

Pearson Level 3 AAQ BTEC National in Applied Science – Summer Work

A skill which students must master as part of the Applied Science AAQ is the ability to conduct independent literacy-based research. This will prove vital to enhancing their knowledge and understanding of key scientific processes and techniques, as well as being a key requirement for their practical-based coursework. Therefore, the tasks detailed here will form the foundations from which we expect students to build their independent researcher capabilities even further as they progress through the applied science course.

Task 1 – Learning how to “reference” appropriately.

Plagiarism is presenting someone else's work or ideas as your own, without giving proper credit. It encompasses various forms of academic misconduct, including copying, paraphrasing without attribution, and submitting work that isn't your own. Therefore, a skill which all applied science students must master is “referencing”. Referencing is the ability to acknowledge the sources students have used in their work, giving credit to the original authors and detailing the books/websites where the information was found. This involves both citing sources within the text of the work and providing a complete list of references at the end.

There are many different referencing styles available, however, for the purpose of this task you are to just learn about two: Vancouver referencing and Harvard referencing.

Use the website and video links below to find out more about the Vancouver and Harvard referencing techniques. Once you have completed this, and you are happy and confident with how to use these referencing styles move on to task 2 to complete a written assignment whereby you will be required to use ONE of the referencing techniques throughout.

Reading & Video Links:

<https://www.youtube.com/watch?v=vZlu2pfbN6Q>

<https://www.youtube.com/watch?v=tKCsriGcXds>

<https://university.open.ac.uk/library/referencing-and-plagiarism/quick-guide-to-harvard-referencing-cite-them-right>

<https://www.youtube.com/watch?v=3cXKJdt6hfk>

https://libguides.st-andrews.ac.uk/Referencing_styles/Vancouver

Task 2: Write an essay about the history of microscopes and how they have revolutionized scientific advancements.

This essay should be between 1000 and 1500 words – not including the reference list at the end of the essay.

Help with what your essay could include (these are just ideas to help you get started, don't feel limited by what's below – go down your own path of discovery):

- An overview of how microscopes have developed over time from when they were first invented right up to present day.
- Examples of historic scientific discoveries that were made using microscopes.
- Comparison between different types of microscopes such as light, electron, scanning electron and transmission electron, and how each of these work and how they are used for different things.
- Images taken from different microscopes and information on what the image shows and its importance.

Throughout your essay you **MUST** include citations from the websites, books, journals etc. that you have used to find information for your essay and use either the Harvard or Vancouver referencing style. At the end of your essay there **MUST** be a references list showing the full details of all websites, books, journals etc. used.