

Lab Template

Text:

Volume: Green CORD _____ **Chapter:** _____

Unit number: 16 **Title of unit:** _____

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Attach the Following Documents:

- 1. Lab Instructions**
- 2. Student Handout(s)**
- 3. Rubric and/or Assessment Tool**

Short Description (Be sure to include where in your unit this lab takes place):

Students will use a table to find the rate of change/slope for a line of best fit. The students will use the information to find the equation of the line in slope-intercept form. Students will then create a table based on a different equation.

Find the Line

LAB PLAN

TEACHER: (*Teacher Prep/Lab Plan*)

⤴ **Lab Objective**

Students will work collaboratively, but report individually, to create a table from the equation of a line. Students will then find the equation of a line from a table with a y-intercept of 0 and then a line from a table with a y-intercept that is not zero.

⤴ **Statement of prerequisite skills needed** (*Vocabulary, Measurement Techniques, Formulas, etc.*)

Students will need to be familiar with solving equations algebraically, rate of change/slope of a line, and slope-intercept form of a line

⤴ **Vocabulary**

Rate of change	slope
y-intercept	slope-intercept form of a line
table	

⤴ **State Standards addressed:** (*Highlight "Green" Standards, you may use your District's Power Standards if applicable*)

⤴ **Math:**

- P A.1.1.B Solve problems that can be represented by linear functions, equations, and inequalities
- P A.1.3.B Represent a function with a symbolic expression, as a graph, in a table, and using words, and make connections among these representations
- A.1.8.A Select and apply strategies to solve problems
- ⤴ **Reading:**
 - ⤴ **Writing:**
 - ⤴ **Leadership:**
 - ⤴ **SCAN Skills/Workplace Skills:**
- ⤴ **Teacher Preparation:** (*What materials and set-up are required for this lesson?*)
- ⤴ Materials: Calculator, computer with internet access
 - ⤴ Set-Up Required: Copy the student sheet with the equation and needed table information. If time permits have the students find their own tables online to create the equations for.
- ⤴ **Lab Organizational Strategies:**
- ⤴ Grouping/Leadership/Presentation Opportunities:
Students will work in groups to create the table and write the equations of a line.
 - ⤴ Cooperative Learning:
 - ⤴ Expectations:
 - ⤴ Time-line: 1-2 class periods
- ⤴ **Post Lab Follow-Up/Conclusions** (*to be covered after student completes lab*)
- ⤴ Discuss real world application of learning from lab:
I would find real world, or have the students find their own real world tables to create equations of the line.
 - ⤴ Career Applications:
The skills used in the lab can be used in business applications looking at profit and loss.
 - ⤴ Optional or Extension Activities:
To extend the activity, the equations of a line could be graphed.

Find the line (CORD Unit 16 Lab)

Complete the table based on the following equation:

$$y = 3x + 5$$

x	y
-2	
0	
3	
5	
	35

Use the tables to find the equation of the line in slope-intercept form

Table 1

x	y
0	0
2	6
4	12
8	18

Slope = _____

y-intercept = _____

equation in slope intercept form : _____

Table 2

Sales of Xbox 360	
Year	Sales (in millions)
2006	1.5
2007	3.0
2008	4.5
2009	6.0
2010	7.5

Slope = _____

y-intercept = _____

equation in slope intercept form : _____

Find the data for a table and equation on your own (to increase the difficulty find a line with a negative slope). Be prepared to estimate the rate of change, the real world is not a math book!

Table 3

Title	
label	label

Slope = _____

y-intercept = _____

equation in slope intercept form : _____

Rubric for Find the Line

Item	Score
y values for equation	/3
x values for equation	/2
Table 1 slope – y-intercept-equation	/3
Table 2 slope – y-intercept-equation	/3
Table 3 find the information to complete the table title – label – label - information	/5
total	/16