

Lab Framework

Text: Linear Equations

Unit number and title:

Short Description: Students will calculate the cost of car insurance with and without good grade discount.

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LOST IN TRANSLATION (Linear Equations)

LAB PLAN

TEACHER: Teacher Prep/ Lesson Plan

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| Lab Objective | Determine the savings on car insurance with good student discount |
| Statement of pre-requisite skills needed | research, compare & contrast, linear equations, graphing, plotting |
| Vocabulary | linear, slope, plot, graph, variable, |
| Materials List | Car insurance quotes, graph paper, pencil, eraser |
| State Standards addressed | |
| Math: | 7.2.B |
| Reading: | |
| Writing: | |
| Leadership Skills | Peer evaluation, dispersement/collection of material, group roles can include: grapher, equator, and plotter, nonverbal communication |
| SCAN Skills/Workplace Skills | |
| Set-up information | Collect samples of car insurance quotes with and without good student discount. |
| Lab organization | prepare samples of auto insurance plans for teen drivers □ |
| Teacher Assessment of student learning | students accurately plug correct numbers into the equation $y=mx+b$, |
| Summary of learning | compare the difference in cost over time with/without good student discount. |
| Optional activities | research different discount programs online or over the phone. OR volunteers can ask their parents how much their insurance costs and the class can plot these costs (anonymously). Find class averages with/out |

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| | good student discount. |
| Career Applications | Insurance, sales, marketing, accounting |
| Scoring | groups present to the class what they found. The grapher shows graph, equator shows equation, and plotter gives specifics about costs and timeline |
| | |
| | LAB TITLE: <u>LOST IN TRANSLATION</u> |
| STUDENT INSTRUCTIONS: | Using samples of auto insurance plans, phone plans, and gas milage (either provided by teacher or researched by students), students are given a role to interpret the data as graphs, equations, or plots. Students will translate to the rest of the group, but they can only communicate in the "language" that they were assigned. |
| Statement of problem addressed by lab | How much money can be saved with different plans? |
| Grouping instructions and roles | GRAPHER - solves problems in graph form EQUATOR - solves problem in equation PLOTTER - solves problem |
| Procedures | -Students form groups of 3. -Each student is assigned a language that they will speak GRAPH, EQUATE, or PLOT. Students can only speak in that language. -GRAPH student can only "speak" in graphs by showing his graph of insurance plan #1 to person at his right. -EQUATE can only speak in "slope-intercept" and give info for insurance rate #2 to the person on his right. -PLOT can only speak in "coordinates" and pass info about insurance plan #3 to person on the right. -Students will exchange roles/languages and repeat this exercise 2 more times with cell phone plans and gas milages. Each person will have the opportunity to translate into GRAPHS, SLOPE-INTERCEPT, and PLOTS. |
| Outcome instructions | |
| Assessment instructions | Charts are complete and results can be presented to the class. |

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Lab Data Collection

Student: FORMTEXT _____ **Date:** FORMTEXT

Unit: FORMTEXT _____

Lab Title: FORMTEXT

Criteria: Write the problem/objective in statement form
FORMTEXT

Data Collection: Record the collected/given data
FORMTEXT

Calculations: Complete the given calculations to solve for an answer(s)
FORMTEXT

Summary Statement:
FORMTEXT

Other Assessment(s)
FORMTEXT

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