

Name: _____

CASE

Lab Report Template

Hunter Mitchell

Insert Activity number and title here.

Problem

What question are you investigating? What killed the petunias?

Hypothesis

What are your predictions? What do you expect the results to be? I expect it to be dehydration killed the petunias.

Materials

List the supplies needed to conduct the experiment. LabQuest®

- Vernier pH Sensor
- Computer station with Internet access
- 100 ml Graduated cylinder
- 5 16 oz plastic cups
- Distilled water
- Rinse bottle
- 5 plastic spoons
- Paper towel
- Permanent marker pen

Procedures

1. List the steps of your experiment here. If this is a structured lab (you were given all procedures), you may refer to the Activity sheet here.
1. Label the five 16-ounce plastic cups using a permanent marker with the following titles:
 - Sample A – Richard Petunia
 - Sample B – Sally Petunia
 - Sample C – Peter Petunia
 - Sample D – Paula Petunia
 - Sample E – Petra Petunia
2. Place four spoonfuls of soil (approximately 80 grams) from sample A into your cup labeled A. Keep the spoon used to transfer the soil to the cup inside the cup for mixing later.
3. Repeat this process for the remaining four soil samples.
4. For each sample measure out 100 ml of distilled water and add the water to each cup.
5. Stir each sample thoroughly for 1-2 minutes.
6. Let each sample settle for five minutes. You do not want soil particles floating in your mixture when you test for pH.
7. While you are letting the samples settle, set up the LabQuest and pH Sensor.

Name: _____

- Connect the pH Sensor to LabQuest and choose “New” from the File menu.

Important: For this experiment, your teacher already has the pH Sensor soaking in a beaker with solution. Be careful not to tip over the beaker when connecting the sensor to the LabQuest interface.

- On the Meter screen, tap “Mode”. Change the data-collection mode to Selected Events.
 - Select Average over 10 seconds and select OK.
8. Measure the pH.
- Start data collection.
 - Rinse the tip of the sensor with distilled water and place into the liquid part of Sample Cup A. Important: Leave the probe tip submerged while data is being collected for 10 seconds, but do not allow the tip of the sensor to settle into the soil.
 - Tap “Keep”.
 - Repeat data collection by again tapping “Keep”. Leave the probe tip submerged for the full 10 seconds.
 - Stop data collection by tapping stop.
 - Tap “Table” to view the data. Average the two pH values for the sample and record the average for sample A in Table 1.
9. Repeat Step 8 for Samples B, C, D, and E.
10. Rinse the pH Sensor with distilled water and return it to its storage container.
11. Clean up the laboratory according to teacher instructions.

Data Collection

What data did you collect? Use graphs, charts, and illustrations to communicate your results.

Sample	Average pH Reading
Sample A – Richard Petunia	3.5
Sample B – Sally Petunia	5.5
Sample C – Peter Petunia	7.0
Sample D – Paula Petunia	6.9
Sample E – Petra Petunia	6.5

Analysis of Results

Explain the results and data collected. Be descriptive and complete in your discussion.

Richard and Sally’s plants both died because they are the most acidic. Also both of the two plants were killed because they both were very acidic. With these results there could have been an accident while growing the plants. Both of the plants were too acidic which caused them to die.

Conclusions

Based on the results, what inferences can you make? Describe how your predictions were proven or disproven. What were possible sources of error? What questions arise based on your results?

I think that there could have been an accident, maybe they were sprayed with weed killer. Also, my results were disproven because I thought that the plants were dehydrated and in actuality they were both killed because they were too acidic. I wondered why there was too much acid in the plants.