

Math Module, Session 1

Welcome
Objectives
Organization of Modules/Themes
Quick Write
Instructor Presentation
Small Group Activity
Individual Activity

Session 1: Objective

- Students will identify math skills needed to solve the scenario problem and consider ways to support pupils' ability to identify the specific problems that need to be solved in the scenario.

Math Module Themes

- I. Fluency in Basic Computation and Procedural Skills
- II. Communicate unknown values through use of signs, symbols, and graphs
- III. Develop logical thinking in order to analyze evidence
- IV. Apply mathematics to everyday life

Scenario

- You are the employer of a skateboard company called North American Skateboard Company. You are in the process of reorganizing the work area. There are 9 employees who assemble the skateboards. You are moving them to another room.
 - You need to consider the following in order to determine whether you can hire more workers or whether you need to lay off workers according to the space available:
 - Square feet of the current room and square feet of the new room
 - Square feet of work area needed for each of the 9 workers
 - Differences between the square footage of each room.
 - Availability of new space to accommodate 9 workers.
- When given specific information about the work area, pupils will come to the conclusion that there is not enough room for all 9 workers. At that point, they need to be given additional information to make a decision about which employee to let go: hours each employee works per week, salaries, and production rates.
- Hours each employee works per month and per quarter
Production of each employee
True Production: work production- rejects
Salary: month, quarter

Math Skill Development

Computational Skills

Procedural Skills

Problem Solving Skills

Computation Skills

Using a calculator for typical daily math needs

- *manipulating whole numbers
- *manipulating fractions, decimals
- *manipulating percents

Procedural Skills

Understanding needed procedures to use to determine:

- *measurement of a space
- *differences in sizes
- *percentages, costs, etc.
- *production value of each worker



Problem Solving Skills

Identifying the steps to solve the problem:

- *determine what information is needed to solve the problem
- *translate problem into math equations
- *integrate the information
- *use graphs/charts to solve problem
- *justify answer



Small Group Activity Response

- Identify the math skills pupils needed to work through this scenario.
- Discuss what you need to do to support your pupils in working through this scenario.

Individual Activity Response

- Identify your own pupils' math strengths and weaknesses.
- List how you will adapt this scenario to work with your pupils.