

SUPPLEMENTAL LESSONS

**Mathematics Grade 8
3rd Quarter**



Various online tools which make teaching and learning richer
and more meaningful are just a few clicks away!

Log on to www.rexinteractive.com

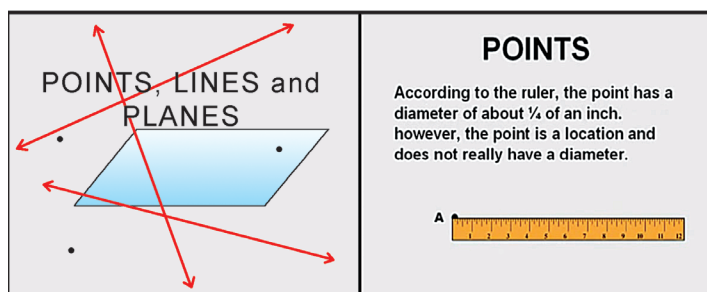


3rd Quarter Grade 8 Supplemental Lesson Plan

Axiomatic Structure of a Mathematical System in Geometry

Introduction

Show to a class a video clip that shows the defined and undefined terms in geometry. (Sample site: <https://www.youtube.com/watch?v=bZdjn1CGakM>)



Body

1. Using the video as a springboard, conduct a whole-class discussion on mathematical system and its axiomatic structure.

Guide questions:

- a. What are the main points raised in the video?
 - b. What are the undefined terms and defined terms in geometry?
 - c. What is a mathematical system?
 - d. Why do we need to have such system?
 - e. What are the postulates and theorems important in geometry?
2. Use concrete objects to illustrate points, lines, and planes.
 3. Using visual illustrations, discuss the characteristics of points, lines, and planes.

Knowledge

Defined and undefined terms, postulates, and theorems in geometry

Learning Competencies

M8GE-IIIa-1

Describe a mathematical system

M8GE-IIIa-c-1

Illustrate the need for an axiomatic structure of a mathematical system in general, and in geometry in particular: (a) defined terms; (b) undefined terms; (c) postulates; and (d) theorems

KU

Real-life objects can be modeled geometrically.

KQ

How does geometry model the real world?

4. Engage the students in a spin-off *Every One Is a Teacher Here* in answering exercises on defined and undefined terms and describe it in a given solid figure.
 - a. Tell the students to answer the exercises.
 - b. Ask the students to move around the room and look for someone who can give help in answering the problems that they failed to answer.
 - c. Process the students' outputs and experiences through a big group discussion.
5. For reinforcement, ask the students to choose one from the following activities:

Activity 1
Compose a haiku about the characteristics of points, lines, and planes.

Activity 2
Make a math rhyme about the characteristics of points, lines, and planes.

Activity 3
Compose a one-minute essay on the characteristics of points, lines, and planes.

Conclusion

As a concluding activity, ask the students to complete the following statements in the exit card:

- a. I learned that...
- b. I rediscovered that...
- c. I realized that...
- d. I need help on...

Various online tools which make teaching and learning richer and more meaningful are just a few clicks away!

4

Log on to www.rexinteractive.com