

Unit: Framing

Title: Load Bearing and Non-load Bearing Walls

Skill(s) and Knowledge: Identify and describe opening sizes and components for walls, sizes for door headers, wall framing members. Calculate rough openings, identify headers, corners, and wall sheathing.

Tasks: Students will be able to: . Layout and construct bearing walls using a story pole. Layout and construct bearing wall openings. Sheath a wall. Square-up, Erect and brace wall systems. Construct interior non-load bearing walls.

Performance objective:

Students will identify the framing member needed, measure and use the skill saw to cut plates and studs to length, hand-nail 12d and 8d nails, and install sheathing with construction adhesive and sheathing nails, erect and brace walls.

Tools, supplies and reference materials:

Builder's level, chalkline, framing hammers, framing square, skill saw, 12d and 8d coated sinkers, construction adhesive, 2 x4, or 2x6 material. Career Connections Project Book 3 pages: 177- 188.

Methods of instruction: Demonstration on how to install framing members, including nailing patterns and hammering techniques. Lecture on how to calculate rough openings- using power point presentations. Field trip to a local jobsite or the Union Training Hall to see the task performed by professional carpenters.

Estimated time: 30 hrs. **Number of students:** 10

Task analysis or activities:

Students will erect walls.

1. Set-up the framing materials
2. Refer to the prints
3. Create a story pole
4. Cut and install wall components
5. Assemble wall components
6. Square and sheath walls
7. Erect exterior walls
8. Brace walls and ready for roof framing

Evaluation: Students will be graded on their use of time, safety methods, quality of work, cleaning and organization of their work area, interaction with other students, and vocational employability skills grading rubric. Manipulative skills assessments and written evaluations.

Performance Notes:

Vocational Frameworks References

- 2.A.01.05 Identify and apply OSHA safety regulations.
- 2.E.01.01 Demonstrate use and maintenance of layout, marking and measuring tools.
- 2.H.02. Demonstrate practices related to framing exterior walls
- 2.H.03 Demonstrate practices related to framing interior walls.
- 2.F.01.01 Demonstrate use and Maintenance of a portable circular saw.

English/Strand 3 Frameworks References:

- 2.B.01-06 Determine the meaning of symbols, key terms, and other domain-specific words and phrases in a technical context.

Frameworks References: Math

- 2.B.01 Use Trigonometric ratios and Pythagorean Theorem to solve right triangles in applied problems.

Common Core References:

- Read and listen critically for information understanding and enjoyment
- Set goals and achieve them by organizing time, workspace, and resources effectively
- Work both independently and in groups

SCANS references:

Foundation Skills:

1. Basic skills— reading, writing, mathematics, speaking, and listening.
2. Thinking Skills-- thinking creatively, making decisions, solving problems, visualizing, knowing how to learn, and reasoning
3. Personal qualities--individual responsibility, self-esteem, sociability, self management, and integrity

Workplace Competencies

1. Resources--allocating time, money, material, space, and staff.
2. Interpersonal skills--working in teams, teaching others, serving customers, leading negotiating, and working well with culturally diverse populations.
3. Information--acquiring and evaluating data, organizing and maintaining files, interpreting & communicating, and using computer to process information
4. Systems--understanding social, organizational, and technological systems, monitoring and correcting performance, and designing or improving systems.
5. Technology--selecting equipment and tools, applying technology to specific tasks, maintaining and troubleshooting technologies.