# DAILY LESSON LOG OF M8GE-IIIa-1 (Week One-Day Two)

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| **School** | | **Grade Level** | Grade 8 |
| **Teacher** | | **Learning Area** | Mathematics |
| **Teaching Date and Time** | | **Quarter** | Third |

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| **I. OBJECTIVES** | | *Objectives must be met over the week and connected to the curriculum standards. To meet the objectives, necessary procedures must be followed and if needed, additional lessons, exercises and remedial activities may be done for developing content knowledge and competencies. These are assessed using Formative Assessment Strategies. Valuing objectives support the learning of content and competencies and enable children to find significance and joy in learning the lessons. Weekly objectives shall be derived from the curriculum guides.* |
| **A.** | **Content Standards** | The learner demonstrates understanding of key concepts of axiomatic structure of geometry and triangle congruence. |
| **B.** | **Performance Standards** | The learner is able to:<br>1. formulate an organized plan to handle a real-life situation, and<br>2. communicate mathematical thinking with coherence and clarity in formulating, investigating, analyzing, and solving real-life problems involving congruent triangles using appropriate and accurate representations. |
| **C.** | **Learning Competencies/ Objectives** | **Learning Competency:**<br>     Describes a mathematical system. (**M8GE-IIIa-1**)<br>**Learning Objectives:**<br>1. Define the different terms in mathematical system;<br>2. Describes a mathematical system, and<br>3. Demonstrate appreciation of mathematical system through active participation and coordination with varied activities. |
| **II.** | **CONTENT** | Mathematical System |
| **III.** | **LEARNING RESOURCES** | RTOT power point presentation |
| **A.** | **References** | |
| **1.** | **Teacher's Guide** | |
| **2.** | **Learner's Materials** | |
| **3.** | **Textbook pages** | |
| **4.** | **Additional Materials from Learning Resource (LR) portal** | |
| **B.** | **Other Learning Resources** | https://drive.google.com/open?id=1XX0qw5jTju1HsUqUFhmsUx0h7vn3HNq3<br>http://web.cerritos.edu/dford/SitePages/Math_70_F13/Math70Lecture-1-2-1-3_SymbolsandPostulates.pdf<br>http://www.mathwords.com/index_geometry.htm |
| **IV.** | **PROCEDURES** | *These steps should be done across the week. Spread out the activities appropriately so that pupils/students will learn well. Always be guided by demonstration of learning by the pupils/ students which you can infer from formative assessment activities. Sustain learning systematically by providing pupils/students with multiple ways to learn new things, practice the learning, question their learning processes, and draw conclusions about what they learned in relation to their life experiences and previous knowledge. Indicate the time allotment for each step.* |
| **A.** | **Review previous lesson or presenting the new lesson** | The teacher asks the following questions:<br>1. What did we do last meeting?<br>2. What is an axiomatic system?<br><br>***Possible Response:***<br>1.     *We discussed about the axiomatic system.*<br>2.     *An axiomatic system or mathematical system is* is any set of axioms from which some or all axioms can be used in conjunction to logically derive theorems. |
| **B.** | **Establishing a purpose for the lesson** | The teacher lets the students realize that axiomatic system is important in mathematical system. |

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| **C.** | **Presenting examples/ instances of the new lesson** | The teacher shows the following axiomatic structure from their previous activity and let them observe, then answer the questions below.<br><br><br><br>**Question:**<br>    Which four of the following terms on the schematic diagram are the main parts of mathematical system?<br><br>***Possible Response:***<br>*    Four combinations of any of the terms above. (Students are not necessary to get the correct answer.)* |
| **D.** | **Discussing new concepts and practicing new skills #1** | The teacher processes the answers of the students through questioning. |
| **E.** | **Discussing new concepts and practicing new skills #2** | The teacher only introduces the 4 parts of mathematical systems. She/he will let the students determine their definitions through the next activity "developing mastery".<br><br>✔ UNDEFINED TERMS = terms that are not precisely defined and are generally accepted. Ex. Line, points, plane<br>✔ DEFINED TERMS = Terms that are defined using the undefined terms. Ex. Line segment, angle, polygons, etc.<br><br>  4 CHARACTERICS OF A GOOD DEFINITION:<br>  1. It names the term being defined.<br>  2. It places the term into a set or category.<br>  3. It is distinguishes itself from other terms in that category (without providing unnecessary facts)<br>  4. It is reversible<br>   (eg. If a triangle is isosceles, then it has two congruent sides ---> If a triangle has two congruent sides, then it is isosceles.)<br><br>✔ AXIOM / POSTULATE = is a statement that is taken to be true, to serve as a premise or starting point for further reasoning and arguments.<br>✔ THEOREM = is a statement proven based on axioms, other theorems, and some set of logical connectives.<br><br>***Note: All these definitions were discussed previously.*** |
| **F.** | **Developing mastery (leads to formative assessment 3)** | Working with pairs, the teacher lets the students define the mathematical terms through matching type. Let them write the letter of their answer on the blank provided.<br><br>        Column A                       Column B<br><br>___1. Geometric terms which definitions       A. Undefined terms<br>      are derived from the undefined terms.<br>___2. It is a statement proven based on axioms,   B. Defined terms<br>      other theorems, and some set of logical<br>      connectives.<br>___3. It is a general statement that is taken     C. Axiom<br>      to be true, to serve as a premise or starting<br>      point for further reasoning and arguments.<br>___4. These are geometric terms that are       D. Postulate |

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| | not precisely defined but generally accepted. ___5. It is a geometrical statement that is taken to be true, to serve as a premise or starting point for further reasoning and arguments.        E. Theorems<br><br>Answer key: 1. B  2. E  3. C  4. A  5. C | |
| **G. Finding practical applications of concepts and skills in daily living** | | |
| **H. Making generalizations and abstractions about the lesson** | The teacher lets the students summarizes the lesson by asking the following questions:<br>  1. What is a mathematical system?<br>  2. What are the four parts of mathematical system?<br>  3. What are the characteristics of the defined terms?<br><br>Possible Response:<br>  *1. Mathematical system is is any set of axioms from which some or all axioms can be used in conjunction to logically derive theorems.*<br>  *2. The four parts are: Undefined terms, defined terms, postulates, theorems*<br>  *3. The characteristics of the defined terms are:*<br>  *- It names the term being defined.*<br>  *- It places the term into a set or category.*<br>  *- It is distinguishes itself from other terms in that category*<br>  *(without providing unnecessary facts)*<br>  *- It is reversible* | |
| **I. Evaluating Learning** | The teacher lets the students answer individually the formative assessment.<br><br>I. Direction: Give what is asked.<br>1. These are terms that are not precisely defined and are generally accepted.<br>2-4. Enumerate the three undefined terms.<br>5. This is a statement that is taken to be true, to serve as a premise or starting point for further reasoning and arguments.<br>6. This is a statement proven based on axioms, other theorems, and some set of logical connectives.<br>7. .Terms that are defined using the undefined terms.<br>8-12. What are the characteristics of a defined term?<br>12.     -15. Give three examples of defined terms.<br><br>Answer Key:<br>      1. Undefined terms<br>      2-4. Point, Line, Plane<br>      5. Postulate<br>      6. theorems<br>      7. Defined terms<br>  8-11.<br>    It names the term being defined.<br>    It places the term into a set or category.<br>    It is distinguishes itself from other terms in that category<br>    It is reversible<br>      12-15. Line segment, ray, angles, polygon,etc. | |
| **J. Additional activities or remediation** | | |
| **V. REMARKS** | | |
| **VI. REFLECTION** | *Reflect on your teaching and assess yourself as a teacher. Think about your students' progress. What works? What else needs to be done to help the pupils/students learn? Identify what help your instructional supervisors can provide for you so when you meet them, you can ask them relevant questions.* | |
| **A. No. of learners who earned 80% of the evaluation** | | |
| **B. No. of learners who require additional activities for remediation who scored below 80%** | | |

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| C. Did the remedial lesson work? No. of learners who have caught up with the lesson. | |
| D. No. of learners who continue to require remediation | |
| E. Which of my teaching strategies worked well? Why did these work? | |
| F. What difficulties did I encounter which my principal or supervisor can help me solve? | |
| G. What innovation or localized materials did I use/ discover which I wish to share with other teachers | |

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