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540 N. Harrison Road
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PROGRAM: Heavy Equipment Operation

UNIT: Heavy Construction Materials Estimating

LESSON

TITLE: Estimating Material Quantities/Costs

PERFORMANCE

OBJECTIVE: After completion of this lesson the student will be able to estimate the quantity and cost of stone needed to provide a base for a concrete floor in a building measuring ____ft.X ____ft. The stone to be used will be ____, measuring ____inches in depth. Estimated quantity must be within (+ or-) ____tons and cost must be within (+ or -) ____ dollars.

ENABLING

- OBJ.: 1. Calculate the area of the proposed building in cu.ft. and cu.yds.
2. Convert area to weight (in pounds) per cu.ft. and per cu.yd.
3. Convert calculated weight in pounds to weight in tons to the nearest 10th.
4. Calculate the total cost of stone needed for the job. Add \$ 2.35/ton for delivery cost.

INTRODUCTION:

Now that you have become familiar with the operation of various machines as well as how to calculate area of a space, we will now learn how the two are applied to the construction trade.

MATERIALS

- NEEDED:
1. Pencil/pen and paper
 2. Stone conversion sheet
 3. Stone cost sheet

MATH STANDARDS:

- 2.1.11 B. Use estimating to solve problems
- 2.2.11 A. Develop and use computation concepts w/real numbers
- 2.3.11 C. Produce measures w/specified levels of precision
- 2.4.11 E. Demonstrate mathematic solutions to problems