

## Academic/Career & Technical Related/Demonstration Lesson Plan

Instructor Georger

Date \_\_\_\_\_

Program/Class SR CARPENTRY

Period: 5b-8

### State Indicator/Competency:

14.1 Interpret construction drawings and demonstrate construction layout procedures

14.7 Complete floor framing

### Instructional Objective(s):

- The students will be able to calculate floor joists for a house with 90% accuracy.
- The students will be able to calculate rim joists for a house with 90% accuracy.
- The students will be able to calculate subfloor for a house with 90% accuracy.

### Materials:

- House plans
- pencil
- Paper
- calculator

### Method of Instruction:

student led

### Activities:

#### A. Methods of Estimating Materials for floors

1. floor joists
  - a. Determine the if house beam is in center of building to calculate joist span. (foundation plan will show where post pads are located which indicates where beam will be located)
  - b. If spaced 16" OC, estimate one joist for every 16" across building (use 1.33' if using feet instead of inches). Add one joist as your first joist.
  - c. Double joists at stairwell openings.
  - d. Add in joists for tail joists and header joists at stairwell openings
  - e. A good tip is to draw joists in on foundation plan and count them. This is especially useful in stairwell openings.
  - f. Add lineal feet of rim joists that connects the ends of the joist together on front and back of house.
  - g. Add no waste
2. subflooring
  - i. calculate the square feet of the floor plan
  - ii. Divide this # by 32 to determine the # of sheets
  - iii. add no waste

**Assessment:**

- Calculate the # of floor joist required for the house \_\_\_\_\_@\_\_\_\_\_'
- Calculate the # of lineal feet of rim joist required \_\_\_\_\_
- Calculate the pieces of 4' x 8' subfloor \_\_\_\_\_