

Lab Framework

Text: CORD

Unit number and title: 3

Short Description: Students will be going around the room and finding objects to dimension.

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Lab Title Dimensioning Lab

LAB PLAN

TEACHER: Teacher Prep/ Lesson Plan

- **Lab Objective**

Measure three different objects in the class, record height, width, and thickness, and then draw it in 4 views.

- **Statement of pre-requisite skills needed** (i.e., vocabulary, measurement techniques, formulas, etc.)

- * Students must be able to measure and draw straight lines using a ruler

- * Students must be able to understand the concepts of *front view*, *side view*, *top view*, and a “3d” view.

- * Students must know what *dimensions* are.

- **Vocabulary**

Dimensions- the magnitude of something in a particular direction (especially length or width or height)

- **Materials List**

Rulers

Worksheet

Pencils

Various objects to measure

- **State Standards addressed**

Math: 7.2.D Make scale drawings and solve problems related to scale.

Reading: 1.3.2 Understand and apply content/academic vocabulary critical to the meaning of the text, including vocabularies relevant to different contexts, cultures, and communities.

Writing: 2.4.1 Produces documents used in a career setting.

- **Leadership Skills**

Class foreman gathers materials at the end.

- **SCAN Skills/Workplace Skills**

Drafting and drawing to scale.

- **Set-up information**

1. Have overhead/Elmo samples ready

2. Have plenty of objects to measure

- **Lab organization** (-Grouping/leadership opportunities/cooperative learning expectations; **-Timeline required**)

1. Introduce lab 1-2 min

2. Demonstrate Lab 10 min

3. Questions 0-2

4. Pick teams 3 min
5. Students work on lab ~15 min
6. Have students report/compare findings 15 min

- **Teacher Assessment of student learning** (scoring guide, rubric)
 1. Observation of teamwork
 2. Worksheet are turned in
- **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 how measurement applies to everyday life
- **Optional activities**
 1. Adding more dimensions
 2. Try using different measuring tools
- **Career Applications**
Used in drafting and construction.

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LAB TITLE: Dimensions Lab

STUDENT INSTRUCTIONS:

- **Statement of problem addressed by lab**
How do you dimension and draw an object so that others can correctly interpret your information.
- **Grouping instructions and roles**
Students will be working in groups of two.
- **Procedures** – steps to follow/instructions
 1. Locate an object to draw the dimensions of.
 2. Record the dimensions
 3. Draw the object, with dimensions, on the worksheet. Include the top view, side view, front view, and 3D view.
 4. Repeat for a total of 3 objects/drawings.
- **Outcome instructions**
You will have 3 completed drawings with dimensions.
- **Assessment instructions** (peer-teacher)
The teacher will be observing to see that the teams are working together to formulate their answer and will also be collecting the drawings at the end.

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Front View	Top View
Side View	3D View

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