Unit: Foundations

Title: Building Layout

Skill(s) and Knowledge: Students will know and be able to identify the parts of a tripod and set-up a tripod. Use the transit to establish a grade line. Identify stakes on a site. Set-up batter boards and position a string line.

Tasks: Construct batter boards and position dry lines.

Performance objective: Find the witness stakes and use the batter boards and plumb bob to position dry lines over the corner stakes.

Tools, supplies and reference materials:

Builder's level, transit, batter boards, dry line, plumb bob, sledge hammer, skill saw, duplex nails Career Connections Project Book 3 pages: 68-93.

Methods of instruction: Demonstration on how to use a transit to layout batter boards. Lecture on materials from text. Field trip to a jobsite or the Union Training Hall to see the task performed by professional carpenters.

Estimated time: 30 hrs. **Number of students:** 10-15

Task analysis or activities:

Students will layout a building foundation.

1. Set-up the transit
2. Refer to the prints
3. Locate witness stakes and corner stakes
4. Install batter boards
5. Position dry lines

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.B.04   Understand detail views and schedules.

2.E.01.01 Demonstrate use and maintenance of layout, marking and measuring tools.

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

> **Work Place 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, and maintaining and troubleshooting technologies.