Assignment #4
- Experiment Section 1 & 2 Help -

Instructions: Use this document to complete **SECTION 1** & **SECTION 2** of **Assignment #5 Plant Power Experiment Lab Report**.

REMEMBER - You cannot start growing your plant until the work in this document is complete.

Part 1: Hypothesis Practice

Instructions: For each experimental question below, identify the **Independent** and **Dependent Variables** and use them to write a **hypothesis**.

Experiment Question: How does the number of hours of studying affect students' performance on a test?	
Independent Variable	
Dependent Variable	
Hypothesis	

Experiment Question: Do birds with longer or shorter wings fly faster?	
Independent Variable	
Dependent Variable	
Hypothesis	

Part 2: Experiment Simulation

Instructions: You are going to do a digital simulation of your experiment before you do it in real life. This will help you think of your hypothesis for the experiment and think about how you will set up your experiment.

- Go to the Seed Germination Simulation
  - **Username:**
  - **Password:**
- Follow the questions below to use the simulation to help complete section 1 & 2 of your experiment.

1. What is your experiment focused on? This is your experiment Independent Variable. *(Temperature, Nutrients in Soil, Water, or Sunlight)*	
2. What is your experiment question? Insert your independent variable that is the focus of your experiment.	
3. EXPERIMENT SET-UP PHOTO - Set up the seed germination simulation in order to test what you are focused on in your experiment. **Take a screenshot when you have the simulation set-up and paste the picture in the box to the right.**	
4. EXPERIMENT RESULTS PHOTO - Now run the simulation so that it tests what you are focused on in your experiment. **Take a screenshot of the results of the simulation and paste the picture in the box to the right.**	

Part 3: Experiment Introduction

Instuctions: Use the simulation to help you complete **SECTION 1** of your experiment. Copy and paste your answers to the questions below into **SECTION 1: INTRODUCTION** of your lab report document.

2. **Background Information Part a:** - What is the purpose of your experiment?	**(Write 4-5 sentences that describes what is photosynthesis, and why plants need photosynthesis to survive)**

-	**(Write 4 sentences that explains why you are doing this experiment)** In my group, we selected an edible plant called… The purpose of my group testing our group's edible plant is… The purpose of my experiment on our group's edible plant is… My experiment question is…
2. **Background Information:** - Describe what you did in the seed germination simulation. - Copy and paste the **EXPERIMENT SET-UP PHOTO** and the - Copy and paste the **EXPERIMENT RESULTS PHOTO**. - What are the results of the computer simulation? - Will the results of your experiment in real life be similar or different to the results from the simulation? - Why?	I did my experiment in a simulation first before I do it in real life. Here is the experiment set-up for the computer simulation *(insert experiment set-up photo)*: Then, I had the computer run the simulation. Here are the results of the computer experiment *(insert experiment results photo)*: **(Write 2-3 sentences that explains, which Test Group the simulation predicted would do best)** **(Write 2-3 sentences that explains if your real life experiment will be similar or different)** When I do the same experiment in real life, I think… Because…
3. What is your **Independent Variable?**	

4. What is your **Dependent Variable?**	
5. What is your **Hypothesis?**	If… Then… Because…

Part 4: Experimental Design

Instuctions: Use the simulation to help you complete **SECTION 2** of your experiment. Copy and paste your answers to the questions below into **SECTION 2: EXPERIMENTAL DESIGN** of your lab report document.

What are the **Constant Variables** of your Experiment? (These are the things you will need to keep the same between the different seeds you grow).

Constant Variables	
1	
2	
3	
4	
5	

What materials will you need to do your experiment?

Materials	
1	
2	
3	
4	
5	
6	
