance during your search if you still need help with how to use databases or how to locate journal articles.	Checking and editing of research topic/title will be done per group of researchers.	sentation of outputs will be done per group.

C. Presenting examples/Instances of the new lesson	**LYSIS** he following questions: hat are your observations about the researchable topics and not researchable topics? hen are topics researchable? hat do you think make up a good research topic?			
D. Discussing new concepts and practicing new skills # 1	**ABSTRACTION** Discuss how to identify a research topic/problem			
E. Discussing new concepts and practicing new skills # 2				
F. Developing mastery (leads to Formative Assessment 3)				
G. Finding practical application of concepts and skills in daily living	**LICATION**			

	p Activity – Choosing a Research Topic :tions: Divide the class into groups of five. Have each group accomplish the worksheet to come up with a research topic. earch Question Worksheet hat topic, problem, or issue are you interested in? Do some background research to find out more about it. hat specific part of the topic are you ested in? Break down topic and group ideas in clusters (use reverse). Pick one cluster or part of one. st a few possible questions about your specific topic area.			

	What? Who? When? Where? Why? How? hoose one to be your main research question. Why or How questions are best. ake your question as clear and specific as possible. Specify who, what, where, when you are talking about. Clarify any vague words. ate your working thesis. The working thesis should summarize the answer to your main research question, and will likely change after you do some research.			

H. Making generalizations and abstractions about the lesson	Close the session by summarizing the concept on how to formulate a research topic/problem.			
I. Evaluating learning				
J. Additional activities for application or remediation				
V. REMARKS				
VI. REFLECTION				
A. No. of learners who earned 80% in the evaluation				
B. No. of learners who require additional activities for remediation who scored below 80%				
C. Did the remedial lessons work? No. of learners who have caught up with the lesson				
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?				

GRADE 10 **DAILY LESSON LOG**	**School**		**Grade Level**	**10**
	Teacher		**Learning Area**	**MATHEMATICS**
	Teaching Dates and Time		**Quarter**	**FOURTH**

	Session 1	**Session 2**	**Session 3**	**Session 4**
I. OBJECTIVES				

19. Content Standards	The learner demonstrates understanding of key concepts of measures of position.			
20. Performance Standards	The learner is able to conduct systematically a mini-research applying the different statistical methods.			
21. Learning Competencies Objectives	earner formulates statistical mini-research. **M10SP-lVf-g-1** earner uses appropriate measures of position and other statistical methods in analyzing and interpreting research data. **SP-lVh-j-1** Differentiate population from sample. Identify and describe the different sampling techniques. Value accumulated knowledge as means of new understanding.	earner formulates statistical mini-research. **M10SP-lVf-g-1** earner uses appropriate measures of position and other statistical methods in analyzing and interpreting research data. **SP-lVh-j-1** ntify the difference between primary and secondary data llect or gather statistical data ly the different methods of collecting data	earner formulates statistical mini-research. **M10SP-lVf-g-1** earner uses appropriate measures of position and other statistical methods in analyzing and interpreting research data. **SP-lVh-j-1** eate a tool in collecting data for their research	earner formulates statistical mini-research. **M10SP-lVf-g-1** earner uses appropriate measures of position and other statistical methods in analyzing and interpreting research data. **SP-lVh-j-1** eck and analyze the tool in data collection it and improve the tool for data collection
II. CONTENT	**Collection of Data (Sampling Techniques)**	**Methods of Collecting Data**	**Construction of Tool for Data Collection**	**Checking and Editing of Tool for Data Collection**

III. LEARNING RESOURCES				
M. References				
25. Teacher's Guide				
26. Learner's Materials				
27. Textbook	e-math (Advanced Algebra and Trigonometry), pp.370-371, 374-375 Elementary Statistics by Carmela Zamora-Reyes, pp. 27-34			
28. Additional Materials from Learning Resources (LR) portal	Powerpoint Presentation, laptop, activity sheets	Powerpoint Presentation, laptop, activity sheets		
N. Other Learning Resources				
IV. PROCEDURES				
A. Reviewing previous lesson or presenting the new lesson	"The boat is sinking" Activity - All the students in the class must participate	uct a mini-survey on the track and strands to be taken by grade ten ____ students.	arch Day	ng of experiences regarding the library activity yesterday.

	- Students will have to group themselves according to the classification to be given by the teacher. - Example, “The boat is sinking, group yourselves according to your birth month”			
B. Establishing a purpose for the lesson	WORD DEVELOPMENT -Group students into 5. -Give each group show me board, chalk and eraser. - Jumbled letter-word will be flashed -Each group will rearrange the letters to form the correct words. -The group who earns the most number of points wins. 1. ELMPSA 2. ATPLOPONULI	ACTIVITY Group students into 5. Have each group identify possible ways of collecting data Present outputs in the most creative way.		

	3. DANROM 4. DFIETRSATI 5. CVOENICENCEN 6. LTCEURS			
C. Presenting examples/Instances of the new lesson	A mathematics teacher plans to choose four students from the math club to be in publicity photo. Using the different sampling techniques, how would the teacher choose the four students? SOLUTION: 1. The math teacher could put the names of all the students in a box, pick the names without looking. (**Random Sampling)** 2. The math teacher could choose the 4 students in the fourth row. **(Convenience Sampling)**	ACTIVITY (JIGSAW PUZZLE) 1. Divide students into 5- or 6-person jigsaw groups. 2. Appoint one student from each group as the leader. 3. Divide the day's lesson into 5-6 segments. 4. Assign each student to learn one segment. 5. Give students time to read over their segment at least twice and become familiar with it. 6. Form temporary "expert groups" by having one student from each jigsaw group join other students assigned to the same segment. 7. Bring the students back into their jigsaw groups. 8. Ask each student to present her or his segment to the group.		

	3. The teacher could mix the names of the boys and choose two from the group. The teacher does the same for the girls. **(Stratified Random Sampling)** 4. The math teacher could choose a group of four students in back corner. **(Cluster Sampling)** 5. The math teacher could choose every third student, beginning in front row and count from right to left. **(Systematic Sampling)**	9. Float from group to group, observing the process.		

D. Discussing new concepts and practicing new skills # 1	Identify which type of sampling is used. 1. A psychologist selects 12 boys and 12 girls from each of 4 Science classes. 2. A biologist surveys all students from each of 15 randomly selected classes. 3. Smart selects every 100th cell phone from the assembly line and conduct a thorough test of quality.	What are the different methods of collecting data? What are the advantages and disadvantages of each method? When each method can be used best?		
E. Discussing new concepts and practicing new skills # 2	THINK-PAIR-SHARE Mr. Calong, a g10 adviser at Rosario National High School, needs to choose 2 boys and 2 girls from his class to			

	participate in the cotillion for the Junior's Prom. Using the sampling techniques, how would Mr. Calong choose the students?			
F. Developing mastery (leads to Formative Assessment 3)	Identify the type of sampling used in the following statements. 1. An engineer selects every 50th cell phone from the assembly line for careful testing and analysis. 2. A reporter writes the name of each senator on a separate card, shuffles the cards, and then draws five names. 3. The principal of RNHS surveys all students from			

	each of 12 randomly selected classes. 4. A researcher interviews students who are leaving the school canteen. 5. A grade 10 teacher at RNHS interviews all G10 students in each of 4 randomly selected sections in grade 10.			
G. Finding practical application of concepts and skills in daily living	Identify the sampling technique your group will use for your research paper. Why the specific sampling technique is to be used. Discuss in class your work.	Identify the best method in collecting data for your group's research topic. Be ready to present and explain your answer in class		

H. Making generalizations and abstractions about the lesson	Statistics is a branch of mathematics that deals with the collection, organization, presentation, analysis, and interpretation of data. Statistics involves much more than simply drawing graphs and computing averages. The commonly used terms afre population and sample. *Population is the complete collection of all elements to be studied.* *Sample is a subcollection of elements drawn from a population* Sampling Techniques 1. In a **random sampling**, each member of the population has an equally likely chance of being selected. The members of the sample are chosen	METHODS OF COLLECTING DATA 1. Questionnaire/Survey 2. Interview 3. Observation 4. Experimental Approach 5. Ethnographies, Oral History, and Case Studies. 6. Documents and records		

	independently of each other. 2. A **convenience sampling** is a sampling technique where sample is chosen so that it is easy for the researcher. 3. In a **stratified sampling**, the population is divided into subgroups, so that each population member is in only one subgroup. In here, individuals are chosen randomly from each subgroup. 4. A **cluster sampling** is a sampling technique that consists of items in a group such as a neighbourhood or a household. The			

	group may be chosen at random. 5. A **systematic sample** is obtained using an ordered list of the population, then selecting members systematically from the list.			
I. Evaluating learning	Identify the type of sampling technique used: 1. A mathematics teacher selects 18 boys and 18 girls from each of four classes. 2. A researcher interviews every 45th patients in the list of Divine Grace Medical Center in-patients 3. A student interviews school principals and classroom teachers about the implementation of K-12 Curriculum. 4. Ms. Angon wants to give away 3 movie tickets. In order to avoid bias, she wrote the name of each of her students in a paper and placed it in a hat. To			

	determine the 3 winners, she picked 3 rolled papers from the hat. 5. To research consumer recognition of Swerte Ko noodles, the researcher conducts a survey of 2000 consumers in the Philippines by interviewing typical class C and D consumers coming out of the supermarket.			
J. Additional activities for application or remediation	Read 3 sample research papers on-line, identify the sample techniques used.			
V. REMARKS				
VI. REFLECTION				
A. No. of learners who earned 80% in the evaluation				
B. No. of learners who require additional activities for remediation who scored below 80%				
C. Did the remedial lessons work? No. of learners who have caught up with the lesson				

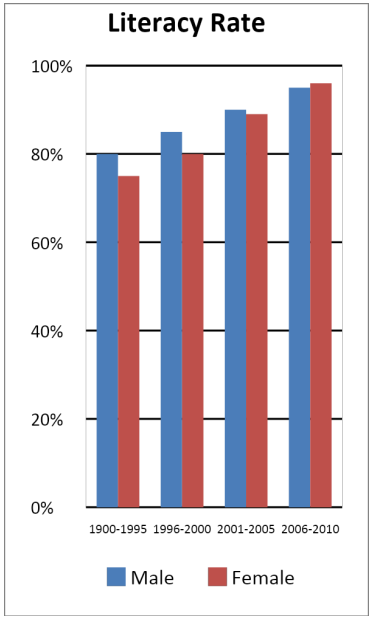
E. Which of my teaching strategies worked well? Why did these work?				
F. What difficulties did I encounter which my principal or supervisor can help me solve?				
G. What innovation or localized materials did I use/discover which I wish to share with other teachers?				

GRADE 10 DAILY LESSON LOG	School		Grade Level	10
	Teacher		Learning Area	MATHEMATICS
	Teaching Dates and Time		Quarter	FOURTH

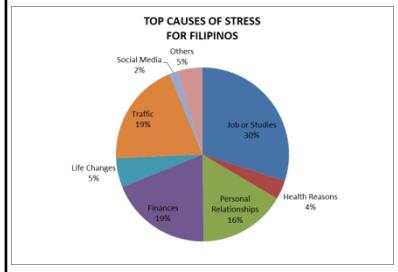
	Session 1	Session 2	Session 3	Session 4
I. OBJECTIVES				
22. Content Standards	The learner demonstrates understanding of key concepts of measures of position.			
23. Performance Standards	The learner is able to conduct systematically a mini-research applying the different statistical methods.			
24. Learning Competencies Objectives	earner formulates statistical mini-research. **M10SP-IVf-g-1** earner uses appropriate measures of position and other statistical methods in analyzing and interpreting research data. **SP-IVh-j-1** ntify parts of the bar graph.	earner formulates statistical mini-research. **M10SP-IVf-g-1** earner uses appropriate measures of position and other statistical methods in analyzing and interpreting research data. **P-IVh-j-1** ntify parts of the pie chart. ad and interpret data presented in a pie chart.	earner formulates statistical mini-research. **M10SP-IVf-g-1** earner uses appropriate measures of position and other statistical methods in analyzing and interpreting research data. **P-IVh-j-1**	earner formulates statistical mini-research. **M10SP-IVf-g-1** earner uses appropriate measures of position and other statistical methods in analyzing and interpreting research data. **P-IVh-j-1** 1. Present the data in a visual representation

	ad and interpret data presented in a bar graph. nstruct a bar graph. preciate the importance of having an organized data.	nstruct a pie chart. preciate the importance of having an organized data.	t and improve the presentation of data.	(e.g. bar graph or pie chart).
II. CONTENT	**Presentation of Data Using Bar graph**	**Presentation of Data Using Pie chart**	**Checking and Editing**	**Presentation of Data**
III. LEARNING RESOURCES				
O. References				
29. Teacher's Guide	Teacher's Guide pp. Synergy for Success in Mathematics 7, pp. 438 – 446;	Teacher's Guide pp. Synergy for Success in Mathematics 7, pp. 438 – 446;		
30. Learner's Materials	Math 7 Learner's Modules pp. 249 - 255;	Math 7 Learner's Modules pp. 249 - 255;		
31. Textbook	e-math (Advanced Algebra and Trigonometry), pp.370-371, 374-375 Elementary Statistics by Carmela Zamora-Reyes, pp. 27-34	e-math (Advanced Algebra and Trigonometry), pp.370-371, 374-375 Elementary Statistics by Carmela Zamora-Reyes, pp. 27-34		
32. Additional Materials from Learning	Powerpoint Presentation, laptop, activity sheets	Powerpoint Presentation, laptop, activity sheets		

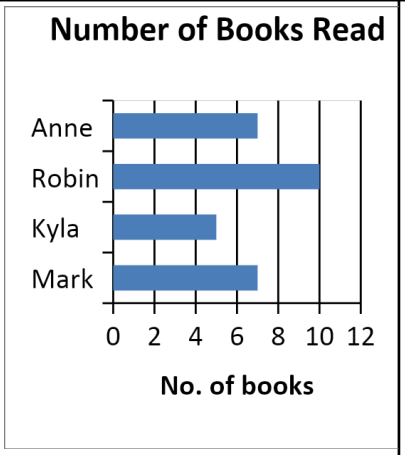
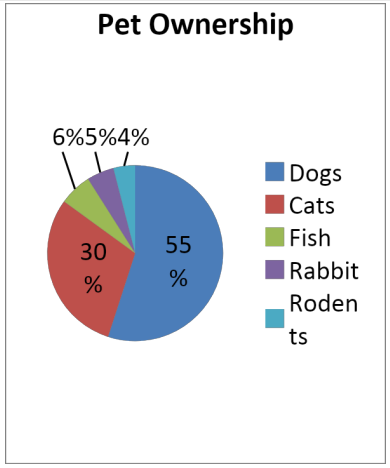
Resources (LR) portal				
P. Other Learning Resources	www.education.com http://www.mathworksheets4kids.com/	www.education.com http://www.mathworksheets4kids.com/		
IV. PROCEDURES				
A. Reviewing previous lesson or presenting the new lesson	"What's Your Brand" Make a survey regarding the brand of mobile phone each member of the group has, the reason for having it, the reason for choosing the particular brand, and the number of cellular phones each has. Present the data gathered in tabular form. Column 1: Brand Name Column 2: Reason for having a mobile phone Column 3: Reason for choosing the particular brand Column 4: Quantity	"Can I Have Your Lunch" 1. Ask your students to give an example of a time when they had to collect and use data. 2. Let students collect data by asking their classmates what they brought for lunch or are planning to have for lunch. 3. Write this on the board in categories.	Research Day	
B. Establishing a purpose for the lesson	Study the graph and answer the questions that follow.	Group Work a. Display the lunch count data on the board. b. Ask each group to set up a picture graph, or a visual		

	 1. What information is given by the bar graph (also called the histogram) above? 2. In which year was the simple literacy rate for females the lowest? highest? 3. In which year was the simple literacy rate for males the lowest? highest? 4. Without knowing the quantity each data represent, is it easy to compare the simple	representation of data with pictures, and a bar graph, or a visual representation of data with rectangles that represent numbers, on the board.		

<table>
<tr>
<td></td>
<td>literacy rates of males and females?
5. What kind of data can be presented using a bar graph?
6. Express the data shown in the graph in table form.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Presenting examples/Instances of the new lesson</td>
<td>Carla made a survey on the number of the books read by her friends during the year. She organized the data in a table. What information does the table show?

<table><tr><th>Name</th><th>Number of Books Read</th></tr><tr><td>Mark</td><td>7</td></tr><tr><td>Kyla</td><td>5</td></tr><tr><td>Robin</td><td>10</td></tr><tr><td>Anne</td><td>7</td></tr></table>
Steps:
1. Find the greatest number in the data.
2. Make a scale from 0 to the greatest number.
3. Label the horizontal and vertical axes.
4. Draw a bar to represent each data.</td>
<td> 

1. What information is given by the pie chart or circle graph?
2. What is the top cause of stress for Filipinos? least?
3. A whole circle is equivalent to how many percent?
4. Without knowing the percentage for each cause of stress, is it easy to identify the top cause of stress for Filipinos?
5. What kind of data can be presented using a pie graph?</td>
<td></td>
<td></td>
</tr>
</table>

	5. Write a title for the graph.	6. Express the data shown in the chart/graph in table form.		
D. Discussing new concepts and practicing new skills # 1	 1. What is being compared in the graph? 2. Who read the same number of books? 3. Who read most? And less number of books?	Analysis 1. How did you find the activity? How can organized data be presented? 2. How do you choose the appropriate graph for organized data? 3. How do you construct the appropriate graph for organized data?		
E. Discussing new concepts and practicing new skills # 2				

<table>
<tr><td></td><td></td><td>It represents the percentage of people who own various pets. As you can see, the ‘dog ownership’ slice is by far the largest, which means that most people represented in this chart own a dog as opposed to a cat, fish, or other animal.</td><td></td><td></td></tr>
<tr><td>F. Developing mastery (leads to Formative Assessment 3)</td><td></td><td></td><td></td><td></td></tr>
<tr><td>G. Finding practical application of concepts and skills in daily living</td><td>Construct a bar graph for each situation below.
a. The number of males and females in your class
b. The allowance you receive every month.
c. The activities you do in a day (sleeping, preparing before going to school, staying in school, helping at home, studying/ doing assignments at home, watching TV)</td><td>In a survey of programs watched on Sunday evenings from 7:00 to 9:00 pm, the following data were obtained:<table><tr><td>Program</td><td>No. of Televiewers</td></tr><tr><td>Rated K</td><td>12</td></tr><tr><td>KMJS</td><td>15</td></tr><tr><td>PBA Games</td><td>43</td></tr><tr><td>Action Movie</td><td>4</td></tr><tr><td>PGT</td><td>16</td></tr></table></td><td></td><td></td></tr>
</table>

		1. Present the data using pie chart. 2. Interpret the result.		
H. Making generalizations and abstractions about the lesson	Statistics is a branch of mathematics that deals with the collection, organization, presentation, analysis, and interpretation of data. ***** Bar graphs are used to show changes over time or to compare items. * Bar graphs can also be used to show time series data when the number of time intervals is small. * If all values are positive integers, the scale should generally use 0 as a baseline. In the event that values include both positive and negative integers, 0 should be the midpoint of the scale. * Scale ranges should be standardized and not vary between graphs, when possible.	Statistics is a branch of mathematics that deals with the collection, organization, presentation, analysis, and interpretation of data. *A pie chart displays data, information, and statistics in an easy-to-read 'pie-slice' format with varying slices sizes telling how much of one data element exists. The bigger the slice, the more of that particular data was gathered. *Circle graph (or pie chart) represents data using sectors of a circle; best used when showing relationship of a specific data to the whole		

I. Evaluating learning	Make a survey of the food preferences of the members of your family according to fruits and vegetables produced in your locality. For data presentation use bar graph.	Make a survey about the favorite TV shows of Grade 10 students. For data presentation use pie chart.		
J. Additional activities for application or remediation	a. Define and describe pie chart. b. Give a sample chart.	Follow up: Read 3 sample research papers on-line and identify the presentation techniques used.		
V. REMARKS				
VI. REFLECTION				
A. No. of learners who earned 80% in the evaluation				
B. No. of learners who require additional activities for remediation who scored below 80%				
C. Did the remedial lessons work? No. of learners who have caught up with the lesson				
E. Which of my teaching strategies worked well? Why did these work?				

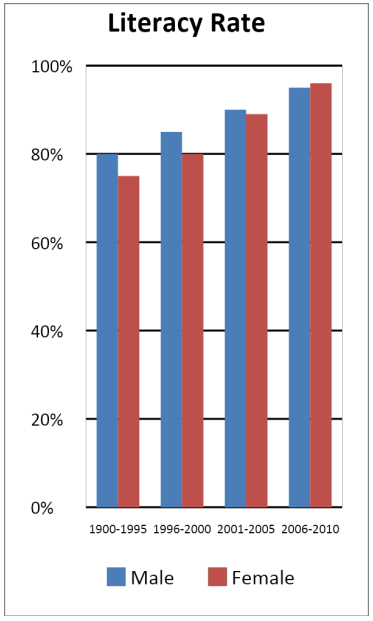
F. What difficulties did I encounter which my principal or supervisor can help me solve?				
G. What innovation or localized materials did I use/discover which I wish to share with other teachers?				

GRADE 10	**School**		**Grade Level**	**10**
DAILY LESSON LOG	**Teacher**		**Learning Area**	**MATHEMATICS**
	Teaching Dates and Time		**Quarter**	**FOURTH**

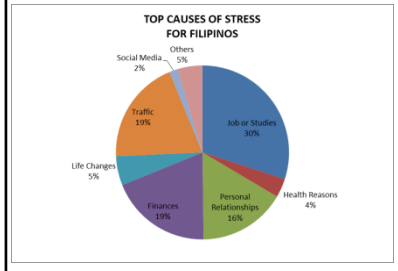
	Session 1	**Session 2**	**Session 3**	**Session 4**
I. OBJECTIVES				
25. Content Standards	The learner demonstrates understanding of key concepts of measures of position.			
26. Performance Standards	The learner is able to conduct systematically a mini-research applying the different statistical methods.			

27. Learning Competencies Objectives	earner formulates statistical mini-research. **M10SP-IVf-g-1** earner uses appropriate measures of position and other statistical methods in analyzing and interpreting research data. **SP-IVh-j-1** ntify parts of the bar graph. ad and interpret data presented in a bar graph. nstruct a bar graph. preciate the importance of having an organized data.	earner formulates statistical mini-research. **M10SP-IVf-g-1** earner uses appropriate measures of position and other statistical methods in analyzing and interpreting research data. **P-IVh-j-1** ntify parts of the pie chart. ad and interpret data presented in a pie chart. nstruct a pie chart. preciate the importance of having an organized data.	earner formulates statistical mini-research. **M10SP-IVf-g-1** earner uses appropriate measures of position and other statistical methods in analyzing and interpreting research data. **P-IVh-j-1** t and improve the presentation of data.	earner formulates statistical mini-research. **M10SP-IVf-g-1** earner uses appropriate measures of position and other statistical methods in analyzing and interpreting research data. **P-IVh-j-1** 2. Present the data in a visual representation (e.g. bar graph or pie chart).
II. CONTENT	**Presentation of Data Using Bar graph**	**Presentation of Data Using Pie chart**	**Checking and Editing**	**Presentation of Data**
III. LEARNING RESOURCES				
Q. References				
33. Teacher's Guide	Teacher's Guide pp. Synergy for Success in	Teacher's Guide pp. Synergy for Success in		

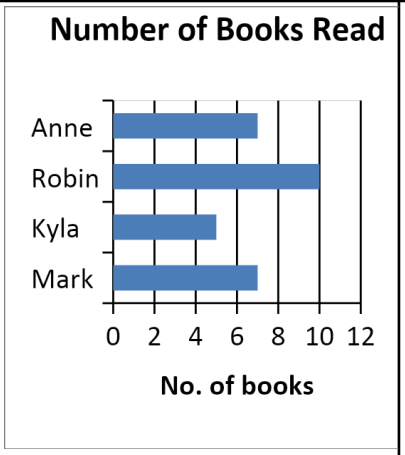
	Mathematics 7, pp. 438 – 446;	Mathematics 7, pp. 438 – 446;		
34. Learner's Materials	Math 7 Learner's Modules pp. 249 - 255;	Math 7 Learner's Modules pp. 249 - 255;		
35. Textbook	e-math (Advanced Algebra and Trigonometry), pp.370-371, 374-375 Elementary Statistics by Carmela Zamora-Reyes, pp. 27-34	e-math (Advanced Algebra and Trigonometry), pp.370-371, 374-375 Elementary Statistics by Carmela Zamora-Reyes, pp. 27-34		
36. Additional Materials from Learning Resources (LR) portal	Powerpoint Presentation, laptop, activity sheets	Powerpoint Presentation, laptop, activity sheets		
R. Other Learning Resources	www.education.com http://www.mathworksheets4kids.com/	www.education.com http://www.mathworksheets4kids.com/		
IV. PROCEDURES				
A. Reviewing previous lesson or presenting the new lesson	"What's Your Brand" Make a survey regarding the brand of mobile phone each member of the group has, the reason for having it, the reason for choosing the particular brand, and the number of cellular phones each has. Present the data gathered in tabular form.	"Can I Have Your Lunch" 1. Ask your students to give an example of a time when they had to collect and use data. 2. Let students collect data by asking their classmates what they brought for lunch or are planning to have for lunch.	Research Day	

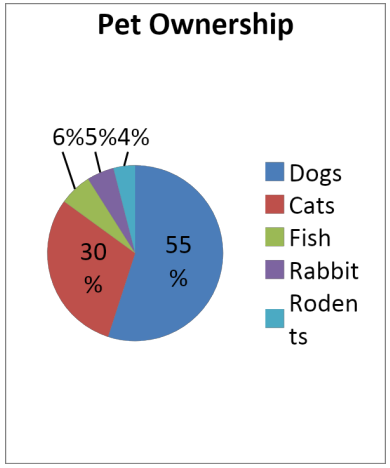
	Column 1: Brand Name Column 2: Reason for having a mobile phone Column 3: Reason for choosing the particular brand Column 4: Quantity	3. Write this on the board in categories.		
B. Establishing a purpose for the lesson	Study the graph and answer the questions that follow.  1. What information is given by the bar graph (also called the histogram) above?	Group Work a. Display the lunch count data on the board. b. Ask each group to set up a picture graph, or a visual representation of data with pictures, and a bar graph, or a visual representation of data with rectangles that represent numbers, on the board.		

<table>
<tr>
<td></td>
<td>2. In which year was the simple literacy rate for females the lowest? highest?
3. In which year was the simple literacy rate for males the lowest? highest?
4. Without knowing the quantity each data represent, is it easy to compare the simple literacy rates of males and females?
5. What kind of data can be presented using a bar graph?
6. Express the data shown in the graph in table form.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Presenting examples/Instances of the new lesson</td>
<td>Carla made a survey on the number of the books read by her friends during the year. She organized the data in a table. What information does the table show?

<table><tr><th>Name</th><th>Number of Books Read</th></tr><tr><td>Mark</td><td>7</td></tr><tr><td>Kyla</td><td>5</td></tr></table></td>
<td> 

1. What information is given by the pie chart or circle graph?
2. What is the top cause of stress for Filipinos? least?</td>
<td></td>
<td></td>
</tr>
</table>

	<table><tr><td>Robin</td><td>10</td></tr><tr><td>Anne</td><td>7</td></tr></table> Steps: 1. Find the greatest number in the data. 2. Make a scale from 0 to the greatest number. 3. Label the horizontal and vertical axes. 4. Draw a bar to represent each data. 5. Write a title for the graph.	3. A whole circle is equivalent to how many percent? 4. Without knowing the percentage for each cause of stress, is it easy to identify the top cause of stress for Filipinos? 5. What kind of data can be presented using a pie graph? 6. Express the data shown in the chart/graph in table form.		
D. Discussing new concepts and practicing new skills # 1	 1. What is being compared in the graph? 2. Who read the same number of books? 3. Who read most? And less number of books?	Analysis 1. How did you find the activity? How can organized data be presented? 2. How do you choose the appropriate graph for organized data? 3. How do you construct the appropriate graph for organized data?		

E. Discussing new concepts and practicing new skills # 2		 It represents the percentage of people who own various pets. As you can see, the 'dog ownership' slice is by far the largest, which means that most people represented in this chart own a dog as opposed to a cat, fish, or other animal.		
F. Developing mastery (leads to Formative Assessment 3)				
G. Finding practical application of concepts and skills in daily living	Construct a bar graph for each situation below.	In a survey of programs watched on Sunday evenings from 7:00 to 9:00		

<table>
<tr>
<td></td>
<td>a. The number of males and females in your class
b. The allowance you receive every month.
c. The activities you do in a day (sleeping, preparing before going to school, staying in school, helping at home, studying/ doing assignments at home, watching TV)</td>
<td>pm, the following data were obtained:
<table><tr><th>Program</th><th>No. of Televiewers</th></tr><tr><td>Rated K</td><td>12</td></tr><tr><td>KMJS</td><td>15</td></tr><tr><td>PBA Games</td><td>43</td></tr><tr><td>Action Movie</td><td>4</td></tr><tr><td>PGT</td><td>16</td></tr></table>
1. Present the data using pie chart.
2. Interpret the result.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H. Making generalizations and abstractions about the lesson</td>
<td>Statistics is a branch of mathematics that deals with the collection, organization, presentation, analysis, and interpretation of data.

* Bar graphs are used to show changes over time or to compare items.
* Bar graphs can also be used to show time series data when the number of time intervals is small.
* If all values are positive integers, the scale should</td>
<td>Statistics is a branch of mathematics that deals with the collection, organization, presentation, analysis, and interpretation of data.

*A pie chart displays data, information, and statistics in an easy-to-read ‘pie-slice’ format with varying slices sizes telling how much of one data element exists. The bigger the slice, the more of that particular data was gathered.</td>
<td></td>
<td></td>
</tr>
</table>

	generally use 0 as a baseline. In the event that values include both positive and negative integers, 0 should be the midpoint of the scale. * Scale ranges should be standardized and not vary between graphs, when possible.	*Circle graph (or pie chart) represents data using sectors of a circle; best used when showing relationship of a specific data to the whole		
I. Evaluating learning	Make a survey of the food preferences of the members of your family according to fruits and vegetables produced in your locality. For data presentation use bar graph.	Make a survey about the favorite TV shows of Grade 10 students. For data presentation use pie chart.		
J. Additional activities for application or remediation	a. Define and describe pie chart. b. Give a sample chart.	Follow up: Read 3 sample research papers on-line and identify the presentation techniques used.		
V. REMARKS				
VI. REFLECTION				
A. No. of learners who earned 80% in the evaluation				

B. No. of learners who require additional activities for remediation who scored below 80%				
C. Did the remedial lessons work? No. of learners who have caught up with the lesson				
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?				

GRADE 10 **DAILY LESSON LOG**	**School**		**Grade Level**	**10**
	Teacher		**Learning Area**	**MATHEMATICS**

	Teaching Dates and Time		Quarter	FOURTH

	Session 1	Session 2	Session 3	Session 4
I. OBJECTIVES				
28. Content Standards	The learner demonstrates understanding of key concepts of measures of position.			
29. Performance Standards	The learner is able to conduct systematically a mini-research applying the different statistical methods.			
30. Learning Competencies Objectives	earner formulates statistical mini-research. **M10SP-IVf-g-1** earner uses appropriate measures of position and other statistical methods in analyzing and interpreting research data. **SP-IVh-j-1**			
II. CONTENT	**RESEARCH DEFENSE**			
III. LEARNING RESOURCES				
S. References				
37. Teacher's Guide				
38. Learner's Materials				
39. Textbook				
40. Additional Materials from Learning Resources (LR) portal	Powerpoint Presentation, laptop, activity sheets			

T. Other Learning Resources				
IV. PROCEDURES				
A. Reviewing previous lesson or presenting the new lesson				
B. Establishing a purpose for the lesson				
C. Presenting examples/Instances of the new lesson				
D. Discussing new concepts and practicing new skills # 1				
E. Discussing new concepts and practicing new skills # 2				
F. Developing mastery (leads to Formative Assessment 3)				
G. Finding practical application of concepts and skills in daily living				
H. Making generalizations and abstractions about the lesson				

I. Evaluating learning				
J. Additional activities for application or remediation				
V. REMARKS				
VI. REFLECTION				
A. No. of learners who earned 80% in the evaluation				
B. No. of learners who require additional activities for remediation who scored below 80%				
C. Did the remedial lessons work? No. of learners who have caught up with the lesson				
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?				