Plant Inquiry Decomposition Lab

Background: **Saprotrophs**, also known as decomposers, are essential in ecosystems. They feed off dead, organic matter in the soil. During this process, they release nutrients back into the soil for the primary producers (plants) to use. The main decomposers in an ecosystem are fungi and bacteria.

Your Goal/Objective: Your main objective is to figure out the relationship between plant decomposition rates, moisture levels, and aerobic (with oxygen) versus anaerobic (w/out oxygen) conditions. Design an experiment that will produce these results. This experiment will go on for two weeks. Observations will be made each day in class.

Hypothesis: Include into your lab report. Please report your hypothesis in an "If, then.." format.

Identify Variables: What are your independent variables? Dependent variables?

Possible Materials (Not limited to these):

- small, clear plastic cups
-Distilled water
-Freshly cut leaves
-Graduated cylinder
-Digital Balances
-Plastic food wrap
-rubber bands
-Tape
-Scissors

Identify Roles: Pick roles for your group. You need to have a Facilitator, Reporter, Recorder, and a Materialist. Record the roles in your lab report.

Procedure:

1) Create your own procedure and place it in your lab notebook. Be as specific as possible so that if some one were to repeat your procedure, they would obtain the same results. The procedure needs to be sequential (1, 2, 3..) and extremely clear. Remember to have a control group!! Lastly, include a set-up diagram for clarity.

Data:

Create your own graphs. Make sure to include data tables as well as linear/bar graphs. Also, include calculations of averages, percentages of decomposition rates (Willis can show you), daily observations, and pictures (you can include digital photos).

Conclusion:

Follow the Conclusion Prompt in your **Syllabus** and address the objective "Are moisture levels, oxygen levels, and decomposition rates related?" If so, how? Make sure to detail what you observed, was your hypothesis right, and what you believe caused the outcome of this experiment. Reporter, be ready to share your procedure and results.