Lab Template

Text: CORD Unit 17
Volume: 2   Chapter: 2
Unit number: 16
Title of unit: Solving Problems Involving Linear Equations
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Attach the Following Documents:
1. Lab Instructions
2. Student Handout(s)
3. Rubric and/or Assessment Tool

Short Description:

Start from the corner of the building and measure out the distance between parking spaces, from painted line to painted line. The distance will be very close to repetitive. After gathering our data in a T-chart we will then make a graph of it. Students will be asked to go find another recursive sequence in/around the building and graph it.

Parking Spaces and Recursive Sequences

LAB PLAN

TEACHER: *(Teacher Prep/Lab Plan)*
- **Lab Objective**
  - Students will be able to create graph data in a scatter plot on a Cartesian coordinate system.
  - Students will calculate the slope and y-intercept as well as write the equation in slope-intercept form $y = mx + b$.
  - Once theoretical results are found for the line of best fit, students will relate the applicability of the numbers to context of the lab. (i.e. what does the y-intercept mean in real-life context? How can we apply this information?)

- **Statement of prerequisite skills needed**
  - Graphing ordered pairs on coordinate system
  - Understanding of slope, y-intercept.
  - Knowledge of measurement tools.

- **Vocabulary**
  - Coordinate system, y-intercept, slope, slope/intercept equation, $y = mx + b$.

- **State Standards addressed:**
  - **Math:**
    - A1.1.A – Select and justify functions and equations to model and solve problems
    - A1.1.B – Solve problems that can be represented by linear functions, equations, and inequalities.
    - A1.8.A - (Green Standard) – Analyze a problem situation and represent it mathematically.

  - **Leadership:**
    - Reference classroom citizenship policies.
    - Students will work in pairs.

- **Teacher Preparation:** *(What materials and set-up are required for this lesson?)*
  - **Materials**
    - Measuring tape, parking spaces, graph paper, blank paper for t-charts
  - **Set-Up Required:** None other than materials

- **Lab Organizational Strategies:**

- **Post Lab Follow-Up/Conclusions** *(to be covered after student completes lab)*
  - Discuss real world application of learning from lab: What results do we get from the graph? Is there an upper limit to what we can have for shots made/xy values? Students are to complete the attached worksheet.

Lab Instructions

Rubric

T-Chart #1	/ 5 points
Graph #1	/ 10 points
T-Chart #2	/ 5 points
Graph #2	/ 10 points
Completed worksheet	/10 points
Groupwork and Class Citizenship	/10 points
TOTAL	/50 POINTS

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