

## Lab Framework

**Text:** CORD MATH CURRICULUM

**Unit number and title:** Unit 2 Estimating Answers

**Short Description:** Students will reconstruct the Barbie Doll into a real life person. They will make assumptions and predictions about the life size of Barbie using each other as models

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### Lab Title

## RECONSTRUCTING BARBIE

### LAB PLAN

**TEACHER:** Teacher Prep/ Lesson Plan

- **Lab Objective**

Students will make predictions and assumptions using problem solving skills and will estimate their answers

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

Students need to be able to understand and use a calculator, be able to use measurements to obtain data

Ratio, dimensions, compare and contrast

Chart paper, markers, measuring tapes, twine, calculators, Barbie Dolls, Pencils, Data worksheet, Sign Language Barbie Video,

<http://www.youtube.com/watch?v=tOApJyOOjrY&feature=related>

**GLEs (State Standards) addressed**

**Math:** EALR 1: The student understands and applies the concepts and procedures of

COMPONENT 1.1: Understand and apply concepts and procedures from number sense.

Understand and use scientific notation.

1.1.4 Understand the concept of inverse proportion and apply direct and inverse

COMPONENT 1.2: Understand and apply concepts and procedures from measurement.

1.2.6 Understand and apply estimation strategies to obtain reasonable measurements at an appropriate level of precision.

COMPONENT 1.3: Understand and apply concepts and procedures from geometric sense.

- 1.3.1 Understand the properties of and the relationships among 1-dimensional, 2-dimensional, and 3-dimensional shapes and figures.
- 1.3.2 Use the properties of and relationships among 1-dimensional, 2-dimensional, and 3-dimensional shapes and figures including prisms, cylinders, cones, and pyramids.

### **Leadership Skills**

Estimating answers and working together as a group to find a common goal

- **SCAN Skills/Workplace Skills**  
Fashion Marketing, Home and Family Life, Counseling
- **Set-up information**  
Materials provided by teacher, tables set up for groups of 4-6
- **Lab organization(-Grouping/leadership opportunities/cooperative learning expectations; -Timeline required)**  
Students will be able to show their leadership skills by leading the discussion and organizing the activity. Students will work in a group setting and need to experience shared leadership. Students must finish the activity in one class period
- **Teacher Assessment of student learning (scoring guide, rubric)**  
Discussion in the mini lesson, charting their work, smart thinking, accountable talk, written materials on data entries, reflection journals
- **Summary of learning (to be finished after student completes lab)**
  - discuss real world application of learning from lab
  - opportunity for students to share/present learningStudents will be able to experience a healthy self image and communicate that to their peers. The students will learn to work well in a group and discuss their feelings and insights
- **Career Applications**  
Health Care Professionals, models, flight attendants, fashion designers, engineers, drafting

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## **LAB TITLE: Reconstructing Barbie**

### **STUDENT INSTRUCTIONS:**

- **Statement of problem addressed by lab**  
Students will be able to work in a group to re-design the Barbie doll in to a real size person. They will use measurements in compare and contrast the dimensions of a real person to Barbie's proportions
- **Grouping instructions and roles**  
Students will divide into groups of 4 to 6 and work together
- **Procedures – steps to follow/instructions**  
With the materials given, measure the above dimensions of Barbie, chose a scribe and record your findings  
In the same manner, measure the above dimensions of the students in your group and find the average of the student's measurements and record your findings  
Find the ratio of the measurements of Barbie if she was a real-life woman. Compare these to student's measurements, record your findings  
With the butcher paper and markers given, draw the students approximate body type on the paper  
With a different marker, draw out Barbie's dimensions as they would be if she had an anatomically correct life-size body
- **Outcome instructions**  
Students will be able to see the unrealistic dimensions of the Barbie doll and how body image is a state of mind
- **Assessment instructions (peer-teacher)**  
Data material and journal entry about the process and procedure

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## Lab Data Collection

**Student:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Unit:** 2 Estimating Answers

**Lab Title:** Reconstructing Barbie

**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)**

### Reconstructing Barbie

- ❖ Chart Paper
- ❖ Markers
- ❖ Measuring tapes
- ❖ Twine
- ❖ Calculators
- ❖ Barbie Dolls
- ❖ Pencils
- ❖ Data worksheet

With the entire class chart the question, when you hear the name "Barbie", what is the first thing you think of?

- ❖ Discuss those impressions and assumptions

- ❖ Are these assumptions true or judgmental?

Divide students into groups of 6 or less

- ❖ Distribute the materials listed above to each group
- ❖ Tell them that they will reconstruct Barbie using the materials given
- ❖ Use the data sheet to record their findings

### Barbie Dimensions

Height:

Head dimensions:

Chest dimensions:

Waist dimensions:

Hip dimensions:

### Student Dimensions

Height:

Head dimensions:

Chest dimensions:

Waist dimensions:

Hip dimensions:

### Real Life Barbie Dimensions

Height:

Head dimensions:

Waist dimensions:

Weight:

Chest dimensions:

Hip dimensions:

With the materials given, measure the above dimensions of Barbie, chose a scribe and record your findings

In the same manner, measure the above dimensions of the students in your group and find the average of the student's measurements and record your findings

Find the ratio of the measurements of Barbie if she was a real-life woman. Compare these to student's measurements, record your findings

With the butcher paper and markers given, draw the students approximate body type on the paper

With a different marker, draw out Barbie's dimensions as they would be if she had an anatomically correct life-size body

How unreasonable are Barbie's dimensions as a real life person?

Journal how you felt about this assignment and what you feel your expectations are when thinking about body image

*Barbie dolls have long been thought of as a grotesquely stereotypical "perfect" woman in some circles—those disgusted with Barbie's perfect proportions note that an anatomically correct life-size Barbie would be 7 feet tall with a 40 inch bust, 22-inch waist and 36-inch hips...and her legs would be 5 feet long.*

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