**Effect of Temperature on Reaction Rates**

**Lab Report Instructions**

The purpose of a laboratory report is to communicate the findings of an experiment that has taken place. This allows scientists to analyse, critique and build upon the work of others.

Your task is to write a laboratory report about your investigation. Your report should be written in the style of a scientific journal article, and contain the following information.

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| --- | --- | --- |
| **Section** | **What needs to go in it** | **Marks** |
| Title | The title should give your reader an idea of the variables being investigated. | - |
| Authors | List all authors involved in the project. | - |
| Introduction | The introduction contains background information relevant to the design of the study. It reviews what has already been published about the topic. This helps the reader to understand the reason for the experiment, the basis for the hypothesis and what variables need to be controlled. Any information from external sources should be referenced using an appropriate format. This section should be approximately half a page (excluding any diagrams).  Your introduction should conclude with your aim. Your aim should explicitly mention the independent and dependent variables. | 4 |
| Method | Your method should be explained in detail such that someone else could repeat your experiment exactly as you performed it. It should specify how the independent variable has been changed, what was measured and how other variables were controlled. For example you need to include actual amounts of substances used (masses or volumes) and actual conditions used (e.g. temperature, length of time heated). Calculations, photos and diagrams can be included if relevant. | 3 |
| Results | Your results need to be described graphically and in text. Tables and graphs need to be logically organised and labelled. Describe the trends in your results but do not analyse your results in this section. | 6 |
| Discussion | The purpose of the discussion is to critically evaluate the results of the experiment. This includes:   * Comparing the results of the experiment with expected results. You should refer back to the information reviewed in the introduction. * Evaluating the success of your method * Analysing possible sources of error and evaluating their impact on your results * Explaining possible improvements to the experimental method and possible directions for future research   These topics are not intended to be answered as individual and separate questions. There is an overlap between the topics and they could be discussed together. | 5 |
| Conclusion | Summarise the main findings from your investigation. | 1 |
| References | Information from other sources needs to be referenced *via* in-text references. The full citation should be included in a reference list after the conclusion. You may choose which referencing system you wish to use (e.g. Harvard, MLA, APA) but be consistent throughout your report Information about different types of referencing systems is available online. Specify which type of referencing system you used at the top of your reference list. | 3 |
| Language Conventions | Academic writing should be clear and concise, use the past tense and use passive voice (no personal pronouns). See <http://www.monash.edu.au/lls/llonline/writing/science/7.xml> for more information. Your report should be in paragraph format and all tables and figures should be clearly numbered, given appropriate titles and referred to in the text. | 4 |

For further information about writing scientific reports see:

* <https://askabiologist.asu.edu/explore/anatomy-of-an-article>
* Chapter 10 of your textbook