# Lab Framework

**Text: Cord**

**Unit number and title: Unit 1 Problem Solving**

**Short Description**: Learn and develop problem solving skills

**Developed by: Ron Carpenter**

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**Date:1/20/08**

## Lab Title

## Roof a Roof

## LAB PLAN

**TEACHER:** Teacher Prep/ Lesson Plan

- **Lab Objective**
  Students will need to figure the number of squares necessary to cove a 24' x 26' gable roof with a 1' overhang. They will need to figure in a 10% waste factor.
- **Statement of pre-requisite skills needed** (I
  Roofing terms, bundles, squares, and computation skills
- **Vocabulary**
  Bundle, Square, 3-Tab composite shingles, gable roof
- **Materials List**
  Calculator, pencil
- **GLEs (State Standards) addressed**
  Math: 1.1.8, 1.2.1, 1.2.3, 1.2.5, 2.1.1, 2.2.1
  Reading: 1.1.1
  Writing: 1.1.1
- **Leadership Skills**
  Work in groups to figure out problem
- **SCAN Skills/Workplace Skills**
  Students will discuss and understand the problem, work together to write a plan of actions, carry out the plan, and check the results.
- **Set-up information**
  Show students model of gable roof; give information, make sure they have formula sheet
- **Lab organization**(-Grouping/leadership opportunities/cooperative learning expectations; -**Timeline required)**
  Students for groups of 2 or 3
  Each is required to turn in sheet with information
  Each will be required to efend their answers
- **Teacher Assessment of student learning** (scoring guide, rubric)
  Use scoring guide
- **Summary of learning** (to be finished after student completes lab)
  -discuss real world application of learning from lab

-opportunity for students to share/present learning
Discuss results; time to defend orally

- **Optional activities**

- **Career Applications**
  Estimator for roofing company
  Sub-contractor roofer

**LAB TITLE:_____**
**STUDENT INSTRUCTIONS:**

- **Statement of problem addressed by lab**
- **Grouping instructions and roles**
- **Procedures** – steps to follow/instructions
- **Outcome instructions**
- **Assessment instructions** (peer-teacher)

# Lab Data Collection

**Student: _____ Date: _____**

**Unit: _____**

**Lab Title:**

**Criteria: Write the problem/objective in statement form**

**Data Collection: Record the collected/given data**

**Calculations: Complete the given calculations to solve for an answer(s)**

**Summary Statement:**

**Other Assessment(s)**