Carrot Lab

Assignment: For this lab, which you will complete at home, you will write your first formal lab report. The lab will contain a purpose, hypothesis, materials, procedures, data, analysis, and a conclusion. Use your lab report handout to guide you in writing the lab report.

Before you Begin: Some parts of a formal lab report are written before the experiment begins. Be sure to write the background/purpose and hypothesis parts of your lab before you start the experiment. Use your text and other resources to gather information about what happens to cells in salt water.

The Lab:

- Cut some carrots or other hard vegetable.
- Place some in saltwater and some in freshwater
- Wait for a given amount of time and compare the pieces

As you are conducting the experiment, be sure to carefully record what you use for the materials section of your lab report, what you do for the procedure part, and what happens in the data section.

Some things to consider:

This lab is very vague on purpose

1. You have to think of the specific like:
    a. How large are the pieces?
    b. How much salt to add?
    c. How long should they be in the water?
2. Your procedure should be specific.

After the Lab: Now you can write the analysis and conclusion part of your report. Please drain the water from the carrots and bring them to school in a baggie, as evidence that you have actually completed the lab!

What you will turn in:

1. Your lab report (1-2 pages). Make sure you have a separate titled section for each area: purpose, hypothesis, materials, procedures, data, analysis, and a conclusion.
2. Your carrots or other hard vegetable in a plastic bag so it does not leak. **This assignment is due**:_____

Title:

Purpose/ Background:

Tell the reader your reason for doing the lab in the first place. If it is too short, it won't be clear why you're doing the lab. For the purpose, in at least 3-4 sentences explain why the lab is being done

Hypothesis:

If _____, then _____. (the hypothesis is a one-line sentence where you discuss how you'll solve the problem at hand) After "if" state the independent variable. After "then" state the dependant variable. (ex. If the carrots are placed in saltwater, then the carrots will turn yellow) The hypothesis must be testable! The hypothesis is your guess of what the outcome of the lab will be when completed correctly. **This is written before you start the experiment**.

Materials:

Your materials list must be VERY complete. You need to indicate ALL the materials that will be used in the experiment so you know what you'll need. Write in columns.

Procedure:

This is a *list* of things you plan on doing during the experiment. Number each step in a short one phrase sentence. Procedure is the step-by-step list. Must be very clear and specific.

Data/ Observations/ Results:

Section where you write down all of your data. The results consist of all quantitative (numerical) data arranged in charts, as well as qualitative (non-numerical) data written out as sentences. Normally this section is very long. If you're not sure if what you've seen is a result, write it down anyways. Include measurements with units.

Questions/ Analysis:

If the lab has questions answer them here. If no questions are on your lab, explain the meaning of your results. If you need to make a graph or a chart, use the data you took in the results section to make the proper charts here. Explain what happened and include any calculations you have.

Conclusion:

This is where you restate the lab. What did you do and why? Explain if your hypothesis is right or wrong, based on your data. If it was wrong include an explanation of what you think went wrong. Needs to be at least 4-6 sentences.