

SENIOR BIOLOGY FORMAL LAB REPORT OUTLINE

Lab skills are an essential component of Biology 12, and as such, formal labs will be an important focus. The following is a breakdown of the sections that, unless otherwise stated, should be found in every formal lab report you submit for senior biology.

TITLE PAGE (Marks are only taken away here)

Each lab report should have all the "basic" information displayed on a front page in **large font**. This basic information should include the title of the lab, the date it was handed in, and your full name & block. Beneath your name, list the members of your lab group. However, your name should be underlined to distinguish you as the writer of the lab report.

PURPOSE (2 Marks)

Write two or three sentences explaining what we hoped to achieve in performing this lab. Depending on the experiment, this purpose may be stated as a hypothesis that is being tested, or it may be addressing the reason for doing this activity. If a purpose is already stated in your lab handout, you are expected to use it as a **starting point** to your own purpose.

MATERIALS / PROCEDURE (1 Mark)

Simply refer to the laboratory manual, handout, etc. that outlines the steps we followed (for example, see Lab #1, p. 16, Inquiry Into Life Laboratory Manual). However, you are also expected to note any changes we made to the procedure (and this is practically always the case!).

OBSERVATIONS (3-5 Marks)

The observations section contains anything significant that was noticed or measured during the experiment. At the senior level, this usually involves a labeled diagram (in the case of a dissection), or a chart with an accompanying graph. If the lab report requires a chart, redraw it neatly (do not hand in your working copy that you used in the lab). All graphs should be done on graph paper with a title, labeled axis, a scale, and a line of best fit. Each graph should be a full page. A diagram should be a full page. If you did any calculations, a sample calculation (only one!) should be included.

QUESTIONS (1-2 Marks Each)

On the lab handout, there will usually be around 10 questions. Unless otherwise stated, all of these questions must be answered completely and in full sentences. If there is a reference in a question to something we have not talked about in class, you are responsible for looking it up yourself and gathering enough information so you can reasonably answer the question. You do not have to re-write the question if you incorporate the question into the answer.

SOURCES OF ERROR (3-5 Marks)

Unless otherwise stated, all labs must include at least three sources of error. A source of error is a limitation of the experimental design that led to an inaccuracy in the results (it is not simply a "careless mistake"). In other words, this experimental error would still have happened even if the procedure was followed perfectly.

CONCLUSION (2-3 Marks)

In this section, you are basically explaining what you observed. You conclusion should always directly tie back to the purpose you wrote in the beginning. In the case of a hypothesis, you are using your results to either support or defeat the hypothesis. In the other case, you are using the specifics of the experiment to address the general reason for doing the activity. In other words, did your results illustrate the concept the lab was about?

PERFORMANCE ASSESSMENT (3-6 Marks)

In certain circumstances, your actual lab skills will be marked while you are performing the lab. Examples would include performing a dissection or making a streak plate. In these cases, you will be given a handout with the breakdown of evaluation on it. Other times, your results chart will be collected and signed, and your lab skills will be evaluated by the quality of your results. In the case of a legitimate absence, this portion of your mark may be omitted (however, a lab report must still be submitted).

PLEASE NOTE: A Formal Lab counts as much as a major test, so please put a corresponding amount of effort into each write-up. As with all major assignments, lab reports must be typed.