

Name: _____

EXPERIMENT ANALYSIS, Version A1

Ms. West notices that students who study do well on tests. She wonders if the amount of time spent studying for a test is related to test scores. She hypothesizes that students who study longer get higher test scores. In order to test her hypothesis, she conducts the following experiment:

- Select 4 students who have the same I.Q.
- Prepare a 20-question written test to give to each student.
- Provide all students with the same learning experiences.
- Provide all students with the same study materials.
- Assign student #1 to not study at all for the test. Assign student #2 to study for 15 minutes. Assign student #3 to study for 30 minutes. Assign student #4 to study for 45 minutes.
- Grade the test and record results.

The table shows the data gathered.

Student	Daily Time Spent Studying	Score on Test
1	0 minutes	60%
2	15 minutes	75%
3	30 minutes	90%
4	45 minutes	100%

- In this experiment, what is the independent variable? _____
- What is the dependent variable? _____
- List 3 control variables. _____

- Create a line graph displaying the results. Make sure to:
 - Create an appropriate title and axis labels
 - Place the independent variable on the x-axis and the dependent variable on the y-axis
 - Calculate a reasonable scale for each axis
- The results show the independent and dependent variables have what type of relationship? direct relationship, inverse relationship, or no relationship. *(Circle one answer.)*
- In a complete sentence, write a conclusion Ms. West can draw after analyzing the results of this experiment.

- Looking at the experiment design and results, list at least one "next step" related to the experiment.

