

# Bio 33 New Lab 1 Lab Report

## Observations

### Lab Report

Include written descriptions and drawings. Remember to use proper anatomical terms

#### **Part A:** *Observations Using the Human Senses.*

1. Observe the fruit in Figure 1 in Part A of Lab 1 in the Lab Manual
  - a. Using the correct anatomical terms, state something you observe about the EXTERIOR of the fruit.
  - b. Using the correct anatomical terms, state something you observe about the INTERIOR of the fruit.

#### **Part B:** *Observations Using Laboratory Tools*

2. Observe the grapefruit magnified with a hand lens in Figure 2 in Part B of Lab 1 in the Lab Manual.
  - a. Using the correct anatomical terms, state something new you observe about the EXTERIOR of the fruit.
  - b. Using the correct anatomical terms, state something new you observe about the INTERIOR of the fruit.

3. What is the magnification of the hand lens?
4. Observe the grapefruit magnified with the dissecting microscope in Figure 3 in Part B of Lab 1 in the Lab Manual. Using the correct anatomical terms, state something you observe about the exterior.
  - a. Using the correct anatomical terms, state something new you observe about the EXTERIOR of the fruit.
  - b. Using the correct anatomical terms, state something new you observe about the INTERIOR of the fruit.
5. What is the range of magnifications possible with the dissecting microscope?

**Part C: Deductions from Observations**

**Observe the other citrus fruits in Figure 4 in Part C of Lab 1 in the Lab Manual.**

6. Do all of the citrus fruits in Figure 4 have a similar EXTERNAL anatomy? Explain.
7. Do all of the citrus fruits in Figure 4 have a similar INTERNAL anatomy? Explain.

**Table 1.1 (Questions 8-23)**

Letter in Diagram	Scientific name***	Common name of fruit	Color	Internal structures	Relative size (largest, medium, smallest)
<b>A</b>	<i>Citrus paradisi</i>	8.	9.	10.	11.
<b>B</b>	<i>Citrus aurantifolia</i>	12.	13.	14.	15.

<b>C</b>	<i>Citrus limon</i>	16.	17.	18.	19.
<b>D</b>	<i>Citrus sinensis</i>	20.	21.	22.	23.

\*\*\* Note the way the scientific names are written. The genus (first part of the name is capitalized), the species (second part of the name is lower case, and both names are italicized. This is the proper way to write a scientific name. You will have to write names this way later in the semester

**Observe the apple shown in Figure 5 in Part C of Lab 1 in the Lab Manual.**

24. Does the apple shown in Figure 5 have a similar INTERNAL anatomy to the citrus fruits you have observed? Explain.

25. Based on your observations, is it clear why scientists have grouped all of the citrus fruits together? Explain.

26. Based on your observations, is it clear why scientists have NOT grouped apples together with citrus fruits? Explain.

#### **Part D: Designing an Experiment**

27. What is your hypothesis for where the mass of a plant comes from (this is NOT something to look up. Where do you think the mass of a plant comes from? As long as it

is a testable explanation, it is a good hypothesis!)

**Watch the video in Part D of Lab 1 and read the lab manual.**

29. Where did Jan Baptist van Helmont think the mass of a plant came from?

30. What observations might have led him (and many others, maybe even you) to make this hypothesis?

Use the slides in Part D of Lab 1 in the Lab Manual to answer questions 31-34.

**Table 1.2 (questions 30-32)**

<b>Weight of the empty cup</b>	31.
<b>Weight of the cup &amp; soil</b>	32.
<b>Calculate the weight of the soil (Subtract the weight of the cup from the weight of the cup &amp; soil)</b>	33.
<b>Weight of the beans</b>	34.