Pipetting, Mastering the Basics - Revised Lab Requirements

This lab deals with serial dilutions and Bradford Assay analysis, two topics that we will not cover in this chemistry class. It is important, however, to learn the basics of pipetting. Therefore, I am modifying the requirements for this lab. <u>Please complete the Lab Worksheet with the following guidelines</u>.

1. The following sections have few or no changes and should be completed in the standard way, as we have discussed at length:
   a. Title
   b. Background Info - Look up & describe: Bradford Assay, Serial Dilution, Pipetting
   c. Hypothesis / Purpose - Use the following: "To learn procedures and best practices for pipetting."
   d. Materials - List all & don't forget to sketch the pipettes and label parts!
   e. Methods - Detailed list of the steps using *specific quantities*.
2. Changes:
   a. Variables - skip this
   b. Data: All I want to see is:
      i. Diagrams relating to the proper use of pipette and microplate (see "Media" within the lab). You may either copy/paste or sketch your own. Be neat!
   c. Analysis
      i. No need to write your own analysis, simply explain ALL of the following in a **well-written few paragraphs**:
         ● What is the purpose of using a pipette? What is it used for?
         ● What are the 3 types of pipettes you used? What is the volume range for each?
         ● Why discard the tip each time?
         ● What are the proper angles for drawing up and releasing liquid? Why?
         ● Why do you have to depress the plunger 2 times when expelling liquid?
         ● How do you change tips?
   d. Sources of Error: Explain two mistakes someone might make when using a pipette.
   e. Conclusion - no need to refer to the hypothesis or identify it as supported or rejected because it's just a statement of purpose, however, please **explain whether or not the lab was successful at imparting the basics of pipette use**.
3. Be sure to attach your **handwritten lab notes** to the Lab Report.