

Chemistry extended essay

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Grade boundaries

Overall

Grade:	E	D	C	B	A
Mark range:	0-6	7-13	14-20	21-26	27-34

Extended essay

The range and suitability of the work submitted

The diversity and appropriateness of the presentations were commendable. This session showed a broader spectrum of work, and students explored new areas. However, there were still some presentations that focused solely on brand comparison, resulting in limited discussion and evaluation. Some projects relied heavily on data from a single literature source, while others were basic literature studies that lacked innovative perspectives.

Student performance against each criterion

Criterion A: focus and method

Many students' performance was weak in this session, and weaknesses in this criterion often prevented students from achieving higher scores on criteria B and C. Many students attempted to answer multiple or complicated research questions with various parts. These types of questions lead to essays that lack the necessary depth. In the case of practical trials, it is usually sufficient to consider only one dependent variable. Additionally, some students included information not directly relevant to their research question. Some students omitted to explain the reason for the selected method and mentioned whether other parallel methods existed and why they had not been chosen.

Criterion B: knowledge and understanding

The best students were able to use sources to support their essays in a way that showed a clear understanding of the topic. It is difficult to award high marks for this criterion if the student does not correctly use the relevant chemical names and formulas in his or her writing. Criterion B clearly defines what knowledge and understanding mean. Students "copy and paste" material from textbooks or websites, but this - alone - is not convincing enough to demonstrate that they truly understand chemistry concepts.

Criterion C: critical thinking

The students assume that statistical evaluation of results is sufficient. Students often fail to achieve the highest marks by not leaving adequate space to present discussion, evaluation, and conclusions. Frequent causes of this were including a lot of information in the introduction that was not directly relevant to the RQ; repeating information, for example by listing apparatus and materials or variables and then describing them again in the method or procedure; and by collecting and analyzing too much data as a result of attempting to investigate multiple variables. Some students exceeded the word limit, meaning that part of their assessment or conclusion was not considered. The best students devoted more of their essays to argumentation and evaluation. These students gave detailed conclusions, identifying both the source and magnitude of potential errors and also evaluating sources, methods, and materials.

Criterion D: presentation

In general, performance on this criterion is adequate. Many times there is too much non-relevant information, or a lot of information presented in the form of tables, which is not expected in this type of work. A common mistake is to add in the body of the monograph a list of materials, the risk assessment, or the procedures or calculations preliminary to the investigation: this should be in the appendix. The incorporation of images should also be thought of as something that adds to the interpretation of the

work: the photograph of the material used on a laboratory counter does not contribute to the reader's understanding, and often distracts from the main focus of the research.

Criterion E: engagement

In general, most students described the process and were able to recognize the learning. Few have shown a critical sense.

Recommendations for the supervision of future students

Work on the evaluation criteria, review the relevance of the statistical analysis, and review the use of SI units and significant figures.