Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please replace all red text with your own work

**Title:** Year level and name of the task

**Introduction**

**Aim:** What is it that you are trying to determine by completing this task? (Explain part 1 here).

**Hypothesis:** Make a prediction about what effect the change to your pathway will have on your results (this is critical as the marking rubric demands it).

**Definitions and features:** Explain all the terms and concepts specific to this work. Terms to consider include: networks, nodes, edges, valence, matrix, algorithm, shortest/longest path, Prim’s algorithm, Kruskal’s algorithm etc . If you need to research any of this, include any references (where relevant).

**Method:** Do this once you have completed the task. Explain, step by step, everything you needed to do to complete this task. List any equipment you used and how you used it.

**Solution:**

* Answer part 2 here. This includes your map, network, original pathway with evidence of algorithm use (including total distance and/or time etc), matrix, valences.
* Explain the change you have made to your story and why you need to change your pathway as a result.
* Answer part 3 here (changed pathway). This includes your map, network, new pathway with evidence of algorithm use (including total distance and/or time etc), matrix, valences.

**Discussion/conclusion:**

**Results** – In this investigation it was found that………….. This is shown by ………..(state the change that was made and outline the effect of this change). This should focus on the differences between each pathway in terms of distance/time (comparison of part 2 and 3).

**Limitations and assumptions** – How accurate is this solution? What factors could limit whether the solution makes sense or not? Discuss any factors that may have affected the accuracy of your results. What have you had to assume? How could this affect the outcome?

**Improvements**  – What could have been done to limit the effect of the factors you discussed in limitations? How could we have improved the accuracy of our measurements etc

**Application** – Give examples of how this process could be used in real life. State the example, explain the example, give reasons as to why it would be useful.

**Conclusion** – A final summary of your findings. Nothing new needed here, just summarise the work you have done in a way that lets the reader know whether the outcome matched the expectations, without having to read the whole report.

**References –** a Harvard style reference list for any research or images (maps etc) you have used