What is to be written up **BEFORE** the lab is done

Experiment Title

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Date; Partner Name(s)

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Pre-Lab Questions: *Questions to answer **BEFORE** doing the lab*

1. **What is the problem?** Describe the problem in your own words. Be sure that your description includes known factors (information about the problem given to you in the lab in a problem statement, for example) and unknowns (what you need to find out in order to solve the problem). *[HINT: Why was CSI called out?]*

2. **What do you know about the science of the problem that could help you answer your research question?** State the scientific concept that the lab is about. Write down information you can find about the concept that might be useful in answering your research question (check lab manual, textbook, class notes, handouts, etc.).

3. **What is your hypothesis for the answer to your research question?** Using what you know about the problem and the scientific concept of the lab, state a hypothesis, your best estimation of the answer to your research question. Then describe the reasoning that led you to your hypothesis, using what you know about the scientific concept as a basis for your reasoning.

4. **What is the dependent and independent variable in this experiement?** A well-designed experiment needs to have variables. Identify the variables that you will be testing during your experiment: what you can measure or observe (dependent variables) and what you can manipulate in an experiment for the measurements or observations (independent variables). (HINT: The *independent* variable AFFECTS the *dependent* variable…)

5. **What experiment(s) could you use to test your hypothesis?** Summarize what you are going to be doing in this lab. (This should be AT LEAST 3 sentences long)

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Purpose

State the goal and reason for completing the experiment. What are you trying to accomplish? *[HINT: Why am I, the teacher, having you the student, do this lab?]*

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Procedure

The procedures of the lab need to be SUMMARIZED in a flow chart. (Regardless of the lab, this flow chart should NOT be longer than one page.)

WHAT IS TO BE WRITTEN UP DURING / AFTER LAB IS COMPLETED

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Results

The Results section tells "What you found". It consists of at least 3 components: description of results, figures (graphs, diagrams, pictures), and tables

The Results are the meat of the report. The data can be presented in graphs, tables, and other illustrations (figures). The tables allow you to present your results clearly to the reader, and graphs allow you to visualize the effects that the independent variable has had on the dependent variable in your experiment. Do not forget to label all graphs, tables, and figures.

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Questions

If a given lab experiment contains questions, include **both** the question and your answer. There are two reasons for this section in a lab write-up. First, it requires that you sift through experimental data to find specific information and present it in a clear and understandable way. The second purpose is to initiate the thinking process about what you did and to possibly find additional outside information pertaining to the experiment.

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Conclusion

(In paragraph form) Summarize your final results based upon your results. Answer the problem question from the beginning of the lab (pre-lab question #1). State any issues or problems you may have run into that may have affected the outcome of the lab. If the lab were repeated, what changes would you recommend?

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SIGNATURE

As with any legal document, SIGN and DATE the bottom of your lab write-up.

HOW TO WRITE UP A Forensic Pathology LAB REPORT

While there is NO single style that is used by all scientists, all of the different organizational approaches meet the following criteria:

1. Legible – The notebook will not be perfectly neat, but it must be neat enough to be read by someone other than the author. This also includes creating a table of contents. Any "typos" should be lined out, NOT scribbled out. NO WHITE OUT is allowed in the notebook.

2. Permanent – The notebook itself should be a bound text. All writing should be in pen and even crossed out items should be legible. **ONLY** diagrams/drawings may be done in pencil. Remember, this is potential evidence!!

3. Complete – All chemicals, equipment, units, diagrams, procedures, computer programs, references, etc. should be included.

4. Narrative – The notebook should tell a story. Why are you doing this experiment? What are you doing? What happened? What are your conclusions? What is your explanation? This so-called "story" should be factual but not "flowery". The purpose of the narrative is to allow others to repeat the experiment.

5. Responsibility – You must be willing to take responsibility for your work and results. If you job was on the line, would you present the report as it is? At the end of every lab, you need to sign and date the lab.

Specific Requirements, in addition to the five guidelines above:

- The first 2 pages of the lab book are for the Table of Contents (TofC)
- After the TofC, number EVERY page *(front & back)* in the UPPER corners
- All sections up through and including the "PROCEDURE" should be **completed before the start of lab.** (If you do not know who your partner will be, leave that area blank until the start of the lab)
- Remember… never ever ever ever ever EVER use white out!!
- Any "empty spaces" (3 or more lines) should have a line through it, initialed, and dated.

Remember, your lab book could become evidence on the witness stand, and you don't want to give the attorney any reason to discredit you. Tearing out pages, scribbling out information, or using white out begs the question, "What are you trying to hide or cover up?"