The program of studies for each Knowledge and Employability course outlines the general and specific outcomes that students are expected to achieve. It also describes the philosophy and rationale for the course. Although the philosophy varies somewhat from course to course, the following key elements appear in or underlie all Knowledge and Employability courses. Many of these elements reflect shifting paradigms in educational thinking in general, while others are more specific to the programming needs of students in Knowledge and Employability courses.

**Integrated Disciplines**

Effective teaching almost always emphasizes the interrelation of concepts, skills and attitudes between subjects. The Knowledge and Employability curriculum deliberately incorporates and encourages such an integrated approach. To help teachers make these connections, cross-curricular links are infused throughout the Knowledge and Employability Studio—for example, ELA tools are suggested for use in science and social studies activities. Cooperative lesson planning between teachers may also be beneficial to facilitate curriculum integration.

Knowledge and Employability courses also have Aboriginal perspectives infused through all courses to help build an understanding of First Nations, Métis and Inuit (FNMI) experiences and perspectives, and a recognition that First Nations, Métis and Inuit students have particular needs and requirements. This knowledge is needed to enable all students to be respectful and responsible citizens.

**Balanced Curriculum**

The programs of study for Knowledge and Employability courses recognize that while subject-area content is important, it is equally essential that students learn effective processes and attitudes. Both the overall philosophy and the learning outcomes emphasize the importance of problem solving, decision making, active inquiry, respect for others, responsible behaviour and a belief in lifelong learning.
Critical and creative thinking

Critical thinking is a process of inquiry, analysis and evaluation that results in a reasoned judgement. Critical thinking skills include: distinguishing fact from opinion; considering the reliability and accuracy of information; determining diverse points of view, perspective and bias; and considering the ethics of decisions and actions. Creative thinking, on the other hand, occurs when students identify unique connections among ideas and suggest insightful approaches to questions and issues. Through creative thinking, students generate an inventory of possibilities; anticipate outcomes; and combine logical, intuitive and divergent thought.

Almost all of the thinking that we do involves some critical and some creative aspects. For example, when we try to solve real-life problems, we move back and forth several times between creative and critical reflection as we develop solutions or weigh the consequences of any one solution.

Critical and creative thinking are woven throughout the Knowledge and Employability curriculum. Some examples of critical and creative thinking include:

- evaluating the perspective of fiction and nonfiction texts in English language arts
- developing an action plan to save electricity in science
- researching and presenting information on the Canadian justice system in social studies
- creating a 3-dimensional scale model of a room in mathematics.

Learning to learn

One of the goals of the Knowledge and Employability courses is to help students become more successful, independent learners. Achieving this goal depends on helping students reflect on their areas of strength and need, develop and use effective learning strategies, and monitor and adapt their use of strategies through metacognitive processes. For more information on helping students learn to learn, see Learning Strategies and Metacognition.

Life skills

It is important that students learn not only how to be effective learners at school, but also how to succeed in their personal and professional lives. The classroom experience should provide ongoing opportunities to develop and practise life skills like teamwork, planning, organization, goal setting, decision making, self-advocacy and using technology. Activities and tools to help students develop these essential skills are infused
Student-centred Instruction

In student-centred instruction, the strengths, needs and interests of students are considered alongside the requirements of curriculum. Student-centred instruction can be thought of as differentiated instruction—using techniques that recognize and support individual differences in learning so that all students in the class can succeed to the best of their abilities. These techniques may include using multiple resources, approaches and assessment strategies; adjusting the learning environment; or providing a choice of activities and assignments.

Student-centred instruction also recognizes that while lecturing is an important part of teaching, this direct instruction should be combined with extensive opportunities for more active learning through discussion, inquiry-based projects, role-plays, community partnerships and other methods. These activities are often effective because they provide opportunities to apply learning in practical, interdisciplinary contexts.

Individualized progress

One element of student-centred instruction is a belief in continuous, individualized progress. Although all students will be working toward the same general outcomes, in any given Knowledge and Employability classroom, students may be at very different levels in terms of reading ability, independence and other factors. Expecting lock-step progress of all students can be counterproductive. Instead, instruction and assessment should emphasize individualized progress through curricular outcomes. This is particularly true in ELA and math courses, where progress is based on a cumulative development of knowledge and skills.

Positive Environment

The school and classroom environment have a significant impact on student behaviour and achievement. Establishing a climate of trust, respect and support will help students feel motivated to learn. Cooperative learning, whether formal or informal, can help to establish such a climate by providing students with common goals, group interaction, and a chance to learn and practise social skills. It is also important that students feel in charge of themselves and empowered to learn. When teachers provide challenging tasks, opportunities for independence and strategies for self-monitoring, students are sent an essential message—that they are capable of learning and succeeding on their own. For more information and strategies, see Creating a Positive Classroom Climate.
Supporting Key Elements in the Philosophy of Knowledge and Employability Courses

Various ideas and strategies for supporting these philosophical elements are provided throughout the Teacher Workstation and infused in the subject-specific curriculum materials of the Studio. Consider the following general tips as a starting point.

Planning

- Be flexible and innovative in the design and use of curriculum. Plan activities suited to the needs, interests and capabilities of students, and encourage student input into course delivery, content and evaluation.
- Have clearly defined short- and long-term plans that reflect the integration of curriculum themes both within a given subject area and across subject areas.
- Set reasonable, challenging and purposeful goals for students. These goals must be flexible enough to accommodate the unique needs of each student.
- Break down units of instruction into manageable portions that allow students to experience success.
- Set classroom rules that are firm, fair and consistent, and make this structure clear to students at the beginning of the year.
- Organize lessons for effective learning:
  - define lesson objectives
  - include a warm-up activity or introduction
  - set the scene for each activity (outline what is expected of students and how they are to be evaluated)
  - help students identify what they learned from the activity and to relate the activity/lesson to their own lives
  - debrief students to ensure that they have concluded their activity and understand the positive aspects and applications of the experience.

Classroom practices

- Model behaviours and attitudes you wish to foster in students, including respect, trust, and critical and creative thinking processes.
- Attempt to interact with every student during each class period.
- Build in frequent review, revision and repetition as part of the instructional process.
- Provide opportunities for:
  - independent study and the sharing of findings
  - participation in small and large groups
  - appropriate risk taking.
- Use questioning techniques that encourage discussion, critical thinking and metacognition.
- Provide material and assignments that require recall, as well as those that require deeper understanding or synthesis such as case studies, simulations and discussions.
• Allow plenty of time for students to generate and evaluate ideas, and refrain from judging ideas too quickly.
• Encourage students to participate in classes by actively listening and expressing ideas and opinions.
• Teach strategies and skills within subject-area content and activities and/or real-world contexts of home, community and workplace.
• Provide opportunities for students to relate and apply their learning through involvement in community partnerships.
• Apply fair and appropriate strategies to assess student learning with an emphasis on quality of performance rather than quantity.
• Encourage students to assess and evaluate their own progress.

External supports
• Promote positive partnerships with parents, the community and other colleagues.
• Explore opportunities for team teaching and cooperative lesson planning.
• Determine when it is appropriate to request additional personnel or other supports if students are having difficulty.
• Continue with professional development.

The Knowledge and Employability Studio
The Studio is the online guide to implementation for all core and occupational Knowledge and Employability courses. In addition to the general planning and instructional support provided in the Teacher Workstation, the Studio contains strategies, information, activities and tools to assist teachers in implementing each course. All of the materials in the Studio are aligned to the philosophy and outcomes of the Knowledge and Employability courses.

Authorized resources
Knowledge and Employability courses may have resources authorized for use as basic student learning resources, support student learning resources and/or teaching resources. All of these resources are aligned to the philosophy and outcomes of the Knowledge and Employability courses. Authorized resource lists are available in PDF format at http://www.education.gov.ab.ca/k_12/curriculum/bySubject/iop.