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|  | **Practical Design Template**  **Planning Template for all Student Designed Practicals** |

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| **Title** |  | |
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| **Background Information** |  | |
| **Aim/Inquiry Question**  **a statement of what you are trying to achieve or find out** |  | |
| **Hypothesis**  **an educated guess of what you think will happen** |  | |
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| **Variable Type** | **Variables** | **How you will consider these in the practical design** |
| **Independent**  **What you deliberately control or change** |  | **What range are you testing? What increments are you testing at?** |
| **Dependent**  **What you are measuring or looking to observe** |  | **How will you measure how this variable is changing, what are you looking for?** |
| **Controlled**  **What variables need to stay consistent** |  | **How will you ensure these stay consistent?** |
| **Uncontrolled**  **What variables are likely to have an impact, but you can’t control** |  | **How will you know if these are having an impact?** |
| **Materials** | **Make sure state the quantity, size and/or concentration (e.g. 300mL 2M HCl, or 3 x 250ml beaker)** | |
| **Diagram of Setup** | **Make sure you include a drawing with labels to identify each piece of equipment.** [**https://chemix.org/**](https://chemix.org/) **is a good website for generating these** | |
| **Method** | **List the steps you will follow to complete your investigation, start each with a verb. Make sure you incorporate the number of times you will complete the practical into your steps. This should be written as numbered steps** | |
| **Safety and Ethical Considerations** | | |
| **Your Risk Assessment on the Student RiskAssess system should be completed prior to completing this part.** | | |
| **Potential safety or ethical concerns identified** |  | |
| **Precautions taken to minimize the risk of injury** |  | |
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| **Results** | | |
| **Include a rough plan of how you will record the data from your experiment, This may include tables, graphs and/or observations** | | |

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| **Discussion** |
| **What are the trends or patterns in the data? What does it all mean in the context of the inquiry question, how can it be explained and how does it link to scientific theory?** |
| **Evaluation** |
| **What were the strengths and weaknesses of your experimental design or the procedure that was given. In what ways can it be improved** |

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| **Conclusion** |
| **Briefly summarise what you have found out about your inquiry question as a result of this task. Was the hypothesis supported? Provide a concluding comment.** |