

Choice of topic

The topic must allow an approach that specifically involves chemistry. Where a topic might be approached from different viewpoints, the treatment of the material must be from a chemistry perspective. For example, an EE in an option area of the IB syllabus such as biochemistry will, if registered as a chemistry EE, be judged on its content within the scope of the biochemistry option of the syllabus.

The scope of the topic and the research associated with it should enable all the criteria to be addressed. The research question must be sharply focused and able to be treated effectively within the word limit.

Suitability of topics

Broad or complex literature-based topics do not allow the student to discuss conflicting ideas and theories, nor to produce an in-depth personal analysis within the word limit. Students should therefore avoid these topics (eg investigations into health problems caused by water pollution, chemotherapy for cancer treatment or the use of spectroscopy in chemical analysis).



Some topics may be unsuitable for investigation because of safety issues. These are clearly stated in the chemistry guide and all students must be aware of them before embarking on their EE. Experiments involving toxic or dangerous chemicals, carcinogenic substances or radioactive materials are strictly prohibited.

Other topics may be unsuitable because the outcome is already well known and documented in standard textbooks.

However, some care does need to be exercised in deciding whether a topic is suitable or not; for example, previously, the study of the allotropes of carbon might have been thought to be trivial, but this would not be the case today.

Examples of topics

These examples are just for guidance. Students must ensure their choice of topic is focused (left-hand column) rather than broad (right-hand column).

Focused topics 	Broad topics 
Determination of chloride, nitrate and calcium ion concentration in sea water	Study of sea water
Spectrophotometric determination of vitamin B2 content in cow's milk	Study of milk
Investigating the possibility of substituting hydrazine for kerosene as a rocket fuel	Theoretical investigation of hydrazine
Extracting DNA from peas using two different primary alcohols	DNA in plants

Once they have chosen their topic, students must then further define and refine it for study by expressing it in the form of a research question.