**Lab Report Template for Bio, Chem and Physics at Kungsholmens gymnasium**

**Title or Cover Page**

* Title - the reader should be able to understand the goal of the practical.
* Name and Date the practical was performed
* Lab partners.

**Introduction**

The introduction should begin with the relevant scientific concepts and ideas needed to understand the subject and content of the report. Here you must rely on sources and use a suitable referencing format such as the APA referencing system.

Begin the introduction with general information to orient the reader in the topic. Then progress by narrowing the scope of the information to the goal of the practical and **finishing with the problem** addressed by the investigation itself. If there is a hypothesis that identifies the variables to be studied; state it after the question.

It *can* be appropriate to divide the introduction into parts with sub-headings like: ***Background, Theory, Aim, Question /Research Question, and Hypothesis.***

In physics and chemistry reports; equations and formulas need to be indexed\* and explained in a ***theory section***. Indexing in general is to make it easy to refer to equations and figures in your ***results*** or ***analysis*** ***sections***.

**Materials and Method**

This section of the text describes how the lab was performed and needs to be written in **past tense passive voice.**  The materials used should be **integrated or woven into flowing text** but sometimes a materials list is required. The method should be described concisely, but clearly enough that the reader could repeat the procedure by following your text. A figure or picture of the lab setup should be used when appropriate.

Factors that may have affected the results while performing the experiment should be noted these may include number of repetitions, ambient temperature etc. If no procedure has been provided by the teacher, justify the chosen method and describe how it minimizes sources of error.

**Results**

This is where the results from the investigation are presented in a **structured** and **understandable** way using tables and figures or other appropriate forms of presentation. If a table or figure is used in the ***results section***, it must be part of the analysis in the ***discussion section*.**

The results should also be presented objectively as flowing text. Tables and figures **must be indexed** and **have an explanatory caption.** An explanatory caption for a table should be above the table; figure captions, below. The reader should be able to understand the table or figure using only the explanatory caption. The **quantity being measured,** and **the units** **used** must always be included in the **column or row headings** of a table and in the **axis labels** of a graph in figure.

Using plain text describe any differences in the average values between data sets and if there are connections to be made between the variables investigated. Make these connections and descriptions by **referring directly** to the figure or table where the data is presented. Any calculations that need to be shown in the result section need to be presented independently from the text and indexed. In **some cases,** the outcome of the investigation is so obvious that it can be included in the results section.

It *can* be appropriate to divide the results into parts with sub-headings like: ***Raw data and Processed data***

**Discussion and conclusion**

This is where relationship between your results and **the question** and in some cases the hypothesis is specifically addressed and discussed. This is also where the conclusions of the investigation are stated and justified using the method, calculations and sources of error.

Evaluate the reliability and plausibility/likelihood of your conclusions. Compare the results and or conclusions with other similar investigations and when appropriate with expected theoretical results. Only include relevant sources of error and how these have directly affected your results. Evaluate your choice of method and suggest how these errors can be minimized.

It *can* be appropriate to divide the discussion section into parts with sub-headings like: ***Analysis, Conclusion and Evaluation***

**Sources and References**

Since references serve to increase validity of your text, chosen sources should be highly credible and reliable. The sources you use for your information should be traceable with origins easy to find for the reader. Referencing systems are used to achieve this clarity. In the sciences APA, Harvard and Vancouver dominate. These systems are preinstalled in Word and can be used to format your referencing. Instructions for using these systems are available through the [school library](https://elevstockholm.sharepoint.com/sites/kungsholmens-gymnasium/SitePages/V%C3%A5ra-databaser-och-digitala-resurser.aspx?web=1) or these links in Swedish [APA](https://tools.kib.ki.se/referensguide/apa/) , [Harvard](https://www.hb.se/Biblioteket/Skriva-och-referera/Guide-till-Harvardsystemet/) and [Vancouver](https://guides.lib.monash.edu/ld.php?content_id=14570618).

**Appendices**

Additional information or raw data that is not crucial to understanding the report can be included here and indexed accordingly.

\*Numbered or ordered alphabetically