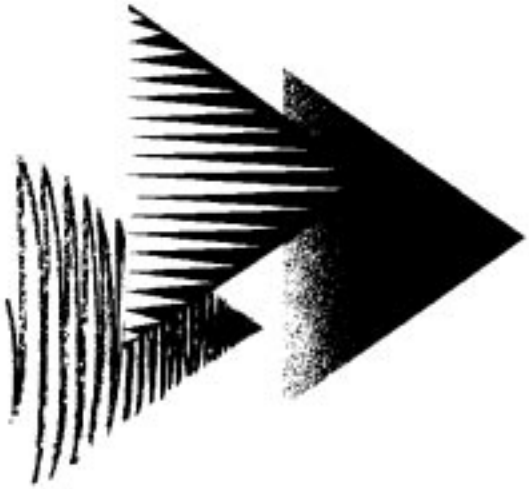

CAREER & TECHNOLOGY STUDIES

MANUAL FOR ADMINISTRATORS, COUNSELLORS AND TEACHERS

Alberta EDUCATION

JUNE 1998

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Questions or comments about this document are welcomed and should be directed to the Program Manager, Career and Technology Studies Unit, Curriculum Standards Branch.

The primary intended audience for this document is:

Administrators	✓
Counsellors	✓
General Audience	
Parent School Councils	
Parents	
Students	
Teachers	✓

PREFACE

This manual is also available for viewing and downloading from the Alberta Education web site at:

<http://ednet.edc.gov.ab.ca>
under "Students and Learning," then "Student Programs."

***Note**: Check memory capacity on your computer before downloading CTS documents.*

In addition to reviewing draft documents and providing input during curriculum development, many of the 2400 (January 1995) members of the CTS Communication Network asked questions and provided suggestions about matters related to the implementation of CTS that affect teachers, counsellors and administrators. We have tried to address these within this manual.

This manual includes information and recommendations related to:

- understanding the CTS program
- planning CTS programs in schools and school systems
- implementing CTS courses in the classroom.

Also included in this manual are charts, forms and a series of appendices that provide additional information and guidelines relevant to implementing CTS, and blackline masters for program administration.

This manual is a useful reference for those having the responsibility for planning and implementing CTS at the school system, school and classroom levels.

Note:

- The CTS "modules" are now officially referred to as "courses" each with an individual, alphanumeric code. In this manual, the term "course" refers to a 1-credit CTS course, and the term "cluster" refers to a multiple-credit CTS offering.
- In accordance with the change to the terminology from "module" to "course," there is a subsequent change in references to the "learner expectations." In this manual, and in future *Guides to Standards and Implementation*, "module learner expectations" are referred to as "general outcomes" and "specific learner expectations" are referred to as "specific outcomes."
- This manual is a support document that supplements other CTS documents, including the *Career and Technology Studies Program of Studies* and the *Guide to Standards and Implementation* for each strand. The *Guide to Education: ECS to Grade 12* and the *Career and Technology Studies Program of Studies* define the legal or prescriptive components of CTS.
- This manual may not answer all of your questions. You may wish to refer to the current issue of the *Guide to Education: ECS to Grade 12* for further information regarding policies and guidelines.

For additional information about CTS and specific program planning, contact:

Career and Technology Studies Unit, Curriculum Standards Branch, Alberta Education
Devonian Building, East Tower, 11160 Jasper Avenue, Edmonton, Alberta, Canada, T5K 0L2
Telephone: 403–422–4872, Fax: 403–422–0576
Toll Free Inside Alberta 310–0000.

Send Us Your Comments

We would appreciate receiving your comments about this manual. We would especially like to know:

Do you feel there are any topics requiring additional information or clarification?

_____

_____

_____

Do you feel there are any topics that should be deleted?

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Are there any questions or issues that you feel need to be addressed?

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Additional Comments

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Please return completed form to the Career and Technology Studies Unit, Curriculum Standards Branch, Alberta Education, Devonian Building, East Tower, 11160 Jasper Avenue, Edmonton, Alberta, Canada, T5K 0L2. Telephone: 403–422–4872; Fax: 403–422–0576. Toll Free Inside Alberta 310–0000.

TABLE OF CONTENTS

This manual is organized into one main introductory section accompanied by relevant charts and forms, and six appendices accompanied by attachments. The charts, forms and attachments are designed to be photocopied for use as they exist, or may be adapted to suit local circumstances.

PROGRAM OVERVIEW

WHAT IS CTS?

Refer to the *CTS Guide to Standards and Implementation*, Section A: Program Rationale and Philosophy.

CTS is an optional program designed for Alberta's secondary school students. As a program of choice, CTS helps junior and senior high school students to:

- develop skills they can apply in daily living now and in the future
- investigate career options and make effective career choices
- prepare for entry into the workplace or further learning.

The 1-credit course structure of CTS enables schools to design unique clusters of courses that meet the needs of students and take advantage of community resources. Developed across levels rather than grades, CTS has multiple entry points and provides junior and senior high school students with access to a common curriculum.

The CTS curriculum is organized into strands and courses as outlined in the following chart. Each strand represents a group of courses designed to support broad career and occupational opportunities. Courses are the building blocks for each strand, and defines what a student is expected to know and be able to do.

CTS Strands	Number of Courses
Agriculture	33
Career Transitions	30
Communication Technology	33
Community Health	31
Construction Technologies	46
Cosmetology Studies	58
Design Studies	31
Electro-Technologies	47
Energy and Mines	26
Enterprise and Innovation	8
Fabrication Studies	44
Fashion Studies	29
Financial Management	16
Foods	37
Forestry	21
Information Processing	53
Legal Studies	13
Logistics	12
Management and Marketing	23
Mechanics	54
Tourism Studies	24
Wildlife	17

WHO IS AFFECTED BY CTS?

CTS was developed to accommodate the varied experiences and needs of all learners in Alberta's junior and senior high schools. Effective September 1997, the CTS program replaced the former practical arts program, including courses in business education, home economics, industrial arts and vocational education. A list of CTS strands and the former practical arts courses they replace is provided at the end of this section in Chart 1: CTS Strands Replacing Practical Arts Courses.

Refer to the *Guide to Education: ECS to Grade 12*, Program Planning.

CTS is part of the junior and senior high school optional course selection, and is therefore a program of choice for junior and senior high school students. Junior high school students can access up to 450 hours of instruction in CTS throughout their junior high school years. The CTS competencies that students develop while in junior high can form an important foundation for further learning at the high school level. Senior high school students may choose to register in CTS courses to meet optional course requirements for the Alberta High School Diploma. Based on current enrollment patterns, about 75 per cent of Alberta's students will earn at least 30 high school credits in CTS.

HOW WAS CTS DEVELOPED?

Development of the CTS program was based on a review of all the former practical arts programs. Through an extensive consultation process, key interest groups were asked to identify elements of these programs that should continue as well as changes that should be made. Former practical arts programs were analyzed in terms of learning environments, enrollment patterns and delivery methods.

Refer to:

- *A Status Report on the Practical Arts Programs Within Secondary Schools in Alberta*, 1989
- *Trends and Issues Affecting Practical Arts in Alberta Secondary Schools: A Review of Research*, 1989
- *Framework for Change: Career and Technology Studies in Secondary Schools in Alberta*, 1990.

In addition, research was conducted to identify:

- trends and issues affecting specific practical arts programs and secondary education in general
- promising practices that could serve as models for curriculum development and implementation.

Based on the results of this consultation and research, a framework for the CTS program was established that included guiding principles and a structure for curriculum development.

The development process included extensive consultation with key interest groups relevant to each strand; i.e., teachers, schools and school systems, post-secondary institutions, business and industry, other government departments. Throughout the development period, over 2400 Albertans were involved in developing and validating the 22 CTS strands. The consultation process used throughout the development of CTS is illustrated at the end of this section in Chart 2: CTS Advisory and Consultation Network.

WHY WAS CTS DEVELOPED?

Refer to the *CTS Guide to Standards and Implementation*, Section A: Program Rationale and Philosophy.

The CTS curriculum was developed to enhance the **relevance** and **credibility** of existing optional programs, and to expand **access** to these programs for all junior and senior high school students.

CTS consolidates and expands upon learnings in the former practical arts courses, and enables educators to respond effectively to rapid changes in our society, including:

- a renewed emphasis in the workplace on teamwork, creativity, problem solving and flexibility
- advances in technology
- the growing demand for multiskilled workers
- the move toward a global economy
- growth in trades, technical and service occupations.

The CTS program responds to the need for students to develop technology-related skills and begin serious exploration of their career options. Program objectives were established jointly by Alberta Education, school system administrators and teachers, and other stakeholder groups, and focus attention on:

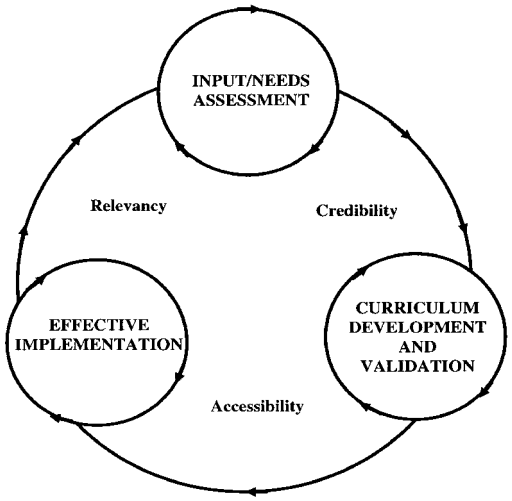
- integrating basic competencies—employability skills—and technology outcomes into a results-based curriculum, thus enhancing transitions for students into the workplace and related post-secondary programs
- establishing credible and clearly-defined standards for measuring student performance and achievement
- making connections with curriculum in other core and optional courses
- establishing flexible delivery strategies, including workplace learning and community partnerships, that make efficient use of in-school and community resources
- improving linkages among educators, business and industry, post-secondary institutions, community agencies and Alberta Education.

HOW IS CTS MAINTAINED?

Strategies are in place for evergreening CTS. Key goals of the evergreening process are to:

- maintain a relevant and credible curriculum and resource base
- support the effective implementation of CTS programs.

STRATEGY FOR "EVERGREENING CTS"



Annual strategies for maintaining a relevant and credible curriculum and resource base include:

- gathering input from key players regarding strengths and gaps in curriculum and resources
- establishing priorities for change based on future gazing and the feedback received
- revising curriculum and assessment standards, drafting new courses and identifying new resources, as required
- validating new or revised curriculum and resources for subsequent approval and implementation.

Effective implementation of CTS is supported by a number of ongoing initiatives that focus attention on:

- support for teachers through curriculum and resources, key contacts, professional development
- effective use of learning/teaching resources, facilities/equipment, learning time and other resources
- expanded delivery options for CTS strands/courses; e.g., distance delivery, linkages with core, off-campus learning
- smooth transitions for CTS students from junior to senior high and from senior high to post-secondary and the workplace
- ongoing exchange of information with teachers, schools and school systems through the *Career and Technology Studies Manual for Administrators, Counsellors and Teachers*, online *Connection* newsletter, CTS Web site and other documents.

Ongoing input from teachers and other stakeholders across the province is essential to an effective evergreening process. Feedback regarding CTS curriculum, resources and implementation strategies can be provided using the online Evergreening CTS: Survey and Response Form, available through the CTS section of the Alberta Learning Web site.

Note 1: The CTS "modules" are now officially referred to as "courses" each with an individual, alphanumeric code. In this manual, the term "course" refers to a 1-credit CTS course, and the term "cluster" refers to a multiple-credit CTS offering.

Note 2: In accordance with the change to the terminology from "module" to "course," there is a subsequent change in references to the "learner expectations." In this manual, and in future *Guides to Standards and Implementation*, "module learner expectations" are referred to as "general outcomes" and "specific learner expectations" are referred to as "specific outcomes."

PUTTING THE PARTS TOGETHER

Strands and Courses

Refer to the *CTS Guide to Standards and Implementation*, Section B: Strand Rationale and Philosophy.

There are 22 strands in CTS. Each strand is comprised of a group of courses designed to support positive career and occupational opportunities for students. In general, strands relate to selected industry sectors, including goods-producing industries such as agriculture, manufacturing and construction, and service-producing industries such as business, health and finance. Learnings within any particular strand may involve similar tools and technologies, clientele, working environments, products and processes.

There are over 650 courses in CTS. Courses are the building blocks for each strand. A course defines what the student is expected to know and be able to do, and describes the conditions and criteria by which a student's performance can be judged. Although courses are designed to take approximately 17 to 25 hours of study, some students may need less or more time to complete a course. Courses are organized into levels, not grades. Both junior and senior high school students can access CTS courses. Where appropriate, prerequisites and other requirements for course delivery are specified.

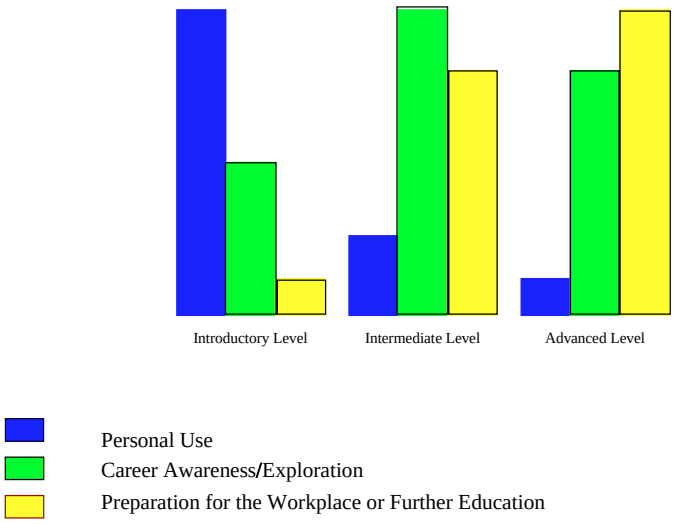
Levels of Achievement

The CTS program is level based, not grade based, and thus can be started by students at different entry points. Courses in each strand are organized into three levels:

- **introductory** level courses help students build daily living skills and form the basis for further learning. Introductory courses are for students who have no previous experience in the strand
- **intermediate** level courses build on the competencies developed at the introductory level. They provide a broader perspective, helping students recognize the wide range of related career opportunities available within the strand
- **advanced** level courses refine expertise and help prepare students for entry into the workplace or a related post-secondary program.

As junior and senior high school students progress through the levels, they are expected to meet higher standards and demonstrate an increasing degree of competence, both in the scope of learning and quality of performance.

The following illustrates the relative emphasis on aspects of career planning at each of the levels.



Courses at each level are grouped into theme areas to provide additional structure and assist in career planning. By linking courses in themes, teachers can plan learning activities that align with student interests/needs and available resources.

Curriculum and Assessment Standards

Refer to the *CTS Guide to Standards and Implementation*, Sections D, E and F.

Each CTS course clearly defines credible curriculum and assessment standards that are relevant to post-secondary education and the workplace. Students are expected to demonstrate higher degrees of competency and meet higher standards as they move through the course levels.

Curriculum standards define what students must know and be able to do. In CTS, these outcomes are communicated through general outcomes (module learner expectations in 1997 documents), with further detail provided in specific outcomes (specific learner expectations in 1997 documents).

Assessment standards establish the conditions and criteria for assessing student competency. For each course, CTS curriculum defines a minimum level of performance for each general outcome, with reference to assessment tools to ensure fairness and equity in judging student achievement.

DESIGNING CTS COURSES

Whereas the former practical arts courses were designed by Alberta Learning, CTS is designed at the school/school system level by combining 1-credit courses that best suit the needs of students, the school/school system and the community.

The CTS curriculum structure allows schools and teachers to design courses:

- within and across CTS strands
- within and across CTS levels.

Some students may successfully complete CTS courses while in junior high school. Competencies developed in junior high school may be recognized in senior high school.

Senior high schools may choose to design CTS courses that enable students to meet the optional course requirements for the Alberta High School Diploma, and develop competencies that align with those expected in the workplace and/or by post-secondary institutions.

KEY FEATURES OF CTS

The following represents a summary of key features incorporated into the CTS program.

CAREER-RELATED LEARNING

Refer to Appendix 5: Planning Ahead—CTS Transitions into Post-secondary Programs and the Workplace.

CTS offers students learning opportunities in a wide range of career contexts. Students become familiar with the many careers related to each strand, and are able to investigate various career options.

In CTS, the concept of career encompasses activities in one's personal life as well as those related to a job or occupation. Students develop competencies for:

- daily living and personal interest
- career planning and preparation
- entry into the workplace and post-secondary programs.

TECHNOLOGY INTEGRATION

Technology outcomes are integrated as appropriate throughout all CTS strands, and focus on the development of competencies required for daily living, entry-level work and lifelong learning.

Refer to the *Learner Outcomes in Information and Communication Technology—ECS to Grade 12*.

CTS defines technology in its broadest sense to include all processes, tools and techniques that affect daily life, and provides opportunities for students to:

- make decisions regarding which procedures best suit the task at hand
- select and use available tools and resources in an appropriate manner
- assess and manage the impact of technology on self, others and the environment.

BASIC COMPETENCIES

Refer to the *CTS Guide to Standards and Implementation*, Section A: Program Rationale and Philosophy.

Critical skills for daily living and employability are incorporated into each CTS strand and course through a set of "basic competencies." Sequenced around four developmental stages, the basic competencies establish standards of performance with respect to:

- managing learning
- managing resources
- problem solving and innovation
- communicating effectively
- working with others
- demonstrating responsibility.

ONE-CREDIT COURSE STRUCTURE

Refer to the *CTS Guide to Standards and Implementation*, Section B: Strand Rationale and Philosophy.

The 1-credit course curriculum structure of CTS allows schools to design programs that enable students to:

- select relevant courses and strands
- progress at rates that are personally challenging
- build on successes and investigate new options.

Schools determine which strands/courses to make available to students, and the extent to which students are involved in planning their own CTS programs.

CLEARLY DEFINED RESULTS

Refer to the *CTS Guide to Standards and Implementation*, Section G: Assessment Tools.

CTS courses emphasize competency-based learning rather than time-based learning. While each course is designed to take a student approximately 25 hours to complete, some students may need more or less time to obtain the competencies. The CTS curriculum defines:

- what students must know and be able to do—the knowledge, skills and attitudes to be developed (curriculum standards)
- the criteria and conditions for assessing student performance (assessment standards).

BROAD-BASED RESOURCE SUPPORT

Refer to the *CTS Guide to Standards and Implementation*, Section I: Learning Resource Guide.

CTS supports the development of resource-based classrooms where a variety of appropriate, up-to-date print and nonprint resources are available. This approach enables students to:

- interact with a wide range of information sources
- assess and use information sources appropriately
- take an active role in managing their own learning.

CTS identifies learning resources in print, software, video and CDROM formats, as well as other sources of information available in the community and through the Internet.

EXPANDED DELIVERY OPTIONS

Refer to the *Off-campus Education Guide for Administrators, Counsellors & Teachers*.

CTS supports a variety of learning opportunities and delivery strategies using technology and other resources available in the school and community. Learning can take place on- and off-campus, in classrooms, labs, the workplace or through distance learning.

CTS recognizes the importance of community support and involvement in the delivery of career-related education programs, and provides flexibility to plan program delivery in ways that meet local needs.

ENHANCED CONNECTIONS

Refer to the *CTS Guide to Standards and Implementation*, Section H: Linkages/Transitions.

CTS links theory and practice in real contexts. Students gain confidence and motivation as they learn to relate, extend and apply abstract learning in a variety of real-life and work-related situations.

The 1-credit course structure of CTS facilitates making connections among CTS strands and with core and optional subjects. Connections identified throughout the CTS curriculum help students transfer their learning effectively and prepare for future career options.

CONTINUITY IN LEARNING

Refer to the *CTS Guide to Standards and Implementation*, Section H: Linkages/Transitions.

CTS enables students to build on the competencies they have already achieved—prior learning from formal schooling and community/personal initiatives is recognized. There are no distinct boundaries between junior and senior high school, and numerous credentialling and articulation agreements at the intermediate and advanced levels provide effective bridging to the workplace or related post-secondary programs. This approach enables students to experience smooth transitions throughout their school careers.

CURRICULUM DOCUMENTS AND OTHER MATERIALS

Refer to CTS at the Alberta Learning Web site at www.learning gov.ab.ca under "Kindergarten to Grade 12," then "Curriculum," then "By Subject," then "Career and Technology Studies."

A number of legal and support documents and other materials are available to support the effective implementation of CTS programs.

To facilitate ease of access, all curriculum documents are available in print and electronic formats through the sources indicated. The most recent versions of curriculum documents can also be viewed and downloaded from the Alberta Learning Web site.

PROGRAM OF STUDIES

Sources:
- Learning Resources Centre (LRC) (print and CDROM)
- Alberta Learning Web site.

The *CTS Program of Studies* is a legal document that outlines mandatory requirements for CTS courses in all strands. This document provides information regarding:

- program rationale and philosophy (Section A)
- strand rationale and philosophy, and general outcomes (Section B).

This is a required document for those planning CTS programs at schools and school system levels. Individuals responsible for delivering CTS courses on- or off-campus should also consult the support documents noted below for additional information regarding specific strands and courses.

GUIDE TO STANDARDS AND IMPLEMENTATION (GSI)

Sources:

- LRC (print and CD-ROM)
- Alberta Learning Web site.

There is a *Guide to Standards and Implementation* to support each of the 22 CTS strands. The GSIs outline the mandatory course requirements in shaded format, and provide additional information useful in implementing strand-specific courses in schools and classrooms. Each GSI provides information regarding:

- the CTS program in general (Section A)
- strand rationale and overview (Section B)
- program planning (Section C)
- curriculum and assessment standards (Sections D, E and F)
- assessment tools (Section G)
- linkages/transitions (Section H)
- sample student learning guides (Section J)
- individuals involved in strand development (Section K—print copy only).

The GSIs are highly recommended to those delivering instruction and assessing student achievement in specific CTS strands and courses.

MANUAL FOR ADMINISTRATORS, COUNSELLORS AND TEACHERS (ACT MANUAL)

Sources:

- LRC (print and CD-ROM)
- Alberta Learning Web site.

This *Career and Technology Studies Manual for Administrators, Counsellors and Teachers*, 1998 is a support document available to facilitate the effective implementation of all CTS strands and courses.

OTHER MATERIALS

CTS Promotional Materials

Refer to Appendix 1: Planning and Marketing CTS in Your School and Community.

The following brochures for promoting CTS in the school and community are available as blackline masters:

- *CTS Backgrounder*
- CTS Strand Brochures.

CTS Videos

Source:

- ACCESS: The Education Station.

The following videos provide an effective means of explaining CTS to clients and stakeholders in the school and community.

- *CTS: Building the Future*, 1996 explains the philosophy, curriculum structure and potential benefits of the CTS program. Designed for viewing by adults, the video is divided into distinct segments and may be used for inservice and orientation sessions. The video is accompanied by a brochure (available in quantity) that describes key features of the CTS program (25 minutes).
- *Opportunities for You*, 1996 profiles CTS along with related programs and initiatives. Designed for use with students, the video focuses attention on technical career opportunities, and is accompanied with a questionnaire to assist students in career planning (15 minutes).
- *On Cue*, 1993 introduces teachers, administrators, parents and the community-at-large to the CTS program. The video is divided into distinct segments and may be used for inservice and orientation sessions (30 minutes).
- *U-Choose*, 1993 describes the CTS program and the 22 CTS strands to students (11 minutes).

DEVELOPING AN IMPLEMENTATION PLAN

The following steps assist in planning for the effective implementation of CTS programs at the school and school system level.

DEVELOP AN UNDERSTANDING OF THE CTS PROGRAM

Schools and school systems are encouraged to design a communication plan to inform all client and stakeholder groups about the goals and structure of the CTS program. The communication plan should include an initial orientation to CTS, and ongoing strategies to reinforce and expand understanding of the CTS program and how it is evolving in the school and community.

To assist in this task, information packages can be developed and modified to address the needs of different groups. As well, it is helpful to keep informed of implementation initiatives undertaken in other communities.

When developing their communication strategies, schools and school systems may wish to:

- access the promotional materials and videos on CTS
- share ideas with neighbouring schools and school systems.

PREPARE AN IMPLEMENTATION PLAN

Refer to Appendix 1: Planning and Marketing CTS in Your School and Community.

Successful implementation of CTS requires the coordinated effort of school and school system administrators, counsellors and teachers. While implementation plans vary according to the unique characteristics of individual schools and school systems, successful implementation of CTS involves:

- establishing a planning team
- drafting a plan of action
- taking inventory of in-school and community resources
- researching interests/needs and potential sources of support in the community
- identifying potential strands/courses, appropriate for on-site and/or off-campus delivery
- identifying potential barriers to implementation and possible solutions
- gaining commitment, buy-in and approval for action
- monitoring and assessing progress.

Refer to the *CTS Guide to Standards and Implementation*, Section H: Linkages/Transitions.

Prior to implementing CTS programs, careful consideration should be given to:

- the anticipated scope of change in school programming
- the expected rate at which these changes will occur.

To assist teachers in making the transition from practical arts to CTS, a correlation of CTS courses to the former practical arts courses they replace is provided for each strand.

SELECT STRANDS/COURSES

Refer to Appendix 2: Defining CTS Learning Environments—Strand and Course Parameters.

Schools decide which CTS strands and courses to offer on the basis of student interests/needs and resources available in the school and community. **Course design and selection must address prerequisites and other delivery requirements defined in the strand and course parameters.**

Individual schools may select which CTS strands they wish to offer. Schools and teachers design CTS programs by combining 1-credit courses:

- within and across strands
- within and across levels—introductory, intermediate, advanced.

When designing CTS programs, teachers need to be familiar with courses:

- in strand clusters; e.g., business education, home economics, industrial education, natural resources. CTS programs can often be enhanced by including courses from two or more related strands
- in "process" strands; e.g., Enterprise and Innovation, Design Studies, Information Processing, Management and Marketing. Learning in these strands can be effectively contextualized when their courses are combined with other strands that are more specialized in context
- in the Career Transitions strand; e.g., courses from the Career Extensions, Career Credentials and Job Safety Skills themes. These courses directly reinforce employability skills and can be used effectively to extend learning in other CTS strands.

SELECT TEACHERS TO DELIVER THE PROGRAM

Refer to Appendix 2: Defining CTS Learning Environments—Strand and Course Parameters.

A key factor in the effective delivery of CTS courses is the involvement of qualified and enthusiastic teachers. While many courses can be delivered by certified teachers having expertise and interests suited to providing instruction in CTS settings, some courses require additional instructor qualifications over and above a regular professional teaching certificate. These qualifications may include:

- a specific credential granted by business, industry, government or a community organization; e.g., journeyman certificate, Alberta Best Trainer, First Aid certificate
- evidence of successful completion of a specialized training program or equivalent; e.g., a workshop/course from a technical institute/college/university, a session at the CTS Leadership Seminar.

Teacher selection processes must address the instructional qualifications as defined in the strand and course parameters.

Schools may find it desirable to expand human resources available for the delivery of CTS programs by:

- providing effective teacher orientation and inservice
- encouraging collaboration and teamwork
- involving teachers from other core/optional subject areas
- involving instructional assistants—community partners—having specialized knowledge and skills
- establishing partnerships with post-secondary institutions.

PREPARE STUDENT PROGRAMS

CTS is available to all secondary students having the potential to meet the requirements of an Alberta High School Diploma. While schools establish their own strategies and criteria for placing students in CTS courses, these practices should reflect student interests and needs.

Some students with special needs may benefit from instruction in some CTS strands and courses, particularly those involving considerable hands-on learning with limited emphasis on theory. Counsellors and teachers can help students with special needs make the transition to CTS by making provision for:

- supportive learning environments and differentiated instruction
- flexible transfer points into and out of the CTS program.

Students with special needs taking CTS courses for credit are expected to meet all requirements for successful course completion. In situations where curriculum is modified and no credit is granted, such changes should be recorded on the student's individual program plan.

IDENTIFY APPROPRIATE LEARNING ENVIRONMENTS

Refer to:
- Appendix 2: Defining CTS Learning Environments— Strand and Course Parameters
- Appendix 3: Addressing Health and Safety in CTS.

Some CTS courses can be delivered in regular classrooms, while others require the use of more specialized facilities. CTS encourages schools to use on- and off-campus learning environments in addressing student needs. **Learning environments, whether on-campus or off-campus, must address the policies and guidelines for facilities, equipment and safety as defined in the strand and course parameters.**

Schools may find it desirable to expand learning environments suited to the delivery of CTS programs by:

- making innovative and effective use of existing facilities and equipment
- carrying out renovations to existing facilities
- using facilities and equipment in the community
- sharing facilities and equipment in neighbouring schools and school systems
- using distance learning technologies and other alternative delivery strategies.

CTS learning environments should provide opportunities for students to work individually or with others in a supportive atmosphere that reflects due attention to health and safety. When possible, work areas for CTS should:

- be flexible and multipurpose, supporting hands-on learning as well as research, note-taking and discussion
- enable teachers to observe, supervise and assess student performance readily
- facilitate a shared and team approach to instructional delivery
- provide easy access to learning resources, computers and other technology
- provide adequate and secure storage.

ESTABLISH SCHEDULING/DELIVERY STRATEGIES

Refer to the *CTS Guide to Standards and Implementation*, Section C: Planning for Instruction.

Schools and school systems are encouraged to consider the many methods of course delivery available to them when they plan course offerings in CTS. While most strands and courses can be offered through standard class scheduling practices, the structure of CTS, its focus on competency rather than time-based learning, and the use of off-campus delivery and enhanced distance learning tools enable schools to expand student access to CTS strands and courses.

Schools may choose to maximize options available for delivering a range of CTS courses by modifying current class scheduling practices, and/or combining them with other methods of course delivery. Specific scheduling and delivery strategies will be determined by:

- the strands and courses being offered
- teacher background and instructional approach
- resources available in the school and community
- the degree of choice and self-direction provided for students.

Regardless of particular course scheduling and delivery strategies, all senior high school courses offered to students must be appropriately timetabled, taught, assessed and reported to Alberta Learning.

Standard Class Scheduling

Standard class scheduling involves timetabling CTS classes using the Carnegie Unit organizational model; i.e., a time-credit relationship. Such practices, usually established at the school level through various software programs, provide for instruction through clearly defined time blocks. Standard class scheduling can be effectively used to timetable CTS classes, assign students and teachers, and monitor attendance.

Using typical timetabling practices, schools may decide to:

- schedule a specific CTS course within an instructional time block
- schedule multilevel courses concurrently within an instructional time block
- schedule time blocks when students select from a menu of courses
- cycle particular strands/courses over semesters or school years.

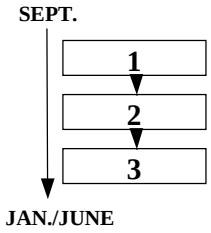
CTS emphasizes experiential learning. It is important that students have opportunities to demonstrate and practice the competencies they develop. Class length should provide sufficient time for hands-on experiences as well as work set-up and clean-up. Class sequencing should provide frequent opportunities for students to practise the skills they are learning.

The following scenarios represent possible ways of organizing for instruction with standard time blocks.

Scenario A

Students move through courses sequentially; e.g.,

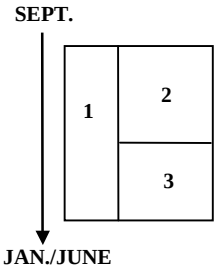
INF1020 Keyboarding 1
INF2030 Keyboarding 2
INF2040 Keyboarding 3



Scenario B

Students work on one course throughout the year/semester (e.g., 20 minutes per class or one class per week) and then spend the remainder of the class time working on other courses; e.g.,

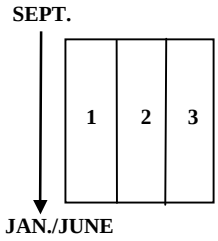
COM1020 Media & You
(throughout the term)
COM1030 Photography 1
COM1050 Printing 1



Scenario C

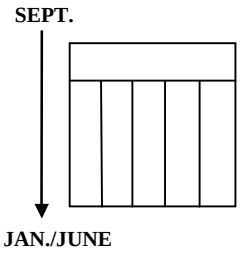
Students work on three courses within an instructional time block. This strategy is often used when students are working on an integrated project, such as operating a school store or handling customer work; e.g.,

MAM1010 Management & Marketing Basics—one class per week
MAM1020 Quality Customer Service—first half of class
MAM2040 Retail Operations



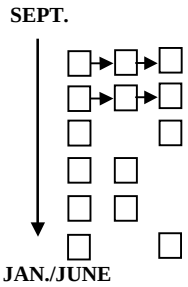
Scenario D

All students work on one or more courses together, then are able to select from a list of courses that are available for individual or small group learning. The menu of courses could be from one or more strands.



Scenario E

From a list of courses defined by the teacher, students select which ones they will work on and, in consultation with the teacher, establish timelines for completion and submission of assignments, etc.



Expanded Delivery Options

Schools also may wish to consider other methods for expanding or enhancing delivery of CTS programs, keeping in mind that the quality of interaction between student and teacher has a profound influence on learning. Many of the options outlined below can be used as an extension to, or in combination with standard class timetabling.

Shared Delivery

Schools may decide to expand their delivery of CTS programs by making expertise and/or resources present in one school available to other schools. Sharing may occur among schools within the same school system, or through special agreements with schools in a neighbouring system. Shared delivery may involve the use of mobile labs, the sharing of teachers among schools, and/or the bussing of students to other schools offering complementary programs and facilities.

Off-campus Delivery

Refer to the *Off-campus Education Guide for Administrators, Counsellors and Teachers.*

CTS courses or course components can be delivered outside the school classroom or lab through off-campus education. Through worksite learning and partnerships with local business/industry and post-secondary institutions, off-campus education provides access to instructional expertise and specialized facilities available within the community. Off-campus education may encompass community partnerships, job shadowing, job sharing, mentorships, and work study.

Distance Education Technology

The use of information, communication and multimedia technologies can be another effective means of expanding and/or enhancing the delivery of CTS courses. Distance education technology can be used to:

- help students learn difficult concepts
- deliver instruction in new areas where there may be a lack of teacher expertise.

While the potential for distance education technology to deliver a range of CTS courses is expanding rapidly, some courses focus on the development of workplace competencies and cannot be effectively delivered unless the student has access to hands-on learning, either in a lab or worksite setting. Such courses do not lend themselves to technological delivery unless supported by other forms of instruction and practice.

Refer to Appendix 2: Defining CTS Learning Environments—Strand and Course Parameters.

PREPARE LEARNING PLANS

Once organizational strategies regarding where and how learning is to occur have been established, teachers can begin to prepare learning plans. Learning plans determine how the competencies defined within specific courses are to be developed and assessed.

Refer to the *CTS Guide to Standards and Implementation*:

- Section D: Introductory Level
- Section E: Intermediate Level
- Section F: Advanced Level.

Learning plans should address both the basic competencies and strand-specific competencies referenced as general outcomes (module learner expectations in 1997 documents). Additional guidelines for preparing learning plans are provided through the specific outcomes (specific learner expectations in 1997 documents). Though not prescriptive, the specific outcomes provide further information regarding the depth and scope of learning expected for each course.

In general, learning plans should include:

- assignments/projects/tasks that develop the defined competencies
- strategies to assess student performance and achievement
- resources that support learning outcomes
- timelines and task/laboratory schedules.

Student Learning Guides

A Student Learning Guide (SLG) provides information and direction to help students attain the outcomes defined in a CTS course. SLGs are designed to be used by students under the direction of a teacher. Components of an SLG include:

- Why take this course?
- What do you need to know before you start?
- What will you be able to do when you finish?
- When should your work be done?
- How will your mark for this course be determined?
- Which resources may you use?
- Activities/worksheets.

Refer to the *CTS Guide to Standards and Implementation*, Section J: Sample Student Learning Guides.

While a development template accompanied by some sample SLGs is provided for each CTS strand, most SLG development is being done by individuals and organizations across the province.

Teachers should note that an SLG is not a self-contained learning package like those produced by the Learning Technologies Branch.

Distance Learning Materials

Refer to the Learning Technologies Branch home page at <http://ednet.edc.gov.ab.ca/ltb>.

The Learning Technologies Branch is developing distance learning materials for courses in a number of CTS strands. Distance learning materials are self-contained learning packages that typically include the type of information provided in a Student Learning Guide and additional resource materials for the student.

Teachers are advised to consult the Learning Technologies Branch home page for information regarding the availability of distance learning materials in particular strands and for future development schedules.

CTS IN JUNIOR HIGH SCHOOL

PROGRAM PLANNING

Each junior high school determines which CTS strands and courses to offer. Because few junior high students have made specific career decisions and plans, they are better able to learn about different career areas if they can explore several of the CTS strands along with other optional courses.

Experience has demonstrated that male and female students do equally well in CTS programs. When possible, planning should facilitate co-ed classes in most CTS strands.

Selecting Strands/Courses

Junior high schools are encouraged to develop CTS programs that focus on personal skills for daily living and career exploration. While all CTS strands can be delivered at the junior high school level, some strands have a more specialized occupational focus and may be less relevant to the junior high school student.

Introductory level courses are considered most appropriate for junior high school students as they focus on developing competencies that are useful for daily living and form a foundation for further study within the strand. Junior high schools may also choose to deliver intermediate level courses, particularly in areas where students may have previously developed competencies.

When selecting CTS courses, junior high schools should take into account the strands/courses available to students when they enter high school, and design courses accordingly.

Designing Courses

Refer to the *CTS Guide to Standards and Implementation*, Section C: Planning for Instruction.

Junior high schools may design CTS courses by combining:

- components of courses within and across strands to enable students to explore a range of career options
- complete courses within and across strands to enable students to acquire knowledge and skills prerequisite to further study.

Course design in junior high school may involve sequencing the delivery of course components over a period of one, two or three years.

Course prerequisites and recommended sequences are defined in the scope and sequence chart for each strand.

Courses offered at the junior high school level can be named Career and Technology Studies (CTS), given specific strand names such as Agriculture or Design Studies, or given other names considered appropriate in communicating the nature of the learning.

EFFECTIVE TRANSITIONS

CTS encourages students to build upon prior learning that may have occurred through formal schooling and personal initiatives. Within this context, junior high students who have already developed competencies defined within a course should have opportunities to expand upon or enhance these competencies as they move through their school experience.

Elementary to Junior High

Some students entering junior high school may have already developed CTS-related competencies in the elementary school years. As well, many elementary students are already accustomed to working in multi-activity and independent learning environments. Junior high schools are encouraged to consult with feeder schools to determine the level of expertise students bring to junior high school, and plan their CTS courses accordingly.

Junior High to Senior High

Junior high schools should become knowledgeable of the strands/courses available at high school and design their courses accordingly. Junior and senior high school teachers and administrators are encouraged to share information regarding:

- which CTS strands/courses they are delivering
- where and how CTS courses are being delivered
- strategies used to organize for learning; e.g., class timetabling, flexibility and degree of student choice
- policies regarding the recognition of prior learning.

Awareness of each other's programs and flexible approaches to program planning facilitates effective transitions from junior to senior high school.

Recognizing Prior Learning

Refer to the *Guide to Education: ECS to Grade 12*, Courses and Programs.

Some students may successfully complete CTS courses while in junior high school. The senior high school principal may accept a recommendation from the junior high school principal that a student has successfully completed a course and should be given credit.

Junior high schools need to determine the practices adopted by local high schools regarding recognition of prior learning in CTS, and advise students and parents accordingly.

CTS IN SENIOR HIGH SCHOOL

PROGRAM PLANNING

While the emphasis of CTS programs in junior high school is on daily living skills and career exploration, CTS programs in senior high school focus on building transitions to the workplace or related post-secondary programs.

Each senior high school determines which CTS strands and courses to offer. Some students entering high school may wish to expand on the competencies they have already developed within a particular strand. Other students may wish to expand their repertoire of competencies by working in other strands.

Selecting Strands/Courses

Intermediate- and advanced-level courses are generally most appropriate for high school students, particularly those in Grade 11 and Grade 12, as these courses focus more directly on technical and career-related competencies. Senior high schools may also deliver introductory-level courses, particularly in strand areas where students may not have developed the prerequisite knowledge and skills.

When selecting CTS strands and courses, senior high schools should take into account prior learnings acquired by students in junior high school and through personal initiatives, and design courses accordingly.

Course Delivery

Senior high schools may deliver CTS by combining 1-credit courses:

- within and across strands, and
- within and across levels (introductory, intermediate, advanced).

Refer to the *Guide to Education: ECS to Grade 12*, Senior High School Programming.

All high school courses offered to students must be timetabled, taught, assessed, and reported appropriately to Alberta Learning.

For funding conditions for grades 10 to 12, school authorities should consult the current Funding Manual for School Authorities.

Advanced-level courses may be used by students to meet the high school diploma requirements. Schools need to review the course combinations made available to ensure that students have access to an adequate number of advanced-level courses to meet the 30-level credit requirements for the Alberta High School Diploma.

Schools may combine courses into multiple-credit clusters for scheduling and instructional purposes. However, the courses are to be reported to Alberta Learning as 1-credit courses. At the school level, course names may be used that clarify learning outcomes for students and parents.

EFFECTIVE TRANSITIONS

An important goal of the CTS program is to enhance transitions from junior high school to senior high school, and from senior high school into the workplace or related post-secondary programs. Within this context, senior high school students should have opportunities to:

- expand upon or enhance competencies they may have already developed through formal schooling and personal initiatives
- develop competencies that prepare them for entry into the workplace or related post-secondary programs.

Junior High to Senior High

Senior high schools should become knowledgeable of the strands/courses offered to students at junior high school, and take this information into account as they plan their CTS programs. Junior and senior high school teachers and administrators are encouraged to share information regarding:

- which CTS strands/courses they are delivering
- where and how CTS courses are being delivered
- strategies used to organize for learning; e.g., class timetabling, flexibility and degree of student choice
- policies regarding the recognition of prior learning.

Awareness of each other's programs and flexible approaches to program planning facilitates effective transitions from junior to senior high school.

Senior High to the Workplace

Refer to the *CTS Guide to Standards and Implementation*, Section H: Linkages/Transitions.

Many young people experience challenges upon entering the workplace. In preparation for this critical step, students can be provided with opportunities to explore options for employment through work study, job shadowing, mentorship and other forms of off-campus learning. Each CTS strand is supported with a comprehensive list of related occupations and career opportunities.

A number of credentialling opportunities are available to CTS students through professional and community organizations, whereby students may earn partial or complete credentials recognized in the workplace. CTS courses can be designed in ways that enable students to obtain credentials that enhance opportunities for entry into the workplace.

Senior High to Post-Secondary

Many CTS students upon completing particular course sequences have developed competencies that align with those expected in post-secondary programs. A summary of related post-secondary programs offered at the college, technical and university level, as well as through Apprenticeship and Industry Training, is published periodically in *It's About Time to Start Thinking About Your Future* by Alberta Advanced Education and Career Development, and is available for purchase from the LRDC.

Refer to the *CTS Guide to Standards and Implementation*, Section H: Linkages/Transitions.

A number of articulation agreements have been established with post-secondary institutions and training programs in Alberta. These agreements provide preferred entrance and/or advanced standing for CTS students who have successfully completed designated courses. Advanced-level courses will be accepted in lieu of 30-level practical arts courses in qualifying for post-secondary entrance.

The Alberta Heritage Scholarship Fund combines and averages the marks of CTS courses taken at the same level (i.e., introductory, intermediate) to establish 3 credits that can be considered for the Alexander Rutherford Scholarship. In cases where more than three courses have been taken at the same level, the three courses with the highest marks are combined and averaged.

Recognizing Prior Learning

Students should be encouraged to refine and extend competencies they may have developed in junior high school or through personal initiatives. To do this, high schools need to establish practices for recognizing students' prior learning.

Courses Completed in Junior High

Some students may successfully complete CTS courses while in junior high school. The senior high school principal may accept a recommendation from the junior high school principal that a student has successfully completed a course and should be given credit. This course then can be included when reporting student achievement through the normal student records system. The course(s) also will then be included in the student's transcript.

Refer to the *Guide to Education: ECS to Grade 12,* Senior High School Courses and Credits for Junior High School Students.

Such courses are to be reported by the senior high school principal according to the directions provided in the *Guide to Education: ECS to Grade 12.* **High school credits granted upon the recommendations of a junior high school principal are not eligible for Credit Enrollment Unit (CEU) funding.**

Local policies regarding the granting of credits for prior learning in CTS should be established collaboratively and communicated to all clients and stakeholders. These policies may include provisions for challenge assessment.

Course Challenge

Refer to the *Guide to Education: ECS to Grade 12,* Course Challenge.

Course challenge may be appropriate for students who, because of prior learning, have demonstrated the ability to meet the assessment standards established for specific 1-credit courses. Course challenge assessment may occur through:

- a traditional comprehensive examination
- teacher observation over three to four classes
- teacher evaluation of a student's portfolio or work sample
- a student's demonstration of skills through performance of set tasks.

Successfully challenged courses are to be reported as passed courses according to the directions provided in the *Guide to Education: ECS to Grade 12.*

SELECTING AND USING LEARNING RESOURCES

CTS encourages teachers to establish resource-based classrooms where a variety of appropriate, up-to-date print and nonprint resources, such as print, software, video, CDROM and other electronic formats, are available.

AUTHORIZED LEARNING RESOURCES

Alberta Learning authorizes a variety of resources that support learning and teaching in this strand. Teachers are encouraged to browse the Alberta Learning Web site at www.learning.gov.ab.ca on a regular basis for the most up-to-date information on:

- authorized resources; i.e., student basic, support and authorized teaching
- provincial software licensing agreements
- additional sources of support.

The lists of authorized resources that were previously included in Section I of the *1997 Guides to Standards and Implementation* have been deleted. Up-to-date listings of authorized resources are available at the Alberta Learning Web site and can be accessed through:

- Authorized Resources Database, a searchable online index of every approved learning and teaching resource for use in each subject area. The database is searchable for each 1-credit course.

Refer to the Authorized Resources Database at www.learning.gov.ab.ca/lrdb/.

- Learning Resources Centre (LRC). The LRC ensures accessible, available and affordable resources to enhance learning to all Alberta students.

Refer to the *Learning Resources Centre Resources Catalogue* at www.lrc.learning.gov.ab.ca.

A variety of documents and related sites are also accessible at the Alberta Learning Web site. These include:

- *Connection: Information for Teachers*, an online information newsletter for administrators, counsellors and teachers. It includes information on curriculum, resources, assessment, technology, new initiatives and projects.

Refer to *Connection: Information for Teachers* at www.learning.gov.ab.ca/connection/.

- Learning Technologies Branch, a partnering branch that develops and provides information about distance learning programs and other learning alternatives offered by Alberta Learning.

Refer to the Learning Technologies Branch Web site at www.learning.gov.ab.ca/ltb/.

- 2Learn Alliance, an education–business partnership that provides Internet inservice, support and mentorship for Alberta teachers.

Refer to the 2Learn Alliance Web site at www.2learn.ca/.

ESTABLISHING RESOURCE-BASED CLASSROOMS

Resource-based classrooms can accommodate a variety of instructional strategies and teaching styles, and support individual or small group planning. They provide students with opportunities to interact with a wide range of information sources in a variety of learning situations.

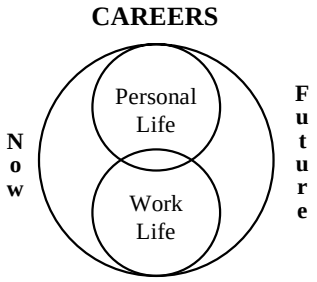
Schools are encouraged to establish CTS resource centres that include:

- copies of various learning and teaching resources that have been authorized for each strand
- copies of other resources identified in each strand
- relevant magazines, periodicals and newsletters
- multimedia resources, including videos and CD-ROMs
- samples of student work.

Access to a broad resource base enables students to learn to screen and use information appropriately, solve problems, meet specific learning needs, and develop competency in communication skills.

INTEGRATING CAREER-RELATED LEARNING

A key feature of CTS is its focus on "careers" in a wide range of contexts. A career not only relates to a person's job or occupation, but also involves one's personal life—as a family member, a friend, a community volunteer, a citizen. Competencies developed through personal interest during secondary school often form the foundation for a future career choice.



Career—the sum total of life's experiences
Occupation—a cluster of similar jobs
Job—a position of work in an organization.

Junior and senior high schools should plan CTS programs in ways that enable students to explore their goals in life and work, now and in the future. Career-related learning should begin in junior high school and continue through the high school years so that by the time students graduate they have developed competencies for:

- daily living and personal interest
- career planning and preparation
- entry into the workplace or post-secondary programs.

DAILY LIVING/PERSONAL INTEREST SKILLS

Many CTS courses identify competencies that people consider essential for daily living, such as financial management, nutrition and basic meal preparation, consumer decision making, and the use of information and communication technology. In addition, CTS provides access to courses that support the pursuit of hobbies and other recreational interests.

Refer to the *CTS Guide to Standards and Implementation*, Section B: Strand Rationale and Philosophy, and Scope and Sequence.

By reviewing the scope and sequence charts for the CTS strands offered, schools can identify courses that:

- provide an introduction to each strand
- develop skills for daily living and personal use
- provide a foundation of knowledge and skills that support further specialization in the strand.

CAREER PLANNING AND PREPARATION

As students progress through each level of learning in CTS, they develop skills in career planning, explore numerous strand-related career options, and begin to prepare for present and future career options.

Career Awareness

Refer to relevant career web sites, including:

- OCCINFO <www.aecd.gov.ab.ca/occinfo>
- CAREER INFORMATION HOTLINE <www.aecd.gov.ab.ca/hotline>
- HUMAN RESOURCES DEVELOPMENT CANADA <http://roe-ab.hrdc-drhc.gc.ca>.

Refer to the *CTS Guide to Standards and Implementation*, Section H: Linkages/Transitions.

Junior and senior high schools are encouraged to use current labour market information in developing career awareness within the context of specific strands and courses. Competencies relevant to career planning and awareness are defined within each CTS strand through learner outcomes (learner expectations in 1997 documents).

Clearly defined assessment standards and tools provide further benchmarks for establishing appropriate levels of career awareness within specific CTS courses.

Each CTS strand is supported with a comprehensive list of related occupations and career options that align with National Occupational Classification (NOC) descriptions. Approximately 800 linkages to the labour market are identified across the 22 CTS strands, each further described by educational and training requirements.

Career Readiness

Refer to the *Career Transitions Guide to Standards and Implementation*, Section B: Strand Rationale and Philosophy.

The Career Transitions strand provides extensive opportunities for career preparation through its themes on Career Readiness, Leadership, Career Extensions, Career Credentials and Job Safety Skills.

Of particular relevance to career planning and preparation at the high school level are courses in the Career Readiness theme:

- CTR1010: Job Preparation
- CTR2010: Job Maintenance
- CTR3010: Preparing for Change.

Schools can design courses that prepare students for particular careers by combining one or more courses from the Career Transitions strand with intermediate- and advanced-level courses from other strands having an industry focus.

Employability Skills

Refer to the *CTS Guide to Standards and Implementation*, Section A: Program Rationale and Philosophy.

Career preparation is further enhanced through a set of basic competencies or employability skills integrated throughout all CTS strands and courses. The basic competencies align with critical skills for employability identified by the Conference Board of Canada, and are organized around four developmental stages that address the learning needs of junior and senior high school students. The basic competencies are included as appropriate in curriculum and assessment standards defined for each CTS course.

WORKPLACE AND POST-SECONDARY TRANSITIONS

The relevance and credibility of CTS within career contexts is enhanced through the extensive contributions to curriculum development by representatives of business and industry, professional associations and post-secondary institutions. Many students who complete intermediate- and advanced-level courses in one or more CTS strands develop competencies that align with those expected in the workplace and/or by post-secondary institutions.

Credentials for the Workplace

A credential provides written evidence by agencies external to the school of a student's qualifications with respect to particular competencies. CTS students may earn partial or complete credentials recognized in the workplace or by post-secondary institutions through their work in particular CTS strands and courses.

Students can earn credentials by successfully meeting the curriculum and assessment standards established for:

- specific credential-bearing courses
- generic "practicum" courses from the Career Transitions strand that incorporate learnings requisite to particular credentials.

Refer to Appendix 5: Planning Ahead—CTS Transitions into Post-secondary Programs and the Workplace.

Each CTS strand provides information regarding relevant credentialling opportunities. Schools and school systems can use this information as a basis for further research and planning regarding credentials they may wish to offer through CTS. Schools should determine which credentials are viable in their community, and plan courses that incorporate these opportunities when appropriate.

Articulation with Post-Secondary

Refer to:
- *CTS Guide to Standards and Implementation*, Section H: Linkages/ Transitions

A number of articulation agreements have been established with post-secondary institutions and training programs in Alberta. While the agreements vary in terms of how prior learning in CTS is recognized, most provide preferred entrance, advanced placement and/or advanced standing for CTS students who have successfully completed designated courses or course sequences. Schools and school systems are encouraged to consult local post-secondary institutions regarding:

- recognition of locally offered CTS courses
- the status of existing articulation agreements established at the provincial level.

Refer to Appendix 5: Planning Ahead—CTS Transitions into Post-secondary Programs and the Workplace.

Articulation with the Alberta Apprenticeship and Industry Training Program

Articulation agreements have been established between CTS strands and a number of the Alberta Apprenticeship and Industry Training Programs. Through these agreements, students who complete required CTS courses and successfully challenge appropriate theory and practical examinations for particular trades may qualify for:

- a portion of the trade's in-school training program, and/or
- on-the-job time credit within the trade.

A summary of articulation agreements established with Alberta Apprenticeship and Industry Training Programs is provided in Appendix 5: Planning Ahead – CTS Transitions into Post-secondary Programs and the Workplace.

Off-campus Learning

Refer to the *Off-campus Education Guide for Administrators, Counsellors and Teachers*.

A variety of off-campus learning experiences are suggested throughout the CTS curriculum—work study, work experience, job shadowing, mentorship. Each provides valuable opportunities for students and schools to enhance connections with business/industry, professional associations, post-secondary institutions or other community groups.

Work Experience Program

The Work Experience program is designed to provide high school students with experiential learning in career-related contexts. Work Experience courses are delivered off-campus under the supervision of a community partner, and enable students to develop:

- an understanding of expectations in the workplace
- knowledge and skills relevant to a specific career.

Although Work Experience and CTS are separate programs, CTR1010: Job Preparation is a prerequisite for all Work Experience courses. Schools may choose to register students concurrently in CTS and Work Experience courses.

Registered Apprenticeship Program

The Registered Apprenticeship Program (RAP) is designed for high school students who wish to begin a trade apprenticeship while completing their high school diploma. A RAP apprentice accumulates hours of on-the-job training as credit toward both a journeyman certificate and a high school diploma. RAP 15–25–35 courses are taught through off-campus learning under the joint supervision of a certified teacher and a journeyman in the workplace.

Although RAP and CTS are separate programs, courses in each may complement one another.

THE ROLE OF THE CTS COUNSELLOR

The role of the school counsellor in CTS is one of helping students make effective career decisions through awareness and preparation. Counsellors can help students plan their junior and senior high school CTS programs, identifying strands and courses most appropriate to:

- long- and short-term goals
- interests and aptitudes
- learning styles and abilities.

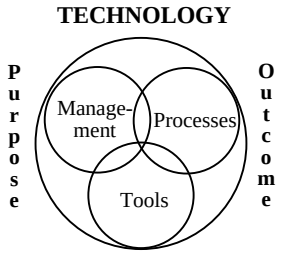
Through effective partnerships with other school personnel, counsellors can assume a key role in coaching CTS students to:

- explore a range of career and occupational opportunities
- plan the necessary steps to meet entry-level requirements for particular career choices
- negotiate effective transitions to the workplace or related post-secondary programs.

Counsellors can also help CTS teachers and administrators to determine which strands and courses should be made available to students, and help them, parents and community partners to understand the nature and structure of the CTS program.

INTEGRATING TECHNOLOGY OUTCOMES

A key feature of CTS is its focus on the use of technology. In its broadest sense, technology includes all the processes, tools and techniques that affect daily life. Technology is more powerful today than ever, creating ways of living, working and thinking never before imagined. Technology outcomes in CTS reinforce, extend and enhance related skills developed in earlier grades and in other courses.



CTS programs in junior and senior high school provide opportunities for students to develop technology skills required for daily living, entry-level work and lifelong learning. These skills involve:

- making effective decisions regarding which processes or techniques best suit a particular task
- selecting and using appropriate tools and resources in a skilled manner
- assessing and managing the impact of technology on self, others and the environment.

INFORMATION AND COMMUNICATION TECHNOLOGY: KINDERGARTEN TO GRADE 12

Refer to learner outcomes in Information and Communication Technology, Kindergarten to Grade 12.

The Information and Communication Technology (ICT) curriculum provides a broad perspective on the nature of technology, how to use and apply a variety of technologies, and the impact of ICT on self and society. Students in Kindergarten through Grade 12 are encouraged to grapple with the complexities, as well as the advantages and disadvantages, of technologies in our lives and workplaces.

The ICT curriculum is not intended to stand alone, but rather to be infused within core courses and programs. CTS courses should provide further opportunities for students to extend and apply ICT competencies in work-related contexts.

Technology is best learned within the context of applications. Activities, projects and problems that replicate real-life situations are effective resources for learning technology. Students will learn:

- that, although technology is often complex, it is simply "a way of doing things"
- about the impact of technologies in their lives and workplaces
- how to determine which processes, tools and techniques to use, and when to use them
- how to use and apply a variety of information and communication technologies to problem solving, decision making, inquiring and researching in the context of other subject matter.

ICT Curriculum Organization

The ICT curriculum organizes technology outcomes around three interrelated categories.

Foundational Operations, Knowledge and Concepts

Outcomes in this category include understanding the nature and impact of technology, the moral and ethical use of technology, mass media in a digitized context, ergonomic and safety issues, and basic computer, telecommunication and multimedia technology operations.

Processes for Productivity

These outcomes focus on the knowledge and skills required to use a variety of basic productivity techniques and tools. These include text composition, data organization, media and process integration, electronic communication navigation, collaboration through electronic means, and graphical, audio and multimedia composition and manipulation.

Communicating, Inquiring, Decision Making and Problem Solving

Outcomes in this category build on the foundational operations, knowledge and concepts, as well as the ability to use a variety of processes. These outcomes include the ability to critically assess information, manage inquiry, solve problems and use research techniques. These outcomes should be addressed within the context of other subjects where students are expected to apply their knowledge and skills in practical situations.

TECHNOLOGY INTEGRATION IN CTS

The CTS curriculum integrates technology skills required for daily living, entry-level work and lifelong learning. Each CTS strand requires students to learn about technology and learn with technology.

Learning About Technology

While students learn about technology in all CTS strands, the Information Processing, Communication Technology and Electro-Technologies strands provide specific focus on the development of knowledge and skills in information, communication and multimedia technology. Technology outcomes are clearly identified in each of these strands through learner outcomes in each course, and directly support and extend competencies identified in the ICT curriculum within the categories of:

- foundational operations, knowledge and concepts
- processes for productivity.

Information Processing

Refer to the *Information Processing Guide to Standards and Implementation*.

The Information Processing strand provides opportunities for students to learn about electronic technologies as they apply to personal use and the business environment. Students develop competencies related to system operations, text/data input, productivity software, applied processing, dynamic environments and programming.

Communication Technology

Refer to the *Communication Technology Guide to Standards and Implementation*.

The Communication Technology strand provides students with a broad understanding of the impact that presentation and communication technology, print, photography and media design have on society. Students develop competencies related to presentation techniques, photography, print communication and the use of audio, video and digital technologies.

Electro-Technologies

Refer to the *Electro-Technologies Guide to Standards and Implementation*.

The Electro-Technologies strand focuses attention on electric and electronic systems and the role of electronics in daily life, major research and scientific developments. Students develop competencies related to fabrication and service principles, power systems, computer logic systems, computer networking systems, communication systems, and robotic and control systems.

Learning with Technology

The CTS curriculum recognizes the expanding influence of technology in all learning environments. CTS students use and apply technology in strand-specific contexts to:

- develop an understanding of difficult concepts and relationships
- perform tasks that are technology-based
- access a range of current information
- collaborate with other learners on a project.

Learning outcomes relevant to the use of technology are embedded throughout the CTS curricula, and extend and apply a range of competencies identified in the ICT curriculum—including those within the category of inquiry, decision making and problem solving. Many CTS strands and courses require students to:

- refine and extend their skills in the use of all levels of technology, from simple hand tools to sophisticated computer and telecommunications technologies
- select and manage available technology to respond to challenges
- use information, communication or multimedia technology as an aid to learning.

STRATEGIES FOR INSTRUCTION IN CTS

Instruction in CTS should use a range of strategies and methodologies that suit the needs of the learner and the nature of learning taking place. No one strategy is appropriate for all courses or learnings within a course, nor for all students. Key to helping students develop career-specific and basic employability skills within the context of any course are:

- flexible time frames for learning
- access to a range of resources and learning activities
- support, encouragement and opportunities for success.

Teachers are encouraged to plan learning experiences that help students:

- understand the outcomes and standards of performance required to succeed in each course
- link theoretical and practical components of learning within each course
- make connections between learning in a particular course, and:
  - what is learned in other CTS strands and curriculum areas
  - future plans for the workplace and/or related post-secondary programs
- become self-directed lifelong learners who are able to adapt to change.

Suggestions for developing a positive CTS learning environment are provided at the end of this section in Chart 3: Positive Classroom Climate Checklist.

Metric and Nonmetric Measurement

Many CTS strands and courses involve the development and use of measurement skills. While SI units have become the principal measuring system used in provincial curriculum, the present use of imperial and other nonmetric units in technical and trade-related occupations makes the application of other measurement systems unavoidable. Students should be given opportunities to develop measurement skills consistent with those required in future career paths. Teachers should:

- use SI units of measurement wherever possible in activities
- use imperial and other nonmetric units only where such measurement parallels its common usage in occupations.

LEARN BY DOING/ACTIVE LEARNING

Active learning occurs when students learn by doing and reflect on the processes used. Active learning requires that students are not just passive recipients of information, but develop the ability to apply what they are learning.

Refer to Appendix 4: Strategies for Instruction in CTS

CTS places an emphasis on learning by doing. Essentially, the teacher's role in this process is that of facilitator, guide and coach. Teachers need to:

- recognize the different ways in which students learn, and plan activities that enable students to use learning processes appropriate to their needs

- plan for deliberate observation and questioning that promote thinking and reflection on learning tasks
- encourage students to observe, verbalize and discuss relationships between theory and practice.

APPLIED LEARNING/MAKING CONNECTIONS

CTS courses provide career-specific contexts through which students can reinforce, extend and apply learning from other core and optional programs. As students recognize the relevance of prior learning to their future lives, they are motivated to develop higher levels of competency. Course planning should focus attention on ways to help students make connections between abstract concepts developed in other curriculum areas and their application in practical settings.

Refer to Appendix 4: Strategies for Instruction in CTS.

Teachers can enhance students' ability to make connections across the curriculum by:

- increasing their sensitivity to the content of other subject areas and working with other teachers to design courses, lessons and activities that strengthen linkages
- identifying prior learnings in other subject areas that apply in practical CTS contexts and being prepared to review or teach particular core concepts/skills prior to their use in a particular CTS course
- designing projects and assignments that purposely link learnings from one discipline/subject to another and collaborating with other teachers in their delivery to help students make connections in their learning across several CTS strands or other disciplines
- becoming familiar with the processes used for inquiry, research, reporting and decision making in other disciplines, and providing opportunities for students to use similar processes and vocabulary in CTS settings.

TEAMWORK/COOPERATIVE LEARNING

The ability to work as part of a team is essential in the workplace. The transition to a technology- and information-based society requires today's workers to pool their expertise. This trend can be expected to become even more pronounced in the future.

Cooperative learning also promotes active learning and encourages individual and group enterprise. Group learning can help students to develop increasingly independent and responsible learning habits and to become more self-disciplined.

CTS offers many opportunities for students to work in team settings, formally and informally. The teacher's role in cooperative learning involves:

Refer to Appendix 4: Strategies for Instruction in CTS

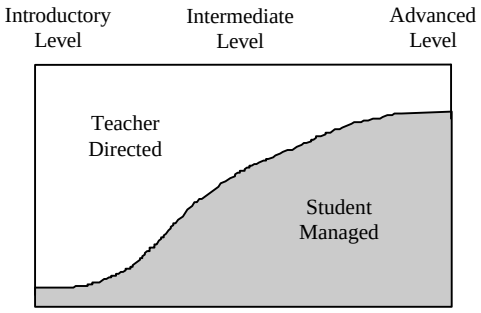
- communicating objectives, assignments and tasks
- determining the size and composition of groups
- arranging for appropriate facilities, equipment and materials
- informing the group of behavioural expectations
- acting as a resource person, coach and monitor
- evaluating the product of the group and performance of each group member.

Teachers may wish to use Form 3: Group Member Effectiveness, included at the end of this section, to guide their observation and evaluation of student performance in group settings.

MULTI-ACTIVITY LEARNING

Multi-activity learning supports the concurrent delivery of different courses and/or learning tasks within a common time frame. It combines elements of active learning and cooperative learning. The process empowers students, working individually or in groups, to assume responsibility for completing courses or course components within a specified time period.

In multi-activity learning, teacher and student share responsibility for managing the learning process. The process requires students to become self-directed learners who are able to manage their time, energy and resources in effective ways. As students move from introductory to advanced levels and become more proficient in managing their learning, teachers may introduce a larger number of course and activity choices.



Multi-activity learning requires much structure and planning prior to implementation, as well as class time spent in orienting students to expectations and the learning process. The role of the teacher in multi-activity learning is to:

- plan and develop a range of learning activities
- facilitate and support the learning process for individual students or groups of students
- evaluate student performance and learning outcomes.

Teachers and students may wish to use Form 4: Sample Learning Contract, included at the end of this section, in establishing plans for multi-activity learning.

ASSESSING STUDENT ACHIEVEMENT

CURRICULUM AND ASSESSMENT STANDARDS

As a competency-based curriculum, CTS defines curriculum standards—what students must know and be able to do, and assessment standards—the criteria and conditions for assessing student performance. Together, the curriculum and assessment standards:

- establish an appropriate level of challenge and rigour for learning within each strand and course
- define knowledge and skills relevant to preparing students for further learning and the workplace
- enable students to focus their efforts on key learnings
- ensure fairness and equity in how student's efforts are judged
- provide a common base of understanding about the competencies developed in each CTS course.

Consistent application of curriculum and assessment standards throughout the learning process is critical to establishing and maintaining the credibility of CTS programs with business, industry, post-secondary institutions and other community stakeholders.

Curriculum and assessment standards are defined in each CTS course through:

- general outcomes (module learner expectations in 1997 documents)—the exit-level competencies that students are expected to achieve to complete a course. Each learner outcome defines and describes critical behaviours that can be measured and observed
- criteria and conditions—the behaviours a student must demonstrate to achieve each exit-level competency and the conditions under which that competency should be judged. The conditions and criteria specify a minimum standard for performance, and include a reference to one or more assessment tools when appropriate
- suggested emphases—guidelines for the relative significance of each general outcome. Though not prescriptive, these guidelines can be used to allocate instructional time and/or determine percentage marks for a course.

Refer to the *CTS Guide to Standards and Implementation*:
- Section D: Introductory Level
- Section E: Intermediate Level
- Section F: Advanced Level.

ASSESSMENT TOOLS

Refer to the *CTS Guide to Standards and Implementation*, Section G: Assessment Tools.

A range of assessment tools are provided to further assist teachers in assessing student performance in each CTS course. Each assessment tool communicates, through a five-point rating scale, a minimum standard for successfully completing a learning task. When used collectively for a particular course, the assessment tools provide a benchmark for assessing successful course completion in an equitable and consistent manner.

Depending on the way the classroom is organized for instruction, assessment tools may be used with individual students upon completion of specific learning tasks, or with the entire class at the end of a learning period.

Although the assessment tools focus on final or summative assessment, teachers should continue to use formative assessment throughout the learning process as they direct and respond to student efforts. As formative and summative assessment are closely linked, some teachers may find it beneficial to modify the assessment tools provided for particular courses during the instructional process.

Teachers may develop and use alternative assessment tools providing these tools address standards that are consistent with the minimum competency defined in each course.

ASSESSING ACHIEVEMENT IN JUNIOR HIGH SCHOOL

Assessing Achievement

Assessment of student achievement in junior high school is based on successfully demonstrating <u>all</u> or <u>part</u> of the general outcomes for any given course to the minimum standard defined for each competency. Consistent application of curriculum and assessment standards is critical to maintaining the credibility of student learning in CTS programs.

Reporting Achievement

As in other junior high school courses, student achievement is reported to students and parents in accordance with local policy. Reporting practices should provide information to parents about:

- what their child knows and can do in CTS courses
- how well their child is doing in these courses.

At the junior high school level, student achievement is not reported to Alberta Education.

Tracking Course Completion

Junior high schools need to implement tracking procedures to maintain appropriate records of the courses and/or general outcomes completed by individual students. Tracking procedures can be:

- quite simple, involving the use of a card for each student to record all completed courses and/or outcomes
- more complex, involving spreadsheets and databases.

Tracking procedures at the school level should be complemented with student portfolios and/or other methods of profiling the work completed by individual students. A per cent mark for completed courses is required by senior high schools if prior learning is recognized through the granting of credits.

ASSESSING ACHIEVEMENT IN SENIOR HIGH SCHOOL

Assessing Achievement

Assessment of student achievement in senior high school is based on successfully demonstrating <u>all</u> of the general outcomes for any given course to the standard defined for each competency. Consistent application of curriculum and assessment standards is critical to maintaining the credibility of student learning in CTS courses.

When a student is able to successfully demonstrate all of the general outcomes for any given CTS course to the standard defined for each competency, the teacher designates the course as successfully completed and assigns a percentage grade for the course—a mark not less than 50%.

Reporting Achievement

Each senior high school reports student achievement in CTS courses to the Educational Information Exchange (EIE) on the basis of individual 1-credit courses, using the seven character alphanumeric codes provided on the scope and sequence chart for each CTS strand. Course reporting is done electronically using appropriate file formats, and includes all:

- successfully completed (passed) courses (i.e., courses in which the student has demonstrated <u>all</u> of the general outcomes to the established standard), along with a mark not less than 50% for each successfully completed course
- unsuccessful courses (i.e., courses in which the student has not demonstrated <u>all</u> of the general outcomes to the established standard).

Refer to the *Guide to Education: ECS to Grade 12*.

The senior high school principal may accept a recommendation from the junior high school principal that a student has completed successfully all of the course outcomes and should be given credit. A mark of "P" for pass, or a percentage grade, may be assigned to the student by the senior high school principal. This course can then be included when reporting student achievement through the normal student records system and will appear on the student's transcript.

Refer to the *Funding Manual for School Authorities*.

CTS courses reported as unsuccessful will need to be further identified regarding their eligibility for funding.

For information regarding the reporting of challenged courses and courses completed in junior high school, see the CTS in Senior High School, Effective Transitions section of this manual.

As in other senior high school courses, student achievement is reported to students and parents in accordance with local policy.

Tracking Course Completion

Refer to the *Electronic Data Exchange User Guide* and/or *Manual Forms User Guide*.

Tracking systems used by senior high schools to record the completion of individual CTS courses should align with the system used by EIE for reporting student achievement. Schools may choose to supplement their tracking of course completion with information regarding achievement in junior high school.

Course tracking and record keeping at the senior high school level should be complemented with student portfolios and/or other methods of profiling the competencies and learning experiences of individual students.

FUNDING FOR CTS

The sources of funding described below support Alberta Learning's shift to site-based management. Local school systems are responsible for assessing needs and making appropriate funding applications. School systems also retain responsibility for distributing funds to schools equitably.

Basic Instruction Funding

Basic instruction funding for junior high school students is independent of course completion. Funding is based on a per student grant, with the amount of the grant subject to adjustment from time to time.

Basic instruction funding for senior high school students is provided based on the principle that instructional services are provided and courses are completed. All senior high school course completions claimed for funding must meet the conditions of funding as outlined in the *Funding Manual for School Authorities*.

Refer to the *Funding Manual for School Authorities*.

Further inquiries regarding basic instruction funding should be directed to the School Finance Branch, Alberta Learning.

Capital Funding

Capital funds are made available each year for new construction and major modernization projects. This funding is provided to school boards for capital projects that may include the upgrading of an existing CTS lab, construction of new space, and associated equipment costs.

Further inquiries regarding capital funding should be directed to Alberta Infrastructure.

POLICIES AND GUIDELINES FOR IMPLEMENTING CTS COURSES

Refer to Appendix 6: Policies and Guidelines for Implementing CTS Courses in Senior High Schools.

Refer to the *Funding Manual for School Authorities*.

Appendix 6 provides a summary of the policies and guidelines, as stated in the *Guide to Education: ECS to Grade 12* and the *Funding Manual for School Authorities*, for planning, delivering and reporting CTS courses in senior high schools.

The information included in Appendix 6 clarifies the practices to be followed by senior high schools in:

- providing access to instruction
- addressing prerequisite requirements for CTS courses
- assessing CTS course completion
- determining when a CTS course is eligible for funding
- maintaining the documentation required to support funding claims
- reporting CTS courses
- programming for application and transfer of learning.

CHART 1: CTS STRANDS THAT REPLACE PRACTICAL ARTS COURSES

Refer to the *Guide to Standards and Implementation*, Section H, for a correlation of CTS courses to former practical arts courses.

CTS Strand	Practical Arts Courses Replaced by CTS
Agriculture	Agriculture: Land and Life 7–8–9 Agriculture 10–20–30 Horticulture 12–22–32
Career Transitions	no related practical arts course
Communication Technology	Industrial Education 7–8–9 (Visual Communication) Graphic Arts 22–32 Industrial Education 10–20–30 (Visual Communication) Visual Communication 12–22–32
Community Health	Home Economics 7–8–9 (Family) Health Sciences 12–22–32 Personal Living Skills 10–20–30
Construction Technologies	Industrial Education 7–8–9 (Materials) Building Construction 12–22–32 Electricity 12–22–32 Industrial Education 10–20–30 (Materials) Industrial Education 10–20–30 (Electricity/Electronics)
Cosmetology Studies	Beauty Culture 12–22–32
Design Studies	Drafting 10–20 Drafting 12–22–32
Electro-Technologies	Electronics 12–22–32 Industrial Education 10–20–30 (Electricity/Electronics)
Energy and Mines	no related practical arts course
Enterprise and Innovation	no related practical arts course
Fabrication Studies	Industrial Education 7–8–9 (Materials) Industrial Education 10–20–30 (Materials) Machine Shop 12–22–32 Piping 12–22–32 Sheet Metal 12–22–32 Welding 12–22–32
Fashion Studies	Home Economics 7–8–9 (Clothing) Clothing and Textiles 10–20–30
Financial Management	Recordkeeping 10 Business Calculations 20 (Components) Accounting 10–20–30

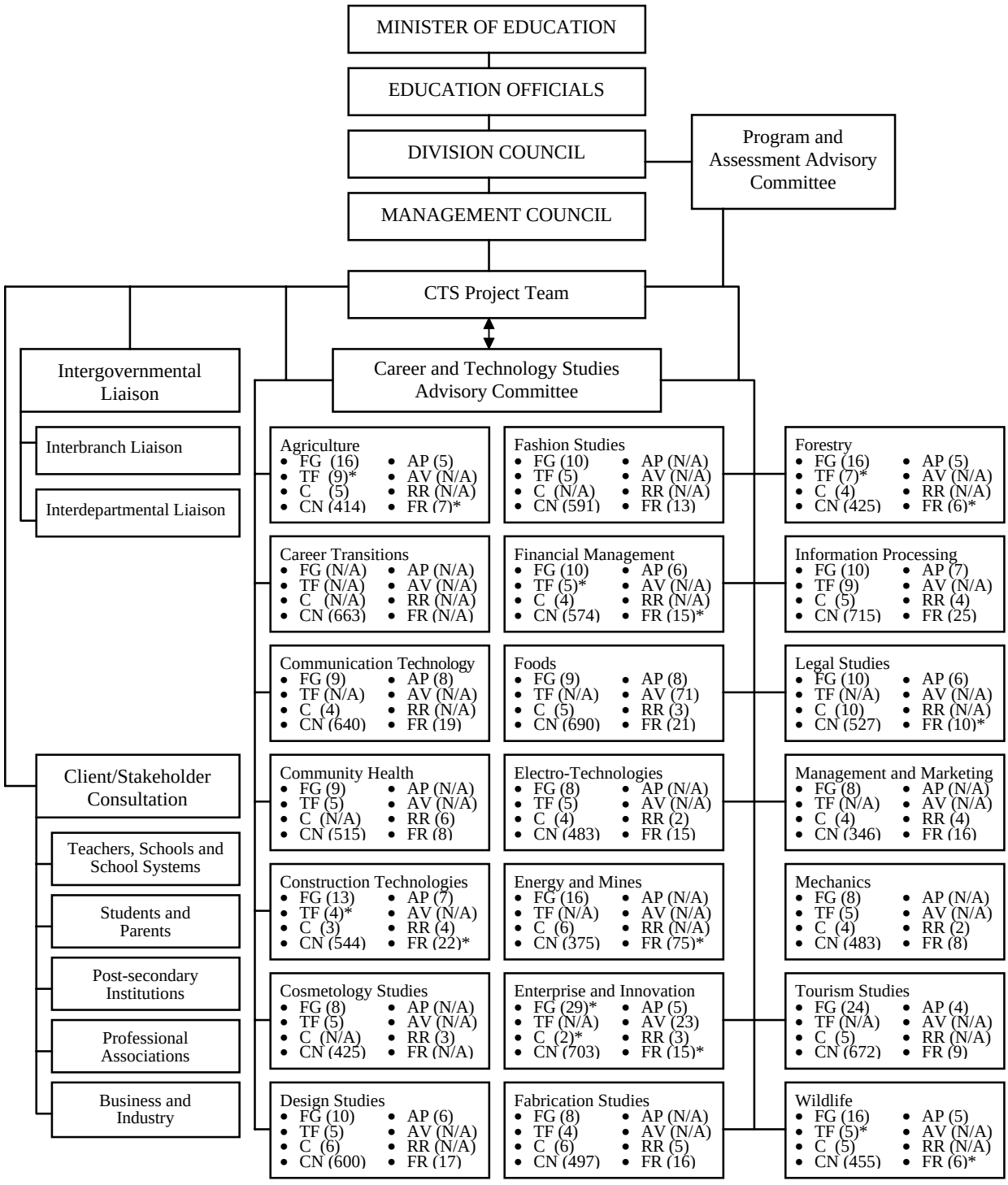
(continued)

(continued)

CTS Strand	Practical Arts Courses Replaced by CTS
Foods	Home Economics 7–8–9 (Foods) Food Preparation 12–22–32 Food Studies 10–20–30
Forestry	no related practical arts course
Information Processing	Computer Studies 7–8–9 Business Calculations 20 (Components) Business Communications 20 (Components) Computer Literacy 10 Computer Processing 10–20–30 Dicta Typing 20 Shorthand 20–30 Typewriting 9 Typewriting 10–20–30 Word Processing
Legal Studies	Law 20–30
Logistics	no related practical arts course
Management and Marketing	Business Studies 9 Basic Business 20–30 Marketing 20–30 Office Procedures 20–30 (Components) Business Communications 20 (Components) Dicta Typing 20 Business Calculations 20 (Components)
Mechanics	Industrial Education 7–8–9 (Power) Mechanics 12 Automotives 22–32 Related Mechanics 22–32 Autobody 12–22–32 Industrial Education 10–20–30 (Power Technology) Driver and Traffic Safety Education 10
Tourism Studies	no related practical arts course
Wildlife	no related practical arts course

CHART 2: CTS ADVISORY AND CONSULTATION NETWORK

(as of August 1995)



Key: FG – Focus Group
TF – Task Force
C – Contractors
CN – Communication Network
AP – Assessment Panel
AV – Assessment Validators
RR – Resource Review
FR – Field Review
(#) – Number of Committee Members
(N/A) – Not Applicable
* – Work Complete

CHART 3: POSITIVE CLASSROOM CLIMATE CHECKLIST

These classroom management strategies may be used as a basis for establishing a positive classroom climate.

- ☐ Did I greet my students warmly?
- ☐ Are the students aware of the objective for today's activities?
- ☐ Did I help focus the class or individuals on today's activities?
- ☐ Did I review the major concepts from the previous session?
- ☐ Did I explain the purpose of today's lesson or activity clearly and accurately?
- ☐ Did I ask processing questions throughout today's lesson to check for understanding?
- ☐ Did I take five minutes at the end of the class period to allow students to summarize today's learnings?
- ☐ Did I respond to their assigned work in verbal or written form?
- ☐ Did I model all of the classroom ground rules on my own behaviour?
- ☐ Did I consistently enforce the ground rules?
- ☐ Did I consciously try to support the students by focusing on their positive qualities and praising their efforts?
- ☐ Did I handle problems quickly and discreetly, treating my students with respect and fairness?
- ☐ Am I creating a safe, supportive environment in which my students may grow and learn?
- ☐ Am I emphasizing the "specialness" of each individual student, the group as a whole, and the course itself?
- ☐ Am I genuinely encouraging parent and community involvement?

The following forms have been removed because they are out-of-date.

Form 1: ***Evergreening CTS—Survey and Response Form, pages 53–58 (1998)***

Form 2: ***CTS Communication Network Registration Form, pages 59–60 (1998)***

Current versions of the CTS Survey and Response Form and of the CTS Curriculum and Resource Maintenance Registration Form are provided in the most recent issue of the* CTS Communication Network Update*, which is available through the CTS section of the Alberta Learning web site.

FORM 3: GROUP MEMBER EFFECTIVENESS

Name: _____ **Date**: _____

Project: _____ **Group:** _____

Observations: **4** = Always; **3** = Frequently; **2** = Occasionally; **1** = Never

Behaviours	**Observations**			
The student:	**4**	**3**	**2**	**1**
was on time	☐	☐	☐	☐
attended group sessions	☐	☐	☐	☐
took an active part and contributed information and ideas	☐	☐	☐	☐
had a positive, rather than negative or critical, approach	☐	☐	☐	☐
listened when others spoke	☐	☐	☐	☐
respected and interacted with other members	☐	☐	☐	☐
respected individual differences	☐	☐	☐	☐
avoided prejudice and kept biases out	☐	☐	☐	☐
was open to the ideas and suggestions of others	☐	☐	☐	☐
encouraged noncontributors to take part	☐	☐	☐	☐
accepted responsibility for the consequences of his or her behaviour	☐	☐	☐	☐
was sensitive to the feelings and concerns of others	☐	☐	☐	☐
was genuine and open	☐	☐	☐	☐
supported others and helped them articulate their ideas	☐	☐	☐	☐
helped the group by summarizing, clarifying, mediating, praising and encouraging	☐	☐	☐	☐
Strategies for Improvement				

FORM 4: SAMPLE LEARNING CONTRACT

An agreement between a student and a teacher can be used to focus a student's attention on class expectations. This example could be altered as necessary.

Student: _____ Date: _____

Cluster/Course Name: _____ Teacher: _____

LEARNER EXPECTATIONS (of cluster/course):

1. _____
2. _____
3. _____
4. _____

ASSIGNMENTS TO BE SUCCESSFULLY COMPLETED (in order to finish the cluster/course):

1. _____
2. _____
3. _____
4. _____

PERFORMANCE INDICATORS (specific behaviours necessary for successful completion of the cluster/course):

1. _____
2. _____
3. _____
4. _____

I understand the requirements for cluster/course completion, and I will complete the learning as noted above.

_____	_____	_____
Date	Signature of Student	Witnessed by Parent(s) or Guardian