

Scientific Report Instructions

Title: summarise in a few words what your experiment is about.

- Tip: use the SSTs from your hypothesis.

Hypothesis: What are you testing? Examples:

- To determine the effect of _____ on _____.
- To investigate _____

Risk Assessment: Identify at least two risks, and how to avoid them.

Risk _____

This risk can be avoided by _____

Apparatus: List all equipment used. State how many and the sizes of each item (where necessary). Example:

- 4 x 250mL beaker
- 1 x 10mL measuring cylinder
- 1 x 100mL measuring cylinder

Method: List the steps taken in your investigation. Reminders:

- Write in third person;
- Write in past tense;
- Be as succinct as possible. Example:
 - **DO NOT DO THIS:** I collected the apparatus and set it by putting the heat mat on the bench, the Bunsen burner on top, the tripod above that, a gauze mat on the tripod, then the beaker on top of the gauze mat.
 - **DO THIS:** Apparatus were collected and set up as per diagram.

Results: present your findings

- Table – always
 - Raw results (actual results you gained from your investigation)
 - Calculations (percentages, averages, etc.)
- Graph – only if necessary
 - Only add a graph if there are pattern or trends in the data
 - Consider the best type of graph to use, depending on your data
 - Consider which data to use – raw results, calculations, all?

Discussion: Write in paragraphs. Minimum three paragraphs for seniors, but aim for four or more paragraphs. Points to discuss:

- Explain what the results mean
 - Pretend that you are explaining your table of results to someone who does not understand it at all;
 - Describe your calculations;
 - Where were the biggest differences in data?
- Provide suggestions as to why you got these results.
- Were your results expected? Why/why not?
- Are your findings valid, accurate and reliable? How do you know?
 - Make sure you know the difference between valid, accurate and reliable* (see: Notes).
- Discuss any background information or research related to your investigation.
- Was there anything that possibly impacted your results?
 - Did anything go wrong, or was slightly off?
- How does this investigation relate to everyday life?
- What are different ways you can improve your results, or this investigation?
 - ALWAYS mention comparing results of other students/scientists;
 - ALWAYS mention that repeating the investigation would help

Conclusion: Describe how your results related to your hypothesis.

- The hypothesis was/was not supported...

*Notes:

- Reliable: when investigation has been repeated multiple times, or compared with others who have completed the same (or very similar) investigation
- Valid: was your method the best way of measuring to achieve your hypothesis? Are there other, more valid ways of measuring to achieve better results?
- Accurate: How precise were your measurements? Were you using the best apparatus to measure? Could individuals have read different results while observing the same investigation? (eg. reading meniscus, wearing glasses, waiting for scales to settle, tarring scales, number of decimal places on apparatus.