

The Right Angle: Report from Alberta Education

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Curriculum Revisions

Alberta Education is providing leadership for the Western and Northern Canadian Protocol (WNCP) to make revisions to the WNCP Common Curriculum Framework (CCF) for K–12 mathematics. A publishers draft for K–7, based on feedback received during consultations, is available on the WNCP website (www.wncp.ca) with the final consultation report. Consultations on outcomes for Grades 8 and 9 were held in December 2005 after initial work on the revisions to the Grades 10–12 CCF to ensure a smooth transition from junior to senior high school.

New Alberta programs of study will be developed based on the revised K–12 CCF. Implementation timelines are published in the *Implementation Schedule for Programs of Study and Related Activities* (www.education.gov.ab.ca/k_12/curriculum/impshed.pdf) on the Alberta Education website. The K–12 CCF will be reviewed to ensure that First Nations, Métis and Inuit perspectives are represented.

Alberta Education, in cooperation with WNCP partners, is engaged in ongoing communication with publishers to ensure that the best possible resources are available for Alberta schools in both English and French before provincial implementation.

Through the Alberta Regional Professional Development Consortia, Alberta Education continued a series of workshops for Grades 7, 8 and 9 mathematics teachers. The workshops, based on current research in mathematics education, provide teachers with strategies for teaching the concepts in the junior high mathematics program that students often find challenging. This year the following workshops were provided:

- Teaching Algebra Concepts in Junior High
- Measurement Activities to Develop Understanding
- Learning Strategies That Enhance Understanding in Mathematics

For information on the availability of these workshops, please contact your regional professional development

consortium. Other questions can be addressed to Debbie Duvall, Alberta Education's K–12 mathematics resource manager, at Debbie.Duvall@gov.ab.ca.

Knowledge and Employability Courses

The Integrated Occupational Program (IOP) is making the transition to Knowledge and Employability courses. Provincial implementation of the new Knowledge and Employability policy, courses and provincial achievement tests is scheduled for September 2006. The current IOP policy will remain in effect until then.

The September 2005 field test drafts of the programs of study for the Knowledge and Employability courses have been posted at www.education.gov.ab.ca/k_12/curriculum/bySubject/iop/default.asp. The revised Certificate of Achievement for Knowledge and Employability will now require students to complete Mathematics 26 and Science 26.

The Knowledge and Employability Studio, an online guide to the implementation of Knowledge and Employability courses for Grades 8–12, provides information, strategies, sample activities and tools to help teachers meet curricular outcomes and enhance student learning. It can be found at www.learnalberta.ca in the Teachers section, or accessed directly at www.learnalberta.ca/content-teacher/kes/index.html?launch=true.

Maintaining Consistent Standards over Time

Alberta Education aims to make diploma examination results directly comparable from session to session, thereby enhancing fairness to students across exam administrations. To achieve this goal, a number of questions, called anchor items, remain the same from one exam to the next. Anchor items are used to find out if the student population writing in one

administration is different in achievement from the student population writing in another administration. Anchor items are also used to find out if an exam's unique items—questions that are different on each exam—are different in difficulty from the unique items on the baseline exam. A statistical process called equating adjusts for differences in examination form difficulty. The resulting equated scores have the same meaning regardless of when and to whom the exams were administered.

Baseline exams were written for Chemistry 30, Physics 30 and Pure Mathematics 30 in January 2005. In January 2006, baseline exams were written for Applied Mathematics 30 and Biology 30. Students who write any of these diploma exams in a future administration will have their marks directly equated to the baseline exam. Exam marks may be adjusted slightly upward or downward depending on the difficulty of the exam relative to the baseline exam. These equated marks will be reported to students. As a result of equating, students' marks will accurately reflect their level of achievement regardless of the particular exam.

Because of the security required to enable fair and appropriate assessment of student achievement over time, both Part A and Part B of the January 2006 Applied Mathematics 30, Biology 30, Chemistry 30 and Pure Mathematics 30 diploma exams were secured and were not released at the time of writing. The June 2006 Applied Mathematics 30 and Biology 30 diploma exams will also be secured. Only one form of the exam will be written during an administration.

In the fall of 2006, Alberta Education will once again provide schools with print copies of *Released Items* from past diploma exams. Alberta Education will also provide *Assessment Highlights* on its website (www.education.gov.ab.ca) to educators, students and parents. Teachers will still be able to peruse copies of these exams during exam administrations.

For more information on this initiative, go to www.education.gov.ab.ca/k%5F12/testing/diploma/consistentstandards.asp.

New Applets and Interface for Applied Mathematics Multimedia Resources

Eleven new discovery applets that address outcomes in applied and pure senior high mathematics have been added to the LearnAlberta.ca website (www.learnalberta.ca). These applets allow students and teachers to manipulate parameters and easily visualize concepts being addressed. This resource has also adopted an improved user interface. In addition to grouping the applets according to strand and sub-strand, the new interface allows the user to select applets according to course (pure mathematics or applied mathematics) and level (10, 20 or 30).

Preview Zone Launched on LearnAlberta.ca

The Preview Zone, available on the LearnAlberta.ca website, offers learning resources in the final stages of technical development. These resources will be available through the Preview Zone to authorized users on a temporary basis during development and testing. New resources will be added as they become available.

To find the Preview Zone, go to the What's New? section or the Teachers page at www.learnalberta.ca.

The following resources are currently available:

- *The Learning Equation 11* (Pure Mathematics 20)
- *The Learning Equation 12* (Pure Mathematics 30)
- *Applied Mathematics 10* (Applied Mathematics 10)
- *Mathématiques appliquées 10* (Applied Mathematics 10, in French)

CD-ROMs with complete content are available through the Learning Resources Centre (www.lrc.education.gov.ab.ca).

The following resources will soon be available:

- *La Formule du savoir 11* (Pure Mathematics 20, in French)
- *La Formule du savoir 12* (Pure Mathematics 30, in French)

Your feedback on these resources is encouraged and valued.