Scientific question at hand - lab report example

Science

Scientific Question at Hand

I would draw grid lines on the entire yard. Then I would sow each type of grass seed in an equal number of sunny and shady grid cells. I would ensure the entire yard was watered and fertilized equally. The causal variable in the experiment would be the amount of sunlight the seed received. I would isolate this variable by controlling other potential causal variables such as fertilizer and water application. After four weeks, I would begin collecting data on the experiment. I would collect observable data on the percentage of each grid space that was sprouting grass. The response variable would be the germination of grass seed. The percentage of each grid would be combined to give me an overall germination percentage. This is how I would interpret my data and this is what I would use to make my decision on which seed I would buy.

Developing this experiment has taught me several things about the scientific method. The first thing I realized is that in the implementation of the procedure, you need to account for variables if you are going to have valid results. In my experiment, I needed to make sure water and fertilizer were spread all over the year equally. If part of the yard was watered and the other was not, then the data could be misleading.

Another thing I realized is that in science, you need to have a good way to collect the data. I thought of dividing the yard into a grid so I could get more specific information. Without the grid, I would have needed to look at just shady spots or sunny spots. The problem with that is as the sun traveled across the side, the shady and sunny areas would move. I could even go so far as to label or record the percentage of the day each grid was in full sun

or shade.

All of the scientific methods is important, but this experiment showed me that the better way you have of collecting data, the more accurate your results will be.