

GED 2002 LESSON PLAN

Patrica Lundin – Wasatch School District

Area/Skill – Math

Cognitive Skill Level – Application

Activity Title – Classroom Remodel

Goal/Objective – Students will apply geometric formulas to remodel their classroom and understand the practicality and use of these formulas.

Lesson Outline

Introduction – Measuring the classroom and using measuring tools, students will be able to find the area and perimeter of the classroom. They will be able to determine how much carpet, wallpaper, border, and paint will be necessary to remodel the classroom. Students will also have to determine the cost of the job.

Activity – Students will use tape measures and rulers to measure the walls and floor space. They will also use a calculator and the GED formula sheet to calculate the perimeter for the border and the area for the carpet, wallpaper, and paint. Students will then decide what wall to paint and what wall to wallpaper. Students will use the newspaper flyer from the local home remodel store, i.e. “HomeBase” to calculate the cost of the project.

Example – Students will determine which perimeter formula to use: $P = 2l + 2w$, $P = 4s$, or $P = a+b+c$. Students will determine which area formula to use: $A = l \times w$, $A = s^2$, or $A = \frac{1}{2}bh$.

If the room were 30 feet long x 20 feet wide x 10 feet high, to find the perimeter to place a border around the room the student would use the formula $P = 2l + 2w$.

$$P = 2(30) + 2(20)$$

$$P = 60 + 40$$

$$P = 100 \text{ feet of border}$$

To find the floor area of this room, the student would use the formula $A = l \times w$.

$$A = 30 \times 20$$

$$A = 600 \text{ square feet of carpet.}$$

To find the area of the longest wall, the student would use the formula $A = l \times w$.

$$A = 30 \times 10$$

$$A = 300 \text{ square feet of wall space.}$$

To find the area of the short wall, the student would use the formula $A = l \times w$.

$$A = 20 \times 10$$

A = 200 square feet of wall space.

To find the cost of the new carpet, wallpaper, paint, and border, the student will use his measurements and the “HomeBase” flyer and a calculator to determine the total cost of the project.

Materials/Text

- Tape Measure or ruler
- “HomeBase” flyer
- Calculator
- Text – Contemporary’s GED Test 5 Math (1994, Jerry Howett)

Extension Activity

The student will do exercises to reinforce this learning activity from Contemporary’s GED Test 5 Math book pages 226 – 244.

Real-Life Connection

The student will use a room in his home to calculate the cost of remodeling it. He will take measurements to determine the amount of carpet, paint, wallpaper, and border needed for that room. He will use the “HomeBase” flyer to determine the cost.

The teacher will invite a carpenter to the class to discuss his use of geometry in the workplace.

Debriefing/Evaluation Activity

The class will discuss the use of the geometric formulas – perimeter and area. The class will discuss the everyday use of these formulas and relevance to real world situations.