

Position Statement

The purposes of a chemistry¹ curriculum

Last reviewed: November 2017

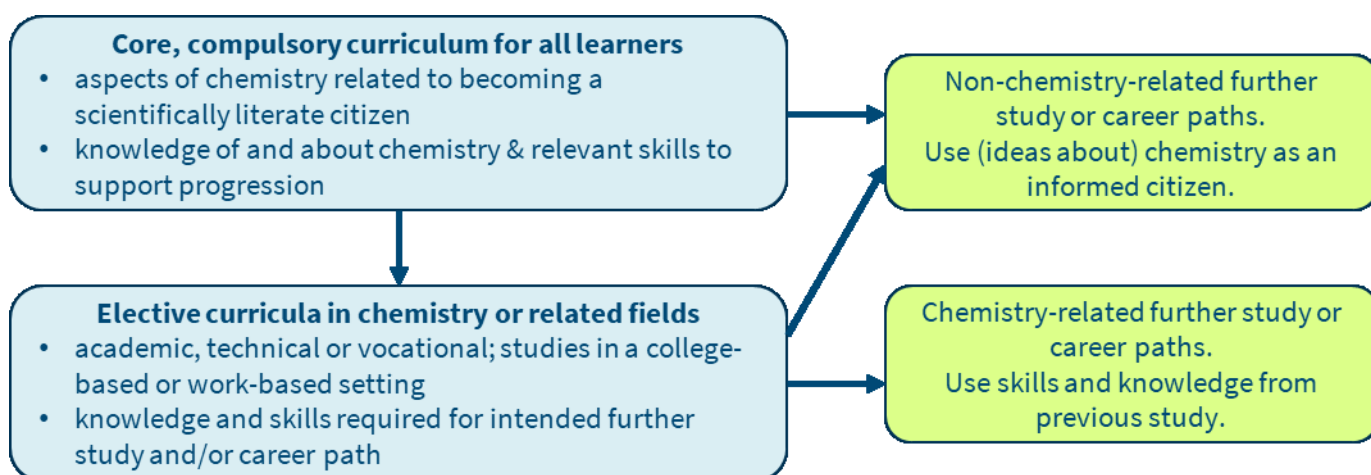
Summary

While our overall envisaged purposes for curricula at all levels are similar, there are differences in focus depending on whether a curriculum is followed by all learners in a jurisdiction or whether learners have made an active choice (usually at a later stage of education) to follow a curriculum.

We recommend that chemistry is included as part of the core, compulsory curriculum for all learners up to the age of 16. The purposes of chemistry curriculum at this level are to

- provide young people with skills and understanding that will enable them to become scientifically literate citizens
- provide adequate preparation for further study and/or careers in the chemical sciences for students who choose that option.

The prime purpose of any elective curriculum pursued subsequently is to provide students with the knowledge, understanding and skills that will allow them to progress into careers in the chemical sciences or related disciplines.



¹ Chemistry is frequently taught as part of a broader subject under headings such as 'science', especially at earlier stages of education. The principles set out in this position statement are intended to apply to the continuum of chemistry education in its broadest sense, whether taught separately or as a broader subject.

Elaboration

The core, compulsory curriculum

Curricula followed by all learners within a jurisdiction must serve the needs of this broad population – both those who will ultimately choose to continue studying or practising chemistry, and those who will not. These are not distinct groups throughout this period; learners make decisions at some point about which subject(s) they wish to specialise in.

All young people should be prepared for becoming a scientifically literate citizen. By this we understand that the curriculum should provide them with the skills and understanding to:

- appreciate the role of chemistry, and more broadly, science, in society
- contribute to debates about how society moves forward, and how chemistry can contribute to this
- make informed decisions that affect their personal wellbeing and that of other people, both locally and globally.

In addition, young people should be adequately prepared to pursue further study and/or careers in the chemical sciences, should they wish to. Adequate preparation includes being able to make that choice from an informed position. Therefore the curriculum should:

- cover relevant core domain knowledge and skills, forming a solid basis for further study
- give a fair impression of the reality of ‘being a chemist’, including the skills and range of knowledge required, and typical progression opportunities.

Elective curricula

Students making choices once they have completed the core curriculum typically have further career opportunities in mind, and qualifications offered at this level are commonly used to provide access to such careers. Therefore, the main purpose of elective curricula should be to provide students with knowledge, understanding and skills to progress into careers in the chemical sciences or related disciplines. This is not to say that general scientific literacy is unimportant at this stage.

Chemistry is a broad field, offering a wide range of career routes requiring different combinations of academic knowledge, technical skills and ‘soft’ skills. Chemistry as a post-16 subject is also most commonly used to support progression into other fields, most notably medicine and biosciences.

Therefore, it is appropriate that a range of elective curricula are available, including vocational, technical and academic options. The nature of technical career routes in the chemical sciences should contribute to defining the detailed purposes of technical and vocational qualifications. Academic curricula will have a more general purpose of deepening understanding of chemistry in breadth and depth, and should be informed by the range of progression opportunities commonly pursued by students studying these curricula. The ability to apply chemical understanding and technical skill in a range of contexts is important in all routes.

For any queries relating to this position statement, please contact the Education Policy team:

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