

Science Program Update Revised November 2011

1. *Where can I find copies of science programs of study?*

All science programs of study can be viewed on the Alberta Education website at <http://education.alberta.ca/teachers/program/science/programs.aspx>.

2. *What learning and teaching resources are available for science?*

Listings of all resources are available on the [Authorized Resources Database](#) on the Alberta Education website. Resources are available for order and purchase through the [Learning Resources Centre](#).

Annotated lists are available for the following:

Elementary Science

<http://education.alberta.ca/media/485689/esci-ar.pdf>

Junior High Science

<http://education.alberta.ca/media/485711/scires.pdf>

Science 14–24

<http://education.alberta.ca/media/485733/sci1424res.pdf>

Knowledge and Employability Courses (Grades 8–12)

http://education.alberta.ca/media/526024/sci_list.pdf

Listings of all resources authorized to November 30, 2011, are available for the following courses:

[Science 10](#)

[Science 20](#)

[Science 30](#)

[Biology 20](#)

[Biology 30](#)

[Chemistry 20](#)

[Chemistry 30](#)

[Physics 20](#)

[Physics 30](#)

Online resources:

[LearnAlberta.ca](#) – online learning resources in both English and French containing a variety of multimedia resources including video clips, animations, interactive lessons, encyclopedias, the Online Reference Centre and much more! Browse the [Science Programs of Study](#) and click on the icons throughout the program to find resources that support the implementation of Science. Check with your school for user ID and password details.

[The Knowledge and Employability Studio](#) – provides information, strategies, sample activities and tools to help teachers meet curriculum outcomes and enhance student learning in K&E courses from grades 8 to 12.

[Knowledge and Employability Courses Implementation Workshop](#) – a browser-driven, one-stop-shop for teachers, educators and administrators to assist in the implementation of Knowledge and Employability courses.

[Tools4Teachers](#) –distributed learning resources including student courses, assignments, teacher resources and answer keys.

3. *What distributed learning resources are available for senior high science courses?*

Tools4Teachers (T4T) courses are secure learning and teaching materials developed by Alberta Education for use by students and teachers in Alberta. These distributed learning resources include student courses, assignments, teacher resources and answer keys. T4T courses are available online for Biology 20–30, Chemistry 20–30, and Physics 20–30 at <http://www.tools4teachers.ca/t4t>. The print formats are available for order from the [Learning Resources Centre](#).

4. *Where are the changes to the Science Grades 7–8–9 Program of Studies?*

As part of the regular maintenance stage of the curriculum development cycle, a review of the Science Grades 7–8–9 Program of Studies (2003) was completed by Alberta Education in consultation with junior high school science teachers. Minor amendments to specific outcomes were recommended. The document, [Highlights of Revisions to the Science Grades 7–8–9 Program of Studies \(2009\)](#) summarizes these amendments. The amendments were determined to have no significant impact on the use of current authorized resources in English and French or on the Grade 9 provincial achievement tests. The [Science Grades 7–8–9 Program of Studies \(2003 – Updated 2009\)](#) includes these amendments.

5. *When will there be a new Elementary Science Program of Studies?*

Alberta Education is currently revising standards and guidelines for future curriculum (programs of study, assessment tools, and learning and teaching resources), as well as the processes for curriculum development, in order to continually improve its work in providing a world-class, student-centred curriculum for students now and in the future. Alberta Education has also proposed a set of competencies for learning in the 21st century that will provide students with the knowledge, skills and attitudes to help them become engaged thinkers and ethical citizens with an entrepreneurial spirit, as described in the [Framework for Student Learning: Competencies for Engaged Thinkers and Ethical Citizens with an Entrepreneurial Spirit](#). These initiatives will inform work on the revised K–6 Science Program of Studies, as the new program will reflect the new curriculum standards, guidelines and processes.

In light of this work, provincial implementation of the revised K–6 Science program is planned for 2015–2016 for K–3 and 2016–2017 for 4–6. The document, [Implementation Schedule for Programs of Study and Related Activities 2011–2012](#), outlines activities related to curriculum development and implementation of new/revised curriculum.

6. *How do the 1993 changes to the organic naming system affect the nomenclature of alcohols, alkenes and alkynes?*

A summary of these changes is available at
http://education.alberta.ca/media/654861/iupac_sum.pdf.

7. *How do the changes in the Mathematics program impact the Science Programs of Study?*

Science Programs of Study from grades 9–12 contain links to Mathematics Programs of Study that relate to the science content. Given that the revised mathematics curriculum will be fully implemented in 2012, the roll out of the new mathematics program has implications for Science Programs of Study. Alberta Education recognizes the need to re-align the mathematics curricular links in the Science Programs of Study to the new Mathematics Programs of Study.

Teachers should be aware that the concept of scientific notation is no longer a part of the junior high mathematics program. This means that starting in the Fall of 2011, students entering high school will likely not have been previously introduced to the concept of scientific notation. Science 10 teachers are therefore encouraged to ensure their instructional activities related to scientific notation match the learning needs of their students. More information identifying current mathematics links will be available in the Spring of 2012.

8. *How do the changes in the Career and Technology Courses (CTS) impact the Science Programs of Study?*

Recent changes to CTS courses have implications for the Science 14–24 Program of Studies, as it contains curricular links to CTS courses. In some cases, courses have changed name in existing occupational areas (strands), courses now exist in the new occupational area, and also courses may have been retired and/or replaced by others. More information identifying current CTS links will be available in the Spring of 2012.