

Lab Framework

Text: Applied Mathematics

Unit number and title: 19 Probability

Short Description: This lab allows students to accumulate data (their test scores) sort them; find the mean, median, mode, range and standard deviation. They will then get to graph the data. The hook here is that those that get the problem right will get extra credit and the class test score will be the curve used for the test.

Developed by: Doug Fassler

Contact Information: Prosser High School

Date: Unknown

Lab Title

Test Curve Lab

LAB PLAN

TEACHER: Teacher Prep/ Lesson Plan

- **Lab Objective**
- **Statement of pre-requisite skills needed** (i.e., vocabulary, measurement techniques, formulas, etc.)
- **Vocabulary**
- **Materials List**
A list of student test scores for this unit.
- **GLEs (State Standards) addressed**
Math: 1.4.4, 1.4.5, 1.4.7, 1.5.1, 1.5.3
Reading: (Reading)
Writing: (Writing)
- **Leadership Skills**
- **SCAN Skills/Workplace Skills**
- **Set-up information**
This lab comes at the end of the unit which is a little unusual. However, the application that ties into their lives can help “seal the deal” in their understanding. When the lab is done, their class histogram will be posted alongside other classes so they can compare themselves with other classes.
- **Lab organization** (-Grouping/leadership opportunities/cooperative learning expectations; -**Timeline required**)
One hour plus
- **Teacher Assessment of student learning** (scoring guide, rubric)
Each student will turn in an answer sheet to answer the questions of class mean, median, mode etc. They will also turn in their own histogram. They will be assigned the following way:

- 10% extra credit applied to their test if they have all of the correct answers and a legible histogram.
- 8% extra credit if all answers are correct but graph or answers are hard to follow.
- 5% extra credit if any of the answers are wrong or if they are missing the graph.
- 2% extra credit for attempting the problem

- **Summary of learning** (to be finished after student completes lab)
Students of all ages like to be recognized. Having their score on the board is motivating. Having a poor score is something they will not want. The posting of scores can serve as both as positive and negative motivation.
- **Optional activities**
Students can do a lot of this work on a spreadsheet program. Spreadsheets should have been introduced in the graphing unit. The teacher can introduce how to find the statistical information using Excel or some like program.
- **Career Applications**
Business analysis.
Secretarial
Farming yield analysis

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LAB TITLE: Test Curve

STUDENT INSTRUCTIONS:

- **Statement of problem addressed by lab**

- **Grouping instructions and roles**

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

This lab allows students to accumulate data (their test scores) sort them; find the mean, median, mode, range and standard deviation. They will then get to graph the data.

- **Outcome instructions**

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

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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)

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