

Name _____

Date _____

Lab#19

Section: _____

Writing a Laboratory Report

INTRODUCTION

When scientists perform experiments, they make observations, collect and analyze data, and formulate generalizations about the data. When you work in the laboratory, you should record all your data in a laboratory report. An analysis of data is easier if all data are recorded in an organized, logical manner. Tables and graphs are often used for this purpose.

A written laboratory report should include all of the following elements.

TITLE: The title should clearly describe the topic of the report.

HYPOTHESIS: Write a statement to express your expectations of the results and as an answer to the problem statement.

MATERIALS: List all laboratory equipment and other materials needed to perform the experiment.

PROCEDURE: Describe each step of the procedure so that someone else could perform the experiment following your directions.

RESULTS: Include in your report all data, tables, graphs, and sketches used to arrive at your conclusions.

CONCLUSIONS: Record your conclusions in a paragraph at the end of your report. Your conclusions should be an analysis of your collected data.

**Read the following description of an experiment.
Then answer the questions.**

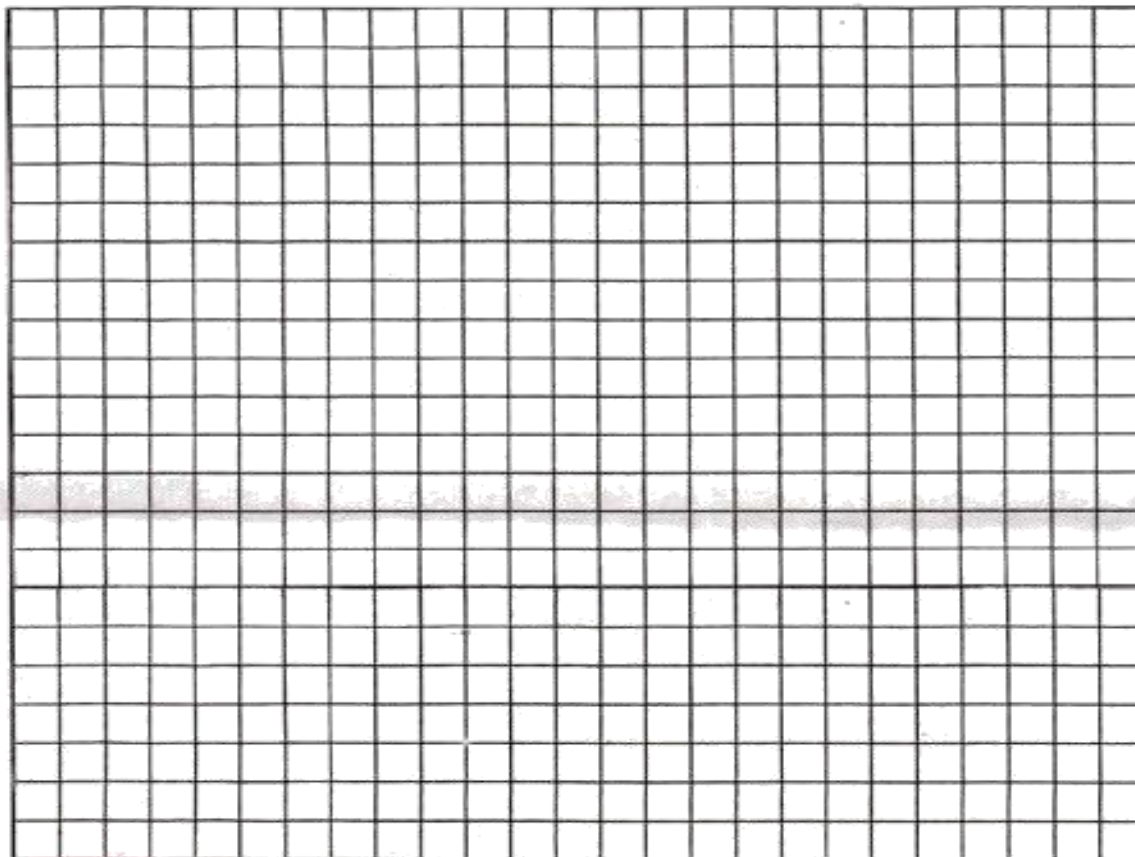
All plants need water, minerals, carbon dioxide, sunlight, and living space. If these needs are not met, plants cannot grow properly. A biologist thought that plants would not grow well if too many were planted in a limited area. To test this idea, the biologist set up an experiment. Three containers were filled with equal amounts of potting soil. One bean seed was planted in Container 1, five seeds in Container 2, and ten seeds in Container 3. All three containers were placed in a well-lit room. Each container received the same amount of water every day for two weeks. The biologist measured the heights of the growing plants every day. Then the average height of the plants in each container each day was calculated and recorded in a table. The biologist then plotted the data on a graph.

Table 1 shows the data collected in this experiment

Table 1

Average Height of Growing Plants (in millimeters)										
Day										
Container	1	2	3	4	5	6	7	8	9	10
1	20	50	58	60	75	80	85	90	110	120
2	16	30	41	50	58	70	75	80	100	108
3	10	12	20	24	30	35	42	50	58	60

5. Plot the data in Table 1 on a graph. Show average height on the vertical axis and the days on the horizontal axis. Use a different colored pencil for the graph of each container.



6. Based on these data, **state a conclusion** for this experiment.

