CASE
Curriculum for Agricultural Science Education

Lab Report Template

Insert your name here. Delete the instructions for each section as you complete the section.

Olivia Graves

Insert Activity number and title here.

3_2_2

Problem

What question are you investigating?
How did they die?

Hypothesis

What are your predictions? What do you expect the results to be?
The 3 members died from too much pH

Materials

- List the supplies needed to conduct the experiment.

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.

- 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.

Table 1 *pH Levels*	
Sample	**Average pH Reading**
Sample A – Richard Petunia died	3.78
Sample B – Sally Petunia died	4.96
Sample C – Peter Petunia	6.5
Sample D – Paula Petunia died	6.8
Sample E – Petra Petunia	7.0

Optimal pH range for petunias	6.0

There was no specific pH that caused the petunias to die

Name: _____

Analysis of Results

Explain the results and data collected. Be descriptive and complete in your discussion.
There was no specific pH that killed the petunias because the pH between those 3 who did died were far apart and would result in another petunia family member dying.

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?

The petunia family members that did die died from a different cause than a too high or too low pH. So maybe they got killed from too much water or poisoning or something ate or destroyed them. So the pH did not kill them so my hypothesis was wrong.

There was no specific pH that caused the petunias to die