

Intro to Biology II

How to write a lab report

Concept: Reporting Lab Investigations

A lab report enables other scientists to:

- check whether they think the experiment has been well designed and carried out
- repeat the experiment themselves if they want to
- find out what the results were
- find out what conclusions have been drawn from the results.

Lab Reports follow the following pattern: all types of labs except (Plan and design –PD)

1. Title: describes what is being investigated. It is short and precise.
2. Hypothesis: a statement which makes an intelligent guess to answer a question. (**ONLY used for Plan and design**) not used for **ORR, MM or Drawing lab**. Skip this step when it doesn't involve a PD
3. Objective/Aim: indicates what you want to find out, so you write a statement that describes what you want to do.
4. Material/Apparatus: accurate listing of equipment, apparatus and materials used.
5. Procedure: it is a step by step written description in 3rd person past tense of the apparatus, the chemical used, the living organisms, the measurements made and any other information necessary for any other experimenter to repeat the experiment. Variables should be mentioned.
6. Observation/Results: can be written description of what was observed during the investigation or can be represented in tables, graphs, histograms or drawings.
7. Discussion: it involves written summary of background information about the investigation which includes:
 - appropriate Biological principles
 - information related to the investigation
 - the explanation of results obtained from the table, chart or graph.

Questions can be given to answer and they must be answered in a paragraph form and need to indicate Limitations and/or Sources of Error.

8. Conclusion: it involves answering the aim or objective and also a brief account on the observation or results. It should be not more than 3 sentences long.

9. Limitations/Sources of error/Precaution:

Limitation: a limiting condition; restrictive weakness; lack of capacity; inability or handicap which may have affected the results.

Sources of errors: errors introduced by your immediate working environment. You may need to take account for or protect your experiment from vibrations, drafts, changes in temperature, electronic noise or other effects from nearby apparatus.

Precaution: a measure taken in advance to prevent something dangerous, unpleasant, or inconvenient from happening which can affect the results

10. Reflection:

It is a brief explanation of what you learnt from the experiment and how you can apply it to personal experience.

BUT

Proposal (Planning and Design)

The maximum marks available for the Proposal is 10 marks

The format for this part outlined below:

Title

Date

Observation/Problem/Research question stated

Hypothesis

2 marks

Aim

1 mark

Materials and Apparatus

1 mark

Method

2 marks

Variables: Controlled variable

1 mark

Expected Results

2 marks

Assumptions, Precautions/Sources of error/Limitations

1 mark

TOTAL

10 marks