

Lab Framework

Text: Cord

Unit number and title: Unit 3: Measuring in English and Metric Units

Short Description: Introduce English/Metric measurements, the importance of standard units of measure, gain familiarity with measurement

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Lab Title

Measurement Madness

LAB PLAN

TEACHER: Teacher Prep/ Lesson Plan

- **Lab Objective**

- To become familiar with basic measurement units and understand the importance of standard measurement units.
- To understand how to convert measurement units.
- To work together as a group, utilizing effective communication to achieve a task.

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

- Knowledge of correct use of measurement tools
- Knowledge of English and Metric units of measurement
- Knowledge of unit of measurement conversion

- **Vocabulary**

- Unit conversion ratio
- Convert
- Measurement unit
- Area
- Capacity
- Standard Measures
- Common Measures

- **Materials List**

- Students in groups of 3-4
- Handouts
- Pencils
- Calculators
- Assorted standard measurement tools (ruler, measuring cups, scale, thermometer, etc)

- **State Standards addressed**

Math: A1.1, 1.4, 2.3, 4.4B, 7.3

Reading: 1.1, 1.2, 1.3, 2.1, 2.2, 2.3, 3.1, 3.2

Writing: 2.2.1, 3.3.1, 3.2.3, 3.3.2

Communication: 1.1.2, 1.2.1, 2.1.1

- **Leadership Skills**
1.1, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.6
- **SCAN Skills/Workplace Skills**
1.1A, 1.1C, 1.1D, 1.2A, 1.2B, 1.2C, 1.5A, 1.5B, 1.5D, 1.5E, 1.5F
- **Set-up information**
 - LCD/Elmo ready
 - Measurement tools ready
 - Handout created and copied for distribution
- **Lab organization**(-Grouping/leadership opportunities/cooperative learning expectations; **-Timeline required**)
 1. Explain expectations and lab, 5 minutes
 2. Assign groups, 5 minutes
 3. Distribute handout for group, 2 minutes
- **Teacher Assessment of student learning** (scoring guide, rubric)
 - Students will self-assess
 - Teacher completes grading rubric
 - Teacher collects handout and checks work
- **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
- **Career Applications**

Skill	Potential Occupation
Measuring length, area, volume, capacity, weight	Cook Construction
Converting English/Metric Meas.	International Business Fashion Design

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LAB TITLE: Measuring Mania

STUDENT INSTRUCTIONS:

- **Statement of problem addressed by lab**

We will experiment with different measuring tools and units of measurement. We will compare and contrast the various methods and discuss benefits or potential problems with each method. We will attempt to convert the measurements between the different units of measurement.

- **Grouping instructions and roles**

Teacher will assign groups. Each group should have a recorder, a presenter, and the remaining group members will assist with the measuring. All group members will calculate the problems.

- **Procedures** – steps to follow/instructions

Complete the handout, measuring the listed items with the **standard** measurement tools in the 2nd column. Your group may choose which tool to use. In the 3rd column, choose a **common** unit of measurement that your group decides. Be creative! Examples would be pencils, spoons, paper clips, cups, etc. The 4th column will list the unit conversion ratio that the group has calculated. The 5th column should list an example conversion.

- **Outcome instructions**

Turn in one group lab sheet per group, with a calculation sheet for each member attached. Each student will complete a self-assessment rubric and turn this in as well.

- **Assessment instructions** (peer-teacher)

Rubric for group member performance

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Lab Data Collection

Student: _____ Date: _____

Unit: Unit 3: Measuring in English and Metric Units

Lab Title: Measuring Mania

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)

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