Communication Production Technology 10, 20, 30
Curriculum Guide

A Practical and Applied Art

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Introduction

Within Core Curriculum, the Practical and Applied Arts (PAA) is a major area of study that incorporates five traditional areas of Home Economics, Business Education, Work Experience Education/Career Education, Computer Education, and Industrial Arts Education. Saskatchewan Education, its educational partners, and other stakeholders have collaborated to complete the PAA renewal. Some PAA curriculum guidelines have been updated; some components have been integrated, adapted, or deleted; some Locally Developed Courses have been elevated to provincial status; and some new courses and guides have been developed.

A companion document, *Practical and Applied Arts Handbook*, provides background on Core Curriculum philosophy, perspectives, and initiatives. The handbook provides a renewed set of goals for PAA. It presents additional information about the PAA area of study, including guidelines about work study and related transition-to-work dimensions. In addition, a PAA Information Bulletin provides direction for administrators and others regarding the implementation of PAA courses. Lists of recommended resources for all guidelines will be compiled into a PAA Bibliography with periodic updates.

Philosophy and Rationale

Communication Production Technology 10, 20, 30 develops knowledge, skills, and abilities in audio, video, and multimedia production technologies. Throughout the course, students will participate in hands-on production-oriented activities, labs, and projects. Students will also engage in research and use industry specific terminology. Wherever possible, students will be learning concepts, vocabulary, and skills within the context of an actual production experience. The course will encourage students to work as a contributing member of a production team, engaged in processes commonly used within the communication production industry.

The Communication Production Technology course encourages the establishment of close links between schools and industry. For example, students should be exposed to site visits, work study, and job shadowing opportunities whenever possible. In an effort to provide students with employability skills in the industry, student assessment and evaluation should consider established and innovative practices within the industry. At the 30 level, students will be expected to compile a presentation portfolio of their work.

Aim, Goals, and Foundational Objectives

Aim

The *Communication Production Technology 10, 20, 30 Curriculum Guide* is designed to provide opportunities for students to acquire and develop knowledge, skills, and abilities in audio, video, and multimedia production technologies.

Goals

Awareness: To develop knowledge, skills, and abilities used in communication production technologies.

Business Environment: To respond to current and innovative practices of the video, audio, and multimedia industry sector.

Career and Employment: To develop team-building skills, technical skills, and communication skills required for the workplace.

Personal Development: To promote self-esteem, confidence, and a positive attitude to communication production technology and present the results of students' efforts in working and presentation portfolios.

Communications: To develop students' social and communication skills as practitioners, potential employees, and entrepreneurs in the communication production industry sector.

Business and Entrepreneurial Attitudes: To provide a practical approach to developing and using students' skills and abilities in a variety of communication production ventures.

Foundational Objectives

Foundational objectives are the major, general statements that guide what each student is expected to achieve. Foundational objectives indicate the most important knowledge, skills, attitudes/values, and abilities for a student to learn in a particular course. Both the foundational objectives for Communication Production Technology 10, 20, 30 and the common essential learnings (CELs) foundational objectives to be emphasized are stated in each module of this guide. Some of these statements may be repeated or enhanced in different modules for emphasis. The foundational objectives of the core modules of the Communication Production Technology 10, 20, 30 curriculum are presented below.

- To develop an understanding of the scope and expectations of the Communication Production Technology course.
- To understand the role and influence of communication technology in today's world.
- To develop an awareness of the three stages of communication production.
- To develop an awareness of current industry practice at each of the three production stages.
- To understand legal and ethical issues associated with communication production, and become familiar with the process of obtaining copyright permission.
- To become familiar with the range of career opportunities within the industry, and understand the roles and responsibilities of various personnel.
- To develop knowledge of basic video production concepts, equipment, and processes.
- To develop knowledge of basic audio production concepts, equipment, and processes.
- To develop knowledge of basic multimedia production concepts, equipment, and processes.
- To demonstrate basic understanding of communication production technology through the development of one or more projects.
- To increase and refine knowledge, skills, and abilities in video production.
- To increase and refine knowledge, skills, and abilities in audio production.
- To increase and refine knowledge, skills, and abilities in multimedia production.
- To demonstrate understanding of communication production technology through development of one or more projects.
- To incorporate techniques and practices recommended within the industry into projects.
- To demonstrate understanding of communication production technology through development of one or more projects.
- To demonstrate a high level of critical and creative thinking regarding decision making and the application of techniques and practices recommended within the industry, in projects.

Common Essential Learnings

Communication Production Technology encourages full incorporation of the common essential learnings (CELs). The incorporation of the CELs into Practical and Applied Arts programs offers many opportunities for students to develop knowledge, skills, and abilities necessary to make the transition to career, work, and adult life.

The CELs also establish a link between Transition-to-Work dimensions and PAA course content. The Transition-to-Work dimensions included in the PAA courses are: apprenticeship, career exploration/development, community project, employability skills, entrepreneurial skills, occupational skills, personal accountability, processing of information, teamwork, and work study/experience. Throughout PAA curricula, the CELs foundational objectives are stated at the beginning of each module with the following codes:

COM = Communication
NUM = Numeracy
CCT = Critical and Creative Thinking
TL = Technological Literacy
PSVS = Personal and Social Values and Skills
IL = Independent Learning

Selected learning objectives for the CELs are included throughout the modules. It is anticipated that teachers will find additional ways to incorporate the CELs into their classroom instruction.

Course Components and Considerations

Communication production technologies are constantly changing and evolving. Resource-based learning encourages teachers to review continuously the resources that are available within and outside their community. This will help teachers gain access to a wide range of current information, and both human and technical support.

The Communication Production Technology course consists of core and optional modules as outlined in the Module Overview Chart. To receive credit, students must complete a total of 100 hours at each level. It is recommended that Modules 1, 2 and 4 be taught at Level 10. It is recommended that module 4 be introduced at the 10 level and integrated at the 20 and 30 levels. Module 3 may be taught at any one level or integrated into all three levels, as appropriate. It is important to remember that when module content is integrated throughout a course of study, all of the learning objectives of that module must be addressed. Suggestions for production projects at the three levels are provided in Appendix B.

Communication Production Technology 10 introduces students to the course expectations and provides them with experiences that develop basic knowledge, skills, and abilities in all three of audio, video and multimedia production. Students will be introduced to the three stages of production including pre-production, production, and post-production. They will be involved in basic audio, video, and multimedia production activities, and will participate in one or more production projects. Post-production activities will be minimal at this level.

Communication Production Technology 20 increases students' understanding of important knowledge, skills, and abilities required in the creation of audio, video, and multimedia products. Students will be engaged in more complex processes than they experienced at Level 10, and will participate in one or more production projects. Post-production activities may be minimal at this level. Students will be expected to increase their understanding of all three of audio, video, and multimedia production.

Communication Production Technology 30 engages students in one or more major projects that may focus on either audio, video, or multimedia production or a combination of these. For example, one class or group of students may focus on audio production and may record and produce a music CD or develop and broadcast a radio drama. Another class or group of students may focus on video production and may develop a video to be showcased at a school or community film and video festival. Another class or group of students may focus on multimedia production and may develop an interactive website, or present an advanced level multimedia presentation to members of the community. It is expected that students will engage in more sophisticated post-production activities at Level 30.

The Optional Modules allow classes, groups, or individual students to increase their experience in one or more areas of production. Students may study a specific area of interest such as animation or special effects, or they may research and explore new software and technology. Some students may make use of Work Study opportunities with communication production companies in their communities. At Level 30, individual students may be allowed to undertake independent study projects in specific areas of interest.

Connections to Other Subject Areas

The Communication Production Technology (CPT) course, while focusing primarily on the technical and procedural aspects of production, has cross-curricular relevance for teachers and students. For example, students who have studied or are currently studying Communication 20, Media Studies 20, or the Film and Video module in Arts Education 10, 20, 30 may find the CPT course content complementary. Collaboration will allow students to extend their understanding and ideas from those related classes into fully developed production projects. Students in Creative Writing 20 or Drama 10, 20, 30 may be involved in scriptwriting activities or dramatic productions that could be explored through video or audio productions in CPT classes. CPT students involved in multimedia production projects may create websites to showcase student work from other classes such as science, visual art or mathematics. Students involved in other Practical and Applied Arts courses such as Graphic Arts, Design Studies or Photography may apply their learning in those areas to their production projects. Teachers should explore opportunities to collaborate with other classes to enrich the students' CPT experience.

Work Study

Work Study provides students with opportunity to enhance knowledge and to develop skills by interacting with industry professionals and using equipment not available in a school setting. Refer to the Work Study Guidelines included in the *Practical and Applied Arts Handbook* and the *Career and Work Exploration Curriculum Guide* for information on student preparation, employer partnerships, and teacher responsibilities.

Portfolios

Portfolios encourage students to collect examples of their work as they progress through the various activities, labs, and production projects. Selecting particular items to include in a portfolio encourages students to reflect on what they have learned or accomplished and what they have yet to learn. Portfolio items may include: journal notes, drafts, photographs, audio or video tapes, computer discs, etc. Portfolios may be used for peer, teacher, and self-assessments, and to showcase selected works for parents, post-secondary institutions, or potential employers.

The development of a portfolio is an important communication tool because it provides information for students, teachers, post-secondary institutions, community organizations and potential employers.

Portfolios can help students:
- reflect on personal growth and accomplishment
- see links between home, school and community education and activities
- collect materials to prepare applications for post-secondary education program entrance and scholarships
- collect materials to prepare for employment applications
- focus on career planning.

Portfolios can help teachers:
- provide a framework for independent learning strategies for the student
- communicate student learning from one school year to another in a specific area of study
- identify career planning needs for students
- assess and evaluate the student's progress and achievement in a course of study

Portfolios can help post-secondary institutions:
- determine suitable candidates for awards and scholarships
- evaluate candidates for program entrance
- evaluate prior learning for program placement

Portfolios can help communities:
- reflect on the involvement in a student's education, and the support offered to learners
- demonstrate the link between the home, school, and community in education

Portfolios can help potential employers:
- identify employable skills desired in future employees
- provide evidence of knowledge and skill development of potential employees

For the purposes of Communication Production Technology, two kinds of portfolios are used.

Working Portfolio

Students collect work over time in a "working folder". Each student should also keep a notebook of observations, critiques, production ideas, and reflections as part of his or her working portfolio. Items in this portfolio may be used for the purpose of ongoing and summative peer, teacher, and self-evaluations.

Working portfolios may be used for purposes of conferencing between student and teacher, teacher and parent, teacher and teacher, or student and student. When a teacher examines a student's portfolio in order to make a decision regarding student progress, the information it contains may become documented evidence for the evaluation.

A daily journal may also become a part of a working portfolio as a means of tracking the student's use of time and to record progress on ideas that are being developed. This will provide the student with a focus for self-directed or independent learning as well as an anecdotal record for part of the course evaluation.

Presentation Portfolio

To compile a presentation portfolio, students should select items from their working portfolio. The presentation portfolio should cover the range of students' experiences and should display their best efforts. The preparation of a presentation portfolio can be an assessment strategy, especially at Level 30. It is strongly suggested that students at the advanced (30) level of Communications Production Technology prepare a presentation portfolio suitable for presentation to potential employers or post-secondary institutions.

Through reflecting, updating and culling, students are able to compile presentation portfolios that display their best collection of work.

Extended Study

The extended study module is designed to provide schools with an opportunity to meet current and future demands that are not provided by current modules in the renewed PAA curriculum.

The flexibility of this module allows a school/school division to design one new module per credit to complement or extend the study of existing pure core modules and optional modules. The extended study module is designed to extend the content of the pure courses and to offer survey course modules beyond the scope of the selection of PAA modules.

The list of possibilities for topics of study or projects for the extended study module approach is as varied as the imagination of those involved in using the module. These optional extended study module guidelines should be used to strengthen the knowledge, skills, and processes advocated in the Practical and Applied Arts curriculum.

It is recommended that a summary of any extended study module be sent to the Regional Superintendent of Curriculum and Instruction.

For more information on the extended study module, refer to the Practical and Applied Arts Handbook.

Resources

A variety of instructional resources have been evaluated and recommended to support resource-based learning within this course. See the *Communication Production Technology 10, 20, 30 An Initial List of Implementation Materials* for resources. Teachers should also refer to the Saskatchewan Education Learning Resources Distribution Centre (LRDC) catalogue. An online ordering service is available.

Distance Learning Materials and Student Resources on the Website

This Communication Production Technology curriculum guide is available online as part of Saskatchewan Education's Evergreen Curriculum at http://www.sasked.gov.sk.ca/docs/paa.html

Interactive materials and resources to support the core modules of this course are also provided at http://www.sasked.gov.sk.ca/docs/cpt/index.html. This area of the website contains information for students about audio, video, and multimedia production, and provides online and hands-on classroom activities for students.

Saskatchewan teachers may submit the online request form to receive free access to the password-protected video production and student portfolio area of the site. Teachers outside Saskatchewan must contact the Learning Technology Unit of Saskatchewan Education for further information. After teachers have previewed the materials and activities on the site, they may wish to submit their list of student names so that the students may access the site, including the secured area provided for student portfolios. Teachers can also access the student portfolios for the purpose of communication, assessment, and evaluation.

Assessment and Evaluation

Student assessment and evaluation allow the teacher to plan and adapt instruction to meet the specific needs of each student. They also allow the teacher to discuss current successes and challenges with students and report progress to parents or guardians. It is important that teachers use a variety of assessment and evaluation strategies to evaluate student progress. Additional information on evaluation of student achievement can be found in Saskatchewan Education documents entitled *Student Evaluation: A Teacher Handbook*, 1991, and *Curriculum Evaluation in Saskatchewan*, 1991.

It is important that the teacher inform students of the assessment strategies to be used in the course, when the assessments will occur, the weighting of each assessment, and how each relates to the overall student evaluation. Weightings should be determined according to the emphasis placed on each area of the course, as suggested in the modules of the curriculum guide.

The *Communication Production Technology 10, 20, 30 Curriculum Guide* suggests many opportunities for teachers to use a variety of instructional and evaluation strategies. Assessment tools useful for teaching PAA are included in the *Practical and Applied Arts Handbook*.

Communication Production Technology is a Practical and Applied Art. One of the major characteristics of this area of study is that students acquire not only knowledge, but the ability to apply this knowledge in practical situations similar to those they might encounter in related industries. When evaluating student achievement, teachers should consider the balance between what students know and what they are able to demonstrate.

Teachers should choose a variety of assessment strategies throughout the course to evaluate knowledge, skills, and abilities. In addition, the Communication Production Technology course proposes that each student develop a portfolio that should account for a substantial portion of the year's mark.

Basic Equipment and Software

Level 10	Equipment • microphones – minimum two • video camera - minimum one. Ideally the cameras will be industrial or professional grade. If not, overrides on automatic functions such as white balance, iris, and focus are desirable so students may adjust these functions manually. • VCR - minimum two • audio cassette player/recorder – minimum one • computer (Internet capable) - minimum one • Internet connection • monitor(s) or TV(s) • tripod(s) • headphones Software • presentation software (e.g., Microsoft Works, Corel Presentation, PowerPoint, Claris Works) • browser (e.g., recent version of Internet Explorer, Netscape) • imaging software (e.g., Photoshop, Draw, various shareware)
Level 20	Equipment Same as Level 10, plus: • audio mixer • microphones - Lavelier, omnidirectional, unidirectional. Two shotgun type and two lapel microphones are desirable. • CD burner • scanner • portable storage Suggested additions: • wireless microphones • ENG lighting kits (3-point) • A nonlinear edit system -- AVID or similar (current video-capable computer, portable storage, 17" multi-sync monitor, compression software, web-authoring software, video and audio editing software) • edit controller and editing VCR (if nonlinear is not available) Software Editing software such as: • Edit DV (Radius) • AVID Cinema • Adobe Premier • Sound editing/mixing software
Level 30	Equipment Same as Level 20. Software • 3D modelling/rendering software • morphing software • authoring software (e.g., Macromedia Director) • illustration software (e.g., Adobe Illustrator, Photoshop)

Module Overview Chart

Module Code	Modules	Suggested Time (hours)
CPTE01	Module 1: Overview of Communication Production Technology (Core)	1-3
CPTE02	Module 2: Introduction to Production Stages (Core)	3-5
CPTE03	Module 3: Legal and Ethical Issues (Core)	2
CPTE04	Module 4: Career Opportunities (Core)	3-10
CPTE05A	Module 5A: Introductory Video Production (Core)	10–20
CPTE05B	Module 5B: Intermediate Video Production (Core)	10–20
CPTE06A	Module 6A: Introductory Audio Production (Core)	10–20
CPTE06B	Module 6B: Intermediate Audio Production (Core)	10–20
CPTE07A	Module 7A: Introductory Multimedia Production (Core)	10–20
CPTE07B	Module 7B: Intermediate Multimedia Production (Core)	10–20
CPTE08A	Module 8A: Introductory Production Project(s) (Core)	20–30
CPTE08B	Module 8B: Intermediate Production Project(s) (Core)	20–30
CPTE08C	Module 8C: Advanced Production Project(s) (Core)	50–100
CPTE09	Module 9: Software and Technology Research and Exploration (Optional)	2
CPTE10	Module 10: Effective Communication (Optional)	2-4
CPTE11	Module 11: Special Effects (Optional)	5
CPTE12	Module 12: Animation (Optional)	20–30
CPTE13	Module 13: CPT Scriptwriting (Optional)	10
CPTE14A, B	Module 14A, B: Work Study Preparation and Follow-up Activities (Optional)	5-10
CPTE15A, B	Module 15A, B: Work Study (Optional)	25-50
CPTE16	Module 16: Advanced Independent Study (Optional)	20-50
CPTE99A, B, C	Module 99A, B, C: Extended Study (Optional)	5-20

Suggested Course Configurations

Module Code	Communication Production Technology 10	Suggested Time (hours)
CPTE01	Module 1: Overview of Communication Production Technology (Core)	1-3
CPTE02	Module 2: Introduction to Production Stages (Core)	3-5
CPTE03	Module 3: Legal and Ethical Issues (Core)	2
CPTE04	Module 4: Career Opportunities (Core)	3-10
CPTE05A	Module 5A: Introductory Video Production (Core)	10-20
CPTE06A	Module 6A: Introductory Audio Production (Core)	10-20
CPTE07A	Module 7A: Introductory Multimedia Production (Core)	10-20
CPTE08A	Module 8A: Introductory Production Project(s) (Core)	20-30
CPTE10	Module 10: Effective Communication (Optional)	2-4
CPTE99	Module 99: Extended Study (Optional)	5-20
	Minimum	100

Module Code	Communication Production Technology 20	Suggested Time (hours)
CPTE05B	Module 5B: Intermediate Video Production (Core)	10-20
CPTE06B	Module 6B: Intermediate Audio Production (Core)	10-20
CPTE07B	Module 7B: Intermediate Multimedia Production (Core)	10-20
CPTE08B	Module 8B: Intermediate Production Project(s) (Core)	20-30
CPTE11	Module 11: Special Effects (Optional)	5
CPTE12	Module 12: Animation (Optional)	20-30
CPTE14	Module 14: Work Study Preparation and Follow-up Activities (Optional)	5-10
CPTE15	Module 15: Work Study (Optional)	25-50
CPTE99	Module 99: Extended Study (Optional)	5-20
	Minimum	100

Module Code	Communication Production Technology 30	Suggested Time (hours)
CPTE08C	Module 8C: Advanced Production Project(s) (Core)	50-100
CPTE09	Module 9: Software and Technology Research and Exploration (Optional)	2
CPTE13	Module 13: CPT Scriptwriting (Optional)	10
CPTE14	Module 14: Work Study Preparation and Follow-up Activities (Optional)	5-10
CPTE15	Module 15: Work Study (Optional)	25-50
CPTE16	Module 16: Advanced Independent Study (Optional)	20-50
CPTE99	Module 99: Extended Study (Optional)	5-20
	Minimum	100

Note: This is a suggested configuration only.

Core and Optional Modules

Module 1: Overview of Communication Production Technology (Core)

Suggested time: 1 - 3 hours **Level:** Introductory
Prerequisite: None

Module Overview
This module provides students with a brief overview of the Communication Production Technology course. Students will consider the significance of communication technology for individuals and societies of the past, present, and future. Various audio, visual, and multimedia production technologies will be discussed as well as their function and role in the communication production industry sector.

Foundational Objectives
- To develop an understanding of the scope and expectations of the Communication Production Technology course.
- To understand the role and influence of communication technology in today's world.

Common Essential Learnings Foundational Objectives
- To develop a contemporary view of technology. (TL)
- To develop students' appreciation of the value and limitations of technology within society. (TL)

Learning Objectives	Notes
1.1 To develop an understanding of the objectives and types of activities included in the Communication Production Technology course.	Provide students with a brief overview of the course, including the core and optional modules. Introduce students to the focus of the course, which is to participate in production labs, projects, and research that will help them develop the knowledge, skills, and procedures used in the communication production technology industry. Clarify that, for the purposes of this course, communication production technology includes: • video • audio • multimedia.
1.2 To identify various types of communication production technology.	Ask students to list the kinds of products and services they think are included in the communication production industry sector. Examples might include news and sports broadcasts, films, television dramas, music CDs, and Internet web pages.
1.3 To explore the distributions and uses of technology in the home, school, and community. (TL)	Have the students come up with some broad categories for the related products and services they have listed, such as print, broadcast, screen industries, and audio recordings. Using the students' broad categories and initial lists, create a "communication technology" concept map including the equipment and other technologies used to produce the products and services listed. Examples might include video cameras, soundboards, microphones, computers, and software. Be sure to consider video, audio, and multimedia technologies used in radio, television, and filmmaking, and on the Internet. (Keep the concept map so that students can add to it as they learn more about technologies throughout the course.)

Learning Objectives **Notes**

	Discuss the class's concept map. Ask students questions such as the following: • What range of knowledge and skills do they think are necessary for people employed in this rapidly growing sector? • What types of skills do they think would be required to create high quality products using the various technologies? Discuss the skills the students would like to learn in this course and beyond. Using the class's concept map as a reference, have the students create a master list of the skills they think they would need in order to work in this industry. Search the Internet to find sites that describe or illustrate various types of communication technologies. Discuss student findings and websites.
1.4 To begin to understand the significance of mass communication in their daily lives.	Ask students to think about spending a few weeks without any of the communication tools we have at our disposal today. Remind students about global systems currently operating: cellular phones, satellite receiving dishes, television and radio broadcast systems, ATM banking systems, national defence systems, the Internet, stock market money tracking systems, etc. What if everything shut down?
1.5 To understand the impact of technology. (TL)	Ask students to write a paragraph describing what they think might happen if all global technology systems shut down. Ask different students to focus on each of the four following topics: the effects on themselves, the effects on life at home, the effects on the community, the effects around the world. Create a "What If…" display for the students' paragraphs, either on a classroom bulletin board or the school's website. OR Have students meet in small groups to discuss the above four topics and share their findings with the rest of the class.
1.6 To become familiar with the evolution of some of the major communication production technologies.	Discuss the evolution of communication technology including print, audio, video, film, television, and multimedia systems. Have students conduct research and develop a timeline of media developments. OR
1.7 To explore the historical developments of particular technologies. (TL)	Provide students with questions such as the following and ask individual students or small groups to find answers: • Before the advent of mass communication, books and documents were copied by hand and were rare and precious. How do you think this would affect the power structure in a society? What effect did the invention of the printing press have on societies? • Beginning with the printing press, what communication inventions have had major impacts on societies worldwide? • What impact do you think developments in mass communication have had on our attitudes and understanding of other cultures and societies around the world?

Learning Objectives	Notes
	OR Have students consider the silent film era in relation to recent advances in film. View excerpts from videos that document film history or technological developments in the industry. Explain to students that this is just one concrete example of how advancements in technology have affected the communication industry.
1.8 To develop a notebook, learning log, or journal that will record students' ideas, activities, production plans, observations, and reflections.	Explain to students that they will be expected to keep a notebook in which they will record their production ideas, plans, time use, individual and group accomplishments, and reflections or critiques. The notebooks will also demonstrate students' understanding of concepts and terminology. As students encounter new vocabulary and procedures they can record them in their notebooks. The notebooks will become part of each student's portfolio. Have students write their first entry in their notebooks: a paragraph explaining their expectations for what they will learn in the CPT course.
1.9 To understand expectations and the components of a CPT working portfolio.	The working portfolios will provide the teacher with data for assessing the students' progress in CPT. Review with students the format, components, and expectations of a student working portfolio. Remind students that the production process is as important as the product. Therefore, the material they will be asked to include in their portfolios will be a reflection of their learning at various stages in the production process. Explain to students that their portfolios might include: • notebooks and logs • video tapes • audio cassettes • computer disks • examples of work at the stages of pre-production, production, and post-production • reflections on their work at the various stages • peer, teacher, and self-assessments. Explain to students that, at the 30 level, they will be compiling a "presentation portfolio". This portfolio will be a compilation of their best work and may be shown to prospective employers or post-secondary institutions that require a portfolio as a component of an entrance application.
1.10 To clarify school and CPT class policies regarding appropriate subject matter, images, and language for student projects.	Inform students of such policies. Discuss in the context of policies in the communication industry. Make sure students understand that the school's and class's policies will be enforced.

	Learning Objectives	Notes
1.11	To understand that both process and product assessment are important in this course.	Students should continually assess their own learning and progress in their labs and production projects. Reflection and self-assessment are essential to the problem-solving approach required by this course. Students should understand that the learning they acquire through the production process is as important as their finished product. That said, students will also be asked to assess the product, and to determine criteria for assessing the quality of their products. Ask students how they might assess their own processes during their work on a production project. Give them a hypothetical situation; e.g., they are working on a multimedia presentation to commemorate a family member's birthday or a special anniversary. How might they assess their planning? What criteria might they use to assess their work throughout the process, other than the quality of the finished product? Brainstorm a list of criteria for assessing their process. Now have them think about the product. Brainstorm a list of criteria for assessing the product. How are the two lists of criteria different? Discuss. Reinforce that both process and product assessments will be used in determining the students' grades for the CPT course. They will be expected to assess their own processes and products, as well as those of their peers. These assessments will be important items in their portfolios. **Note:** In the production modules, students and teacher together should determine criteria for assessing the quality of specific products. They might do this by referring to books and websites, viewing/listening to exemplary products, and consulting experts in communication production technology. As the course progresses, lists of criteria should be displayed for student reference.

Module 2: Introduction to Production Stages (Core)

Suggested time: 3 - 5 hours **Level:** Introductory
Prerequisite: Module 1

Module Overview
This module introduces students to the three stages of production commonly used in the communication production industry. The stages are pre-production, production, and post-production.

Students will participate in some basic pre-production activities. They will begin to understand the need to apply industry recommended practices and techniques at each stage to ensure high quality in audio, visual, and multimedia products.

Foundational Objectives
- To develop an awareness of the three stages of communication production: pre-production, production, and post-production.
- To develop an awareness of current industry practice at each of the three production stages.

Common Essential Learnings Foundational Objectives
- To enable students to understand and use the vocabulary, structures and forms of expression that characterize the communications production process. (COM)
- To develop an understanding that technology both shapes and is shaped by society. (TL)

Learning Objectives	Notes
2.1 To examine the stages and associated current practices of professionals in the field of communication production.	Introduce students to the three stages of production: • *pre-production*: planning • *production*: creating the product • *post-production*: refining and editing the final product. Discuss current industry practices and associated techniques for each stage. Although students will be introduced to each stage in this module, the activities focus on the pre-production stage. Students will not begin production activities until they reach Module 5, the first production module. Students should understand that a successful, broadcast quality video, audio, or multimedia product is the result of following recommended practices and maintaining high standards through each stage of production. Following these practices may be time-consuming and laborious but they are very much part of the communication production industry.
2.2 To explore the role and influence of technology in gathering, processing, and disseminating information. (TL)	If possible, have students work with industry specialists to observe high quality production processes and technical standards. Interviews with industry specialists may be conducted through the Internet. OR Have students bring in examples of products they believe demonstrate great skill with communication technology. (For example, students might bring in video excerpts, audio recordings, CD-ROMs or sample web pages.) Have students justify their selection of these examples through individual and class critiques. OR Show students excerpts of communications products that reflect exemplary production techniques. These might include filmmaking techniques, cutting edge websites, or music recordings.

Learning Objectives	Notes
2.3 To understand tasks and skills required in the pre-production stage for audio, video, and multimedia projects.	**Pre-Production Stage** Inform the students that the labs in this module focus on pre-production activities, although they will first be introduced to all three production stages. Production and post-production activities will be encountered in later modules. In this module, students may choose to work on pre-production activities that will form the basis for production work in Module 8. Pre-production includes all activities related to planning. The following are examples: • setting up the production team • identifying tasks • establishing timelines • preparing a treatment and/or script • storyboarding • casting • gathering equipment and props • finding locations • scheduling (equipment, shooting, personnel) • preparing various logs • establishing timelines.
2.4 To understand tasks and skills required in the production stage for audio, video, and multimedia projects.	**Production Stage** Remind students that they will be doing only pre-production activities in this module. They will be briefly introduced to the production and post-production stages now, so that they know what they will encounter in the production modules that follow. When students study the production modules of this course they will encounter the following in each medium: **Video Production** • working in production teams • following storyboards • rehearsing • setting up locations and blocking shots • camera operation and techniques (shooting) • recording audio with/without external microphones • lighting set-ups and techniques • equipment maintenance **Audio Production** • following a script or outline to produce an audio production • demonstrating care and maintenance of basic audio equipment • operating audio equipment including simple microphones recording in a variety of situations

Learning Objectives	Notes
	Multimedia Production • following storyboards • using two or more media and technologies • demonstrating set-up and shut down of presentation situations
2.5 To understand the need to follow recommended procedures and industry proven techniques to obtain high quality production values.	Review and critique examples and discuss established standards of good production techniques used in the communication production industry.
	Post-Production Stage
2.6 To understand tasks and skills required in the post-production stage for audio, video, and multimedia projects.	During post-production the job of editing begins. Provide students with an introduction to the post-production stage by discussing examples of activities they will participate in during the post-production stages of video, audio, and multimedia projects. Inform students that editing is often considered the most challenging, creative, satisfying, and time consuming stage of production. In order to edit audio and video footage, an editing system is required. Nonlinear equipment is preferred, especially at Levels 20 and 30, but if it is not available students at this level can edit with two VCRs or two tape machines. Post-production includes: • assembly of the visual images • addition of audio elements • addition of graphics, including headings, logos, and credits. Explain the processes involved in simple video editing. Students at this level will probably use linear editing equipment, i.e., two VCRs. Explain the processes involved in simple audio editing. Explain the processes involved in simple multimedia editing.
	Pre-Production Labs
2.7 To develop an understanding of pre-production activities and their relationship to communications theories.	Each of the three stages of production requires critical thinking and decision making about a variety of situations and equipment. These decisions should be considered in respect to well-founded communications theories that focus on the relationships among the production intention or message, the target audience, and the technology format.
2.8 To explore the role and influence of technology in gathering, processing, and disseminating information. (TL)	Have students consider communications theories as they work through the various stages of their productions. They should be reminded to reflect on questions such as: What are the purposes of their productions? What ideas, messages, or effects do they wish to create? Who is their intended audience? (Refer to Module 15 for more information on this topic.)

Learning Objectives	Notes
2.9 To understand basic activities commonly associated with the pre-production stage.	The pre-production stage of communication production includes the following activities: • Identifying message, audience, and appropriate medium • Developing an idea (writer, producer, and director) • Evaluating resources/making a plan (production manager) • Getting organized (production coordinator).
2.10 To develop a treatment for a video.	**Video Pre-Production Lab** *Treatments* Have students write a "treatment" for a short video they could produce in a lab or class project in the production modules that follow. A treatment is usually written in paragraph form, as though the writer is telling what will happen in the video to someone else. The treatment might also include: • the central theme • the plot • the characters • the style • technical considerations Have students "pitch" their idea to the classroom, making sure their treatment abides by established policies of the school and the CPT class. After students have presented their treatments to the class, decide by secret ballot on the most promising project(s). In the event of a tie vote or a question pertaining to the advisability of production, the executive producer (the teacher) has final say. Depending on the class size, determine how many treatments to produce in a production lab or class project. Place students in small groups. Have each group work with the student/director(s) to create a storyboard for the opening scenes of the video. (Note: the director is the student who wrote the selected treatment, unless the student declines the position of director in favour of another student.)
2.11 To develop storyboards for video production.	*Storyboards* Students should learn that storyboards are the director's blueprints for production, and that, among other responsibilities, the director casts the characters and decides on locations.
2.12 To use the formal procedures required in Communication Production Technology. (COM)	Provide students with examples of storyboards. It is important to tell students that creating storyboards does not require highly developed drawing skills. Storyboards are meant to be sketches and scenes can contain stick figures. Storyboards can be divided into scenes for larger productions; or broken down into individual shots for smaller productions. At this level, students should use storyboards to organize individual shots. Captions under each panel of the storyboard will provide suggestions for audio, lighting, etc. Roughly determine shots, setting, scenes, sequence of media, sounds, and music.

Learning Objectives	Notes
	View examples of storyboards and discuss the essential components. Show students an example of a completed storyboard for a one-minute video. Then have them watch a different one-minute video and create a storyboard. If time permits, experiment by blocking or shooting an opening sequence from a sample storyboard. Have students critique the results of their efforts. (This may also be included as a video lab activity in Module 5.) Discuss criteria for peer and self-assessment of storyboards. Prepare the storyboards for inclusion in the working portfolio. Prepare peer and self-assessments.
2.13 To become aware of the nature of sound and the process of human hearing.	**Audio Pre-Production Lab** Sound waves are transmitted through air and other media. When a sound wave enters an ear, the vibration is transferred through the eardrum and a series of bones to the auditory nerve. This nerve converts the energy into an electric impulse which goes to the brain and the sound is heard. The microphone works in a similar way to the ear. Transmission, speed, frequency, intensity, and reverberation of sound should be covered. Students should understand that industry uses different terminology than science for some things, e.g., pitch for frequency and loudness or volume for intensity. Sound is an optional unit in Physics 20, this may be a good opportunity for collaboration with a physics class. Sound is vibrations. The higher the rate of vibration, the higher the pitch. We hear when changes in sound pressure travel to the ear, where the vibrations stimulate the nerves of the inner ear. The inner ear converts sound energy into energy which the brain interprets through the auditory nerve. Discuss the concept of loudness, measured in decibels, and the many implications of loudness, sound waves, frequency, and pitch for audio production. Remind students that they must protect their hearing as ear damage from loud noise is often permanent. Once a certain decibel level has been experienced, the ear never completely recovers from this. Students must be very knowledgeable in this area, particularly if they are managing the sound for a live event.
2.14 To explore pre-production audio tasks.	Familiarize students with the use and care of available audio equipment. Audio activities may be integrated into a video or multimedia production lab or project, or they may be conducted independently as stand-alone audio productions. All students should develop a basic understanding of audio recording that could be applied in a variety of production situations. Discuss with students the many applications of good quality audio in different media products. Include radio, CD's and other music recordings, film, television, and the Internet.

Learning Objectives	Notes
	Have students come up with an idea and a plan for a radio or video interview or broadcast segment. Students may conduct an audio production project or integrate audio activities into a video or multimedia project during the production modules that follow.
2.15 To explore pre-production multimedia tasks. 2.16 To critique various media. (TL)	**Multimedia Pre-Production Lab** Have students research a number of innovative websites to explore the content and features currently available on web pages. Have students design criteria for evaluating websites, and then conduct several website evaluations. Brainstorm ideas and create a plan for designing a multimedia presentation using software such as PowerPoint or Claris Works. Students could also use slides plus audio. Approximately 10 slides would be appropriate for Level 10. (This presentation could be combined with the career research activity in Module 4.) Have students create a multimedia storyboard. Students may complete their multimedia projects during the production modules that follow.
2.17 To examine the role of production team members in the pre-production phase.	**Other Pre-Production Tasks** Ask students to research other pre-production activities that normally take place, and bring this information to share with the class. For example, students should learn about the role of the script and screenplay writers, producers, and production managers.
2.18 To understand the need for accurate and detailed production schedules.	**Production Scheduling Lab** It is advisable to discuss and practise production scheduling with students before beginning the production modules for video, audio, or multimedia.
2.19 To use the formal procedures required in Communication Production Technology. (COM)	Introduce students to the role of the production manager in professional productions. Production managers look at the script and break down the requirements and costs. They are responsible for managing the budget and will often make innovative suggestions as to how a production can achieve its creative goals while living within resource restrictions. (At intermediate or advanced levels, some students may wish to take on this responsibility for class projects.)

Learning Objectives	Notes
	Have students develop a list of the qualities that a good production schedule should have for video, audio and multimedia. For example, a good video production schedule: • shoots all the scenes that happen in a single location before moving on to the next location. • shoots **everything** needed at a particular location, as there may be no going back. • schedules a partial cast for a scene, when only a partial cast is required • has a Plan B for an indoor shoot if the weather does not cooperate for an outside shoot • assigns dates and times for each production day once the order of shooting days makes sense. What items must be included in the schedule? What challenges might arise around production scheduling? Discuss procedures for scheduling and booking equipment. Have students record the procedures and sample production schedules in their notebooks. It is the production manager's responsibility to make up "call sheets" that inform everyone who will be needed, where the location is, and the starting time for cast and crew members. Discuss the different needs of video, audio, and multimedia production schedules.
2.20 To develop production schedules for video, audio, and multimedia productions.	Have each group of students create a draft production schedule for its proposed class project or a fictional project. (Most students will probably not be ready at this point to do an actual schedule for their own project, but all should become familiar with the task of production scheduling. Students will be more prepared to create schedules for their own projects following the production labs in the introductory level production modules.)
2.21 To use formal procedures required in Communication Production Technology. (COM)	Have students write each scene and the characters involved in that scene on a separate strip of paper for each, or use a computer program to organize their production schedules. Shuffle the scenes into an appropriate shooting or recording order given that the goal is to shoot or record all scenes in one location at one time while using only the necessary cast and crew.
2.22 To evaluate the content and efficiency of a production schedule.	Compare the students' schedules to samples of professional production schedules. Have students reflect on the strengths and weaknesses of their own schedules. What did they remember to include? What did they omit? Revise the production schedules to accommodate any omissions.

Module 3: Legal and Ethical Issues (Core)

Suggested time: 2 hours **Level:** Introductory
Prerequisite: Module 1

Module Overview
This module introduces students to some of the legal and ethical issues associated with communication production. The module focuses primarily on the rules and regulations concerning copyright.

All levels of Communication Production Technology require that students have some basic knowledge of copyright law. This module may be integrated in other modules and reinforced at each level, with the intended outcome that students should have a working understanding of copyright and how it applies to their productions.

Using actual issues and legal requirements, students will deliberate on the ethical and legal issues associated with communication production.

Foundational Objective
- To understand legal and ethical issues associated with communication production, and become familiar with the process of obtaining copyright permission.

Common Essential Learnings Foundational Objectives
- To develop a contemporary view of technology. (TL)
- To develop understanding of the personal, moral, social, and cultural aspects of communication production technology. (PSVS)

Learning Objectives	Notes
3.1 To understand the reasons for copyright law as it applies to production technology.	Students should be well-informed about copyright as it applies to a number of situations including: • music • video productions • print materials • Internet resources • group and individual projects.
3.2 To understand how public policy shapes technology. (TL)	Federal law prohibits the unauthorized and uncredited use of published works including written materials, multimedia presentations, songs, print materials, and video productions. Students should become aware and diligently practise crediting sources or seeking authorization to use copyrighted materials.
3.3 To develop an understanding of ethical behaviour in communication production technology.	Have students reflect on the difference between legal and ethical behaviour. Case studies, such as the death of the Princess of Wales, may be helpful to show students the difference between legal and ethical behaviour. Have students prepare personal standards of ethical behaviour related to their own projects. Consider such things as acquiring permission to tape interviews, respecting a person's right to privacy, using others' ideas, and so on.

Learning Objectives	Notes
3.4 To become familiar with copyright laws and related ethical issues.	Using case studies, initiate a class discussion on legal and ethical issues relating to communication production. Suggestions include copyright infringement, public domain, right to privacy versus the public's right to know, intellectual property issues, illegal duplication of music and videos, distribution and marketing of creative works on the Internet, and sampling and re-mixing of previously recorded music by DJs and rap artists. Have students research court cases and discuss examples of copyright infringement. Discuss issues such as the downloading of music from Internet sites that do not pay royalty fees to artists. Discuss some pros of the practice, such as allowing new artists an affordable way to become well known; and cons of the practice, such as depriving creators of fees for their work. Set up a debate on one such issue. Set up a class panel discussion to present various perspectives on copyright issues from the points of view of the consumer, producer, artist, promoter, and distributor. Invite an expert on copyright to discuss laws and their application to students. Industry experts could also serve as resource persons.
3.5 To research organizations associated with copyright, censorship, privacy, and ethics in the communication industry.	Familiarize students with organizations that are concerned with censorship, privacy, pirating, consent, public properties, and codes of ethics. Research the jurisdiction and influence of various groups such as the CRTC and industry associations. Students should be able to identify the major legal and ethical controls of production technology as well as copyright laws. Students should become aware of the existence of various copyright collectives and their role in providing public access to products and compensation to creators. They might also research the function of radio broadcast agreements. Invite industry representatives to provide relevant information and examples.
3.6 To plan strategies to prevent copyright problems.	Familiarize students with school board policy regarding copyright and citation of sources. Students should plan strategies to prevent copyright problems with their own productions. Emphasize and reinforce whenever possible that when students are producing their own video, audio, and multimedia projects they must always obtain copyright permission to use images, sounds, and ideas that were originally produced by others. Discuss with the class specific procedures for using and crediting sources. Have students develop their own copyright checklists, or provide them with a template to help them keep track of their requests for copyright permission.

Module 4: Career Opportunities (Core)

Suggested time: 3 - 10 hours **Level:** Introductory
Prerequisite: Module 1

Module Overview
This module provides students with the opportunity to learn about careers in the field of communication production. Students may observe professionals working in the industry, or may research educational and employment opportunities. They will examine roles and responsibilities of various personnel and will develop an understanding of the need for teamwork, good planning, specialized knowledge, technical skills, and communication. This module may be integrated into other modules.

Foundational Objective
- To become familiar with the range of career opportunities within the industry, and understand the roles and responsibilities of various personnel.

Common Essential Learnings Foundational Objectives
- To develop students' abilities to meet their own learning needs. (IL)
- To understand that technology both shapes and is shaped by society. (TL)

Learning Objectives	Notes
4.1 To observe, when possible, industry professionals using production technologies.	Throughout the course, arrange for visits to film and recording studios, radio and television stations, multimedia production houses, and film production sites. Develop a reference guide of cooperating sites for students to visit.
4.2 To understand how technology influences occupational roles. (TL)	Have students write in their notebooks a description of the visit to the site, including technical vocabulary where possible. The site visitations should ensure that key audio, visual, multimedia and other production equipment is identified. Advise students that while they may be overwhelmed by the complexity of the equipment, they need to understand the processes and skills required for production. Have students note and describe the type, function, and role of the various technologies they encounter at the sites. Do they notice similarities and differences in production facilities and processes? Have students add to their descriptions a list of some of the key equipment and software programs used in audio, video, and multimedia production. Encourage students to consider the careers or employment situations that appealed to them. Start an e-mail exchange or discussion area on the school website. Students may document their experiences and share them with others electronically. Use this experience to explore jobs and career opportunities in the local area, as well as to identify possible work study opportunities.

Learning Objectives	Notes
4.3 To use the Internet to research career opportunities in audio, video, and multimedia production.	**Career Research: Audio, Video, and Multimedia Assignment** **Note:** This research activity could be a long-term project carried out by different students at different times as a way of dealing with limited access to CPT equipment during the production modules.
4.4 To interpret and report results of learning experiences. (IL)	Have students use the Internet to conduct a career research assignment. Have students consult experts in the industry by e-mail to interview them about their work, to obtain specific information, or to carry out mentor discussions. Have students visit career websites such as: www.mediacareers.com www.careers.com www.jobs.com www.about.com www.yahoo.com.
4.5 To understand the roles and responsibilities of personnel involved in video production.	**Careers in Video Production** Have students report on the various career possibilities they have researched in video production.
4.6 To understand how technology influences occupational roles. (TL)	Discuss the roles and responsibilities of some of the key personnel.
4.7 To understand the role and responsibilities of writers working in video production.	*The Writer* The writer is responsible for the script for a project with text or dialogue. Some directors write their own scripts; others collaborate with writers.
4.8 To understand the role and responsibilities of directors working in video production.	*The Director* The director is in charge of determining the look and feel of the production. This means working with both cast and crew on planning and implementing every phase of the project. In the production modules that follow, the individuals whose projects were chosen from the treatment activity in Module 2 may retain the right to become the director or to appoint another director.

Learning Objectives	Notes
	The director determines the look and feel of the production by: • interpreting the writer's script, if there is one • planning each scene of the production shot by shot, and storyboarding the sequences • working with cast on developing characters • working with various departments to develop the look of the production.
4.9 To understand the role and responsibilities of production managers working in video production.	*The Production Manager* The production manager is responsible for scheduling the shooting days and watching over production-related costs. His or her responsibilities include: • deciding how many shooting days are required • deciding what crew is required • determining and booking required equipment • the characters needed for each scene • bit players or "extras" needed for each scene • props, wardrobe, or costume requirements • location arrangements • getting signed releases or permission from all participants. •
4.10 To understand the role and responsibilities of the camera person working in video production.	*The Camera Person* The camera person is responsible for all camera-related activities. The three most important functions of the camera are to: • frame the action • follow the action • emphasize a part of a scene by showing a selected view.
4.11 To understand the role and responsibilities of the audio person working in video production.	*The Audio Person* The audio person is responsible for the location recording of all audio elements. Because audio is as critical as the visuals, good audio technique is essential to a successful production. Audio components include: • location audio (recording the on-camera voices and associated ambient sounds and effects) • background sounds and foreground sound effects.
4.12 To understand the role and responsibilities of video editors working in video production.	*The Video Editor* After shooting is finished, the video editor assembles the different video segments into a continuous piece. In consultation with the director, the editor will decide what to include and what to leave out of the final cut. In this process the video editor contributes to the clarity, audience involvement, tone, and rhythm of the story. The video editor: • assembles the images • tells the story in a way that makes sense • creates rhythm in the story telling.

Learning Objectives	Notes
4.13 To understand the roles and responsibilities of personnel in the art department, including set decoration and properties.	*Art Department* Personnel in this department: • work under the direction of a production designer • create the visual style • construct sets • do the interior decoration • create customized artwork or "properties" as required by the production. *Set Decoration* Personnel in this department: • create the artificial yet believable environments • do the interior decoration. *Properties* Personnel in this department: • assume responsibility for any movable items in a production (e.g., books, baseballs, etc.) • supply everyday sorts of props • build customized props as required.
4.14 To understand the roles and responsibilities of personnel working in the wardrobe department (hair, make-up, and costuming).	*Hair and Make-up* Personnel in this area: • work with the director to create a character's look • make a subject look completely natural in unnatural lighting conditions • work along with costuming to create complex images (e.g., a Geisha girl). *Costuming* Personnel in this area: • work with the director to establish the look of the characters • create or purchase both contemporary and historical costumes • are concerned with continuity issues (e.g., no zippers or velcro in the 14th century).

Careers in Audio Production

4.15 To understand the role and responsibilities of personnel involved in audio production.	Have students report on the various career possibilities they have researched in audio production.
4.16 To understand how technology influences occupational roles. (TL)	Discuss the roles and responsibilities of some of the key personnel. • Have the students obtain an introduction to this career by visiting any facilities in the area. The students should be able to articulate what they perceive to be the various audio positions at that facility. Perhaps the

students will be able to sit down with one of the technicians and initiate a discussion on the merits of a career in this field. Ideally, the students will observe one or more of the following:

- a voice-over person
- a music tracking and/or mixing person
- a live mixer for a music act
- the assembly of a TV or radio ad
- the daily activities of an audio post facility.

Arrange for students to attend the sound check that is done prior to a music performance in order to observe the following:

- how the equipment is moved into place and assembled
- the audio signal path (if the engineer has time to explain this)
- the importance of the monitor board and its operator
- how the mixer chooses his or her mix position and why
- how the engineer interacts to meet the requirements of the artists.

Encourage the students to volunteer with a sound company on one or more assignments, or become involved in a work study opportunity at the more advanced levels. This experience can often lead to "hands on" training in the field.

4.17 To understand the role and responsibilities of the live sound mixer.

The Live Sound Mixer

These audio specialists usually work for a sound company that provides a Public Address (P.A.) system and an operator for various customers. Each assignment may be quite different from the last. The kinds of performances might include:

- a live play or reading
- a presentation or lecture
- a live musical act

4.18 To understand the role and responsibilities of the broadcast engineer.

The Broadcast Engineer

This person makes sure that dialogue, effects, and music are recorded and transmitted to the listener with clarity. He or she could work for a radio or television station. Broadcast engineers are sometimes asked to record a live play or reading, a presentation or lecture, or a live musical act for broadcasting at a future date, perhaps after some editing.

4.19 To understand the role and responsibilities of the recording studio engineer.

The Recording Studio Engineer

This person may be required to do a host of duties, some of which are listed in the broadcast engineer and the audio post sections. In addition, the recording studio engineer records music performances, or "studio sessions," for release as a compact disc, record, or tape. This involves multi-tracking various instruments and then mixing them to the artist's liking. Even though the music producer is the ultimate decision-maker, he or she will rely on the engineer for the technical skills required throughout the process.

Learning Objectives	Notes
4.20 To understand the role and responsibilities of the audio post sound engineer/editor.	*The Audio Post Sound Engineer/Editor* These people are highly trained to work with sound layering and editing in the following commercial endeavours: • informational or training videos • radio and television advertisements • the recording of narration (or voice-over) and its sync to video • theatrical film releases • made for TV movies • series TV (live action and animation). These people do the hands-on editing of all the various sound elements: dialogue, backgrounds, effects, and music (to be covered in depth in later modules). Even though they or others may have initially recorded these sounds, their job is to edit them. Today, this is usually done by importing the elements into a computer so that they can be "cut and pasted" in the digital domain. Once all the elements have been tweaked to perfection, they are converted back into analog sounds.
	Careers in Multimedia
4.21 To become familiar with various departments and personnel within a multimedia production company. 4.22 To understand how technology influences occupational roles. (TL)	Have students report on the various career possibilities they have researched in multimedia production. Multimedia production areas include: • writing (text and audio narration) • digital graphics • digital audio/video • authoring/programming • animation/virtual reality modelling • project management.
4.23 To understand the roles and responsibilities of multimedia production team members.	Discuss the roles and responsibilities of some of the key personnel working in the multimedia industry. Research the roles of various personnel such as the following: • web page designer • webmaster • graphic designer • authoring/programmer • animator • writer • project manager.

Module 5A: Introductory Video Production (Core)

Suggested time: 10 - 20 hours **Level:** Introductory
Prerequisite: Modules 1 and 2

Module Overview
In this module students are introduced to basic knowledge, skills, abilities, and processes required for video production. Students will be involved in hands-on lab activities designed to prepare them for creating their own productions in Module 8.

Foundational Objective
- To develop knowledge of basic video production concepts, equipment, and processes.

Common Essential Learnings Foundational Objective(s)
- To promote both intuitive thought and the ability to evaluate ideas, processes, experiences, and objects in meaningful contexts. (CCT)

Learning Objectives	Notes
5.1 To become familiar with basic video production processes and equipment.	This module consists of hands-on exercises and labs to prepare students for Module 8. Review with students the roles and responsibilities of the video crew members researched in Module 4. Discuss how their roles within the class project will be similar or different from that of a professional. Each classroom video project will require as a minimum: • a director • a production manager • a camera person • an audio person • a video editor. Students might share some of the above responsibilities. During the lab activities students should have an opportunity to try out each role within the production team. The production stage of video production includes the following activities: • selecting equipment • gathering props • identifying and travelling to locations • setting the scenes • rehearsal and blocking • shooting or taping • on-site evaluation of the footage • equipment operation and maintenance. Review the processes involved in the production phase, including scheduling of equipment usage, organizing location shoots, gaining permissions, and planning shooting schedules. Have students record this information in their notebooks.

Learning Objectives	Notes
5.2 To relate, compare, and evaluate what is being read, heard, or viewed. (CCT)	Gather examples of equipment logs, shot lists, location lists, and scripts that have been used in a professional situation, and discuss them with students. If these are not available, use students' work from previous CPT classes. Inform students that their production logs and lists will be included in their working portfolios.
5.3 To understand the role and practise the skills of a director. 5.4 To apply conclusions and generalizations to new situations. (CCT)	**Director's Lab** The director: • plans each scene of the production shot by shot, based on the storyboard sequences • casts the characters and works with the cast on developing characters • works with various departments to develop the look of the production • works with the camera person to plan camera moves • signals the crew when taping is to begin with the cue "Action" • signals the end of a taping segment with the cue "Cut" • watches continuity from scene to scene. Have students execute some short storyboard sequences, taking turns in the role of director. Have them give direction to the cast and camera person, signaling action and cut cues as appropriate. (Note: Students were introduced to storyboarding in Module 2.)
5.5 To understand the basic components and functions of a video camera and examine the role and responsibilities of a camera person.	**Camera Lab** Demonstrate to students the basic components of a video camera. Have students practise inserting tapes, white-balancing, focusing, fastening to tripod, etc. Discuss rules regarding the use, care, and storage of camera equipment. (Note: The cameras should have manual focus and lens iris. Basic camera technique should not be learned on a camera with automatic focus or iris. These are for convenience only and can severely restrict important aspects of composition, depth of field, and lighting.) Have students examine and learn to use operating manuals. Reinforce the importance of using and referring to the manuals. Review sections on trouble shooting. Keep manuals accessible. Draft a schedule for students to practise using the equipment. Check for basic competencies including operation, maintenance, handling, storage, and use of basic terminology. Review the important functions of the camera: • to frame the action • to follow the action • to emphasize part of the scene by showing a selected view of the action.

Learning Objectives	Notes
5.6 To understand the effects of camera positioning.	**Camera Positioning Activities** By changing the camera position, the relationship between the audience and the character is changed. Have students take turns experimenting with camera positions: • eye level • high angle • low angle • point of view. Eye level is how a scene would look to someone who was in a standing position. During a sit-down interview the camera is lowered to the subject's eye level. When writing shot descriptions, the camera position is assumed to be at eye level unless otherwise written. The high angle shot is achieved when the camera is raised above the eye level of the subject then tilted down. A low angle shot is when the camera is lowered below the eye level of the subject and tilted upward. The point of view shot is used to show the scene from the eyes of the character. The camera sees what the character sees in exactly the same way. Have students discuss the effects of varying camera angles. If they wanted to make a character look vulnerable which angle would they use? Menacing?
5.7 To reflect on their own work and critique the results of their efforts.	View the results of students' experiments and have them critique the effects they have achieved. Have students include these critiques in their working portfolios.
5.8 To understand and apply framing shot techniques. 5.9 To apply conclusions and generalizations to new situations. (CCT)	**Framing Shots Activities** Review with students some standard methods of framing shots. Each has a stylistic purpose or creates a particular effect. View and discuss video excerpts that demonstrate basic framing shots. Have students record their observations in their notebooks.

Learning Objectives **Notes**

Have the students experiment with some of the following framing shots that will be practised and refined in the upcoming production modules:

- wide shot (WS)
- full shot (FS)
- medium shot (MS)
- three quarter shot (3/4)
- long shot (LS)
- head and shoulders (H&S)
- close-up (CU)
- extreme close-up (ECU)
- two shot (2-SHOT)
- medium two shot (MED 2-SHOT).

Wide shots are used to establish the location or setting, and can also be used to introduce the action.

Full shots frame a person from head to toe or completely frame an object. A full shot is used either to establish or follow a character.

Medium shots frame a person from the waist up. A medium shot is used to provide new visual information or show a closer view of the action. It also adds visual variety in editing.

Three quarter shots frame a person from the knees up. This shot is a variation between the medium and full shot and provides visual variety.

Long shots are full shots, but show the person at a greater distance.

The head and shoulder shot frames a person from the chest up. The head and shoulders shot provides a closer view of a character and can be used as a listening or reaction shot. This is the standard framing for most interviews where there are two subjects engaged in conversation.

A close-up is framed as a head shot, just above the shoulders. This shot is used to provide a more intimate view of a character or participant. The close-up can also be used as a listening or reaction shot, or to show the details of an object.

The extreme close-up frames a head shot from the tip of the chin to the middle of the forehead, or any other equivalent space on an object, animal, etc. This shot shows drama or tension in a character's face or allows the viewer to see specific details on an object.

A two shot frames two people in a full shot. This can be expanded to include however many people are framed in the shot (three shot, four shot, etc.).

A medium two shot frames two people in a medium shot and can be expanded to a medium three shot, four shot, etc.

Learning Objectives	Notes
5.10 To reflect on their own work and critique the results of their efforts.	View the results of students' experiments and have them critique the effects they have achieved. Have students include these critiques in their working portfolios.
5.11 To understand and apply camera movement techniques.	**Camera Movements Activities** View and discuss video excerpts that demonstrate basic and innovative use of camera movements. Have students record their observations in their notebooks.
5.12 To apply conclusions and generalizations to new situations. (CCT)	Explain to students that equally important to camera positions are camera movements. Camera movement heightens the interest and entertainment value of the visuals. Camera movement may be incorporated for the following purposes: • functional - the camera moves to keep the subject well-framed • practical - the camera moves to reveal information • decorative - the camera moves to provide variety, interest, and style. There are several standard camera movements that will help students achieve a more interesting effect. Standard camera movements include: • tilt - camera tilts in sync with a moving object • pan – camera goes from one object or subject of interest to another • zoom – camera pulls in or out to reveal information • dolly – is a long continuous shot which requires the camera and operator to move physically on a cart to complete the full range of motion. Have the students experiment with tilt, pan, and zoom movements. These shots and movements will be practised and refined in upcoming production modules.
5.13 To reflect on their own work and critique the results of their efforts.	View the results of students' experiments and have them critique the effects they have achieved. Have students include these critiques in their working portfolios.
5.14 To understand the effects of lighting techniques. 5.15 To relate, compare, and evaluate what is viewed. (CCT)	**Lighting Lab** Ask students why they think lighting is important in video production. They should understand that in order to achieve the desired effects, it is essential to consider lighting along with camera work. View excerpts of videos that demonstrate basic and innovative lighting techniques. Have students critique and record observations in their notebooks. Students should consider lighting for the following reasons: • for the clarity and visibility of images • to connect the mood and content of a scene • to help create atmosphere • to make images more vibrant.

Learning Objectives	Notes
5.16 To identify hard and soft light sources and understand their applications. 5.17 To apply conclusions and generalizations to new situations. (CCT)	**Light Sources** Discuss the differences between hard and soft light. Inform students that hard light is direct light. Direct light from the sun or a small focused light source, such as a spotlight, casts well-defined hard shadows. Soft light is diffused or indirect light, sometimes called "bounced light". Soft light sources cast less-defined shadows. Examples include florescent light in an office building or natural light on an overcast day. Have students experiment with hard and soft light sources. Place a subject or object in the same location and position, then note the effect of the two different types of light with regard to colour, shadow, and overall effect. View and critique the examples and have students record their observations in their notebooks.
5.18 To understand the effects of light source direction. 5.19 To relate, compare, and evaluate what is viewed. (CCT)	**Direction of Light Source** The direction of the light source will determine where the shadows fall. This will influence the look or mood of the scene as well as the appearance of people and objects in a shot. Lighting directions include: • front lighting - makes the subject appear flat and two-dimensional; colours are most saturated or vivid • side lighting - brings out detail and texture in irregular surfaces • back lighting - places the subject in silhouette; colours are least saturated or vivid. Experiment with different light sources and examine the effect on the shots. Place one member of the group in a stationary position and experiment with moving the light source from front to back to side. Discuss observable differences in the students' experiments. Have the students critique and record observations in their notebooks.
5.20 To develop an understanding of various types of production lists. 5.21 To relate, compare, and evaluate what is viewed. (CCT)	**Shooting Critiques** View and critique examples of various types of professional camera techniques. Have students list some technical goals for their own productions. Gather actual examples of professional production lists and discuss them with the students. Have students prepare lists of shots, scenes, etc. for their productions in Module 8. Have them review their lists with peers, and include the lists in their working portfolios

Learning Objectives	Notes
5.22 To develop an understanding of simple post-production techniques.	

Visual Editing Lab

Demonstrate basic editing techniques using the raw footage from the students' video production labs.

For many simple productions, editing directly from the camera to the VCR, or from a VCR to a VCR is commonplace.

Editing from the Camera to a VCR

- Connect a cable from the output of the camera to the input of the VCR.
- Push play on the camera.
- At the point where the student wants to record the action on camera, push record on the VCR.
- Continue methodically to piece each segment together until the completed product is pieced together in sequence.
- The VCR tape then becomes the "master".

Editing from VCR to VCR

- Connect a cable from the output of the first VCR to the input of the VCR that will hold the master tape.
- Push play on the first VCR.
- At the point where the student wants to record the action playing on the first VCR, push record on the second VCR.
- Continue to piece together the master in this way.

Using footage shot during production labs, create an example of the entrance cut, the exit cut, as well as the action cut.

Have students prepare a film of various everyday actions such as going through a door, picking up books, or feeding a dog. Ask students to edit the actions together, and then do a self-assessment: How well do the video segments work together? Are there any jump cuts? Where do students need to cut an action?

Module 5B: Intermediate Video Production (Core)

Suggested time: 10 - 20 hours **Level:** Intermediate
Prerequisite: Module 5A

Module Overview
In this module students participate in hands-on labs to refine and further develop their knowledge of video production equipment, techniques, and processes.

Foundational Objective
- To increase and refine knowledge, skills, and abilities in video production.

Common Essential Learnings Foundational Objective(s)
- To develop an understanding of how knowledge is created, evaluated, refined, and changed within subject areas. (CCT)

Learning Objectives	Notes
5.23 To refine their storyboarding techniques.	In Module 2 students were introduced to storyboards. In this module they will refine their storyboarding techniques. Students might want to plan their shots and record them on their storyboard or shooting scripts. The following are terms they may incorporate at the intermediate level.
5.24 To focus attention on knowledge and gaps in knowledge regarding storyboarding. (CCT)	Script writing terms are used in conjunction with storyboards, production notes, and/or shooting scripts. These terms indicate the technical decisions for each scene or part of a scene. Terms include: Fade in: Fade from a black screen into video. Fade out: Fade from video into a black screen. Int.: Interior scene or audio situation. Ext.: Exterior scene or audio situation. Angle on: Indicates subject for camera focus. Close up: As above, close up shot. Another angle: Same subject, more than one camera shot. Various angles: A variety of shots. Reverse angle: Reverse focus of shots. Cut to: Move to another scene. Voice over: Dialogue over scene, narrator not seen. Music over: Music over scene. Point of view: Action or scene as viewed from the perspective of a character. Over the shoulder: Camera is positioned behind and on the other side of the subject. Moving shot: Camera follows action. Insert: Insert shot, action, music.
5.25 To develop equipment logs, shot lists, and location lists.	In Module 5 students were introduced to equipment logs, shot lists, and location lists. In this module they will actually prepare their own lists for production.

Learning Objectives	Notes
5.26 To refine composition techniques.	**Camera Lab** Review basic camera skills from Module 5, and introduce students to the following techniques.
5.27 To strengthen perceptual abilities. (CCT)	*Composition* View and discuss video excerpts that demonstrate basic and innovative compositions. Things to look for: • Find ways to add depth (3D) to a shot. • Check the viewfinder for distractions such as strong horizontal and vertical elements (for example, a chimney growing out of someone's head). • Do not frame important action close to the edge of the frame. • Avoid straight on, square-in-the-middle compositions. • Fill the frame if possible with interest and avoid large, empty, uninteresting spaces, unless this is the desired effect. • Bright colours draw the viewer's eyes away from the main subject.
5.28 To refine techniques for framing faces. 5.29 To make careful observations during active construction of knowledge. (CCT)	*Framing Faces* The rules for framing head and face shots are important to remember and practise: • Rule of thirds: position the eyes about one third of the way from the top of the frame. • The eyes are the centre of attention in face shots. • Headroom should be consistent for the same-sized shots (as in conversation and response). • The closer the shot, the less headroom there will be; crop out the top of the head rather than the chin if cropping is necessary. • Profile shots are flat on video. • Always give space in the direction of people's looks and movement. Have students experiment with various face framing techniques. Have students critique their work and record their observations in their notebooks.
5.30 To understand and apply techniques for creating or simulating motivated light sources. 5.31 To strengthen perceptual abilities. (CCT)	**Lighting Lab** *Motivated Light Sources* The main light source, or what is known as the "motivated" light source, might not be visible in a shot. However, the main source must be established to make a scene more realistic and help the viewer imagine that the scene extends beyond the frame.

Learning Objectives	Notes
	Examples of motivational light sources include: • the sun • the moon • a bedside lamp • a naked bulb hanging from a cord • an exit sign at the end of an apartment hallway • a flashing neon sign from the bar across the street. Discuss various excerpts from videos to determine the motivated light sources. Attempt to create various motivated light sources. For example, does a red gel in front of a white light source simulate an exit sign? Ask students to try to create a blinking neon sign by turning the light source off and on in a rhythmical pattern. Have students create as many examples of motivated light sources as possible, and record their observations in their production logs. *Additional Lighting Exercises* Have students try a few more set-ups to practise creating the looks they might want for their Module 12 production projects. Have students try the following in small groups: • Take a single light and focus it on one of the group members (the subject). • Turn off any other sources of light. • Observe the effect of the light on the subject. • Begin with the light at eye level. • Lower and raise the light and observe the shadow placement and appearance of the subject. • Move the light around the subject and observe the differences. • Note the effect on the face, the shadow, the clothing, the texture, and the colour saturation.
5.32 To develop understanding of titling that blends into the rest of the production.	Invite industry representatives or producers to discuss titling techniques and trends. Discuss with students the basic principles of titling (e.g., short, direct, implied, or explicit titles). Explain options for insertion (e.g., before a scene starts or overlaying the action of a scene).
5.33 To make careful observations during active construction of knowledge. (CCT)	Have students choose from a variety of print fonts and colours for titles. Transitions between scenes and titles might include “wipes” (a line that sweeps across the screen to change the screen) or “dissolves” (one scene blurs into the next).

Learning Objectives	Notes
	Investigate the variety of software options and Internet sites for titling. Provide students with a list of productions showing various types of titling. Have students review and be prepared to discuss the titling techniques used. A number of websites provide information on editing. The following are examples: www.videomaker.com www.matrox.com/mga www.videonics.com
5.34 To understand the role of the video editor.	**Video Post-Production Lab** Students should understand the role of the video editor. After shooting has wrapped, the editor assembles the images and tells the story in a way that makes sense for the production. The editor: • assembles the images and sounds • tells the story in a way that makes sense for the production • creates rhythm in the story telling. The rhythm or pacing of a story is created in editing. For example, suspense is created by holding shots on screen for a long period, while intense action such as a car chase requires more frequent and shorter shots to create a sense of urgency.
5.35 To understand the difference between a jump cut and a motivated cut. 5.36 To strengthen perceptual abilities. (CCT)	*Editing Cuts* Every cut made by an editor must be motivated by new information. If the change between two shots is relatively insignificant this is known as a jump cut. • Cuts are motivated if they provide new information. • Properly motivated cuts allow a closer look and create a transition easily accepted by the audience. • Insignificant changes between two shots are known as jump cuts. Show and discuss video excerpts that demonstrate the difference between a jump cut and a motivated cut.

Learning Objectives	Notes
5.37 To understand some conventions for selecting edit points.	Inform students there are no hard and fast rules about where to make a cut, but there are editing conventions. Choices about where to make a cut are influenced by: • desired pacing • shot content • editor's objectives for creating emotion • where in the frame the audience is looking. Basic editing cuts include: • the entrance cut • the exit cut • the action cut.
5.38 To understand the differences between, and application of, the entrance cut, the exit cut, and the action cut.	The Entrance Cut: • The subject or object is entering the frame. • An entrance cut should hold an empty frame momentarily before the subject enters the frame. The Exit Cut: • The subject or object is leaving the frame. • The smoothest exit cut occurs as the subject is leaving the frame. **The Action Cut** • The action begins on the outgoing shot and completes on the incoming shot. • Two different views of the same action can be cut together to appear continuous. • A good action cut is seamless and will not be seen as two shots. • The action cut is one of the most powerful edits. View examples of each type of edit cut and discuss the effects of each. Look at good examples and poor examples to see how mistakes can disrupt the sequence. Have students create various edit cuts and discuss and critique their work.

Module 6A: Introductory Audio Production (Core)

Suggested time: 10 - 20 hours **Level:** Introductory
Prerequisites: Modules 1 and 2

Module Overview
This module introduces students to basic knowledge, skills, abilities, and processes required for audio production. Students will be involved in hands-on lab activities designed to prepare them for creating their own productions in Module 8.

Foundational Objective

- To develop knowledge of basic audio production concepts, equipment, and processes.

Common Essential Learnings Foundational Objective

- To promote both intuitive thought and the ability to evaluate ideas, processes, experiences, and objects in meaningful contexts. (CCT)

Learning Objectives	Notes
6.1 To develop an understanding of the importance of applying good audio techniques.	Listen to examples of different types of audio applications, e.g., narration, voice-overs, TV advertisements, live action, or animation audio.
6.2 To relate, compare, and evaluate what is heard. (CCT)	Discuss how good audio helps drive the story, increase the dramatic effect, and clarify the story line or message. Discuss the impact of audio and, conversely, the negative effect of badly produced audio. Discuss the importance of critically analyzing the various sound elements. Have students listen for similarities and differences. The students must learn to develop their sensitivity to the sound elements. View and discuss a video on audio production such as: • *Audio Awareness (Sound Effects)* • *Making Grimm Movies: Locations, Sets, Sound, Storyboards.*
6.3 To become aware of the wide range of applications of audio technologies.	Have students list the circumstances where audio production equipment is required including radio stations, stage productions, video and film productions, and multimedia presentations.
6.4 To identify sources of information used to solve problems. (CCT)	Ask students to determine, through research or an Internet search, what tasks an audio technician must perform. For example, the audio technician must decide what type of microphone is to be used. The decision will be based on the task at hand and the range of equipment available.

Learning Objectives	Notes
6.5 To develop skills in audio recording.	Have students conduct a simple, 30-second radio interview with a peer, audio expert, or person from the community. At this level, the equipment could be as simple as one microphone connected into a tape recorder. The teacher might offer no further guidance other than making sure that the students have audio going to tape. Have students critique the interviews and discuss how they could be improved. The door will be opened to teach initial concepts related to microphone choice and placement, pick-up patterns, and room acoustics. After critiquing the interviews, the students will be more aware of the need to learn about technological concerns. Some interview activities could include: • an interview with the captain or MVP after a recent sporting event • an interview with someone of profile in the community • an interview concerning controversial school policies from a teacher's and/or student's perspective • an interview concerning student elections.
6.6 To become familiar with microphones and their use.	**Microphones** In this section of the module, students should: • learn the different types and functions of microphones • learn the key properties of microphones • demonstrate the correct use of a microphone, showing proper placement to achieve maximum presence • name the major components of dynamic and condenser microphones • identify the correct placement of a microphone for use in and outside a studio to obtain the best possible presence from the human voice • demonstrate the correct way to engage and disengage a microphone on an audio console. Introduce students to basic microphone concepts. Ensure that they know the following fundamental concept: a microphone is a transducer that has the ability to take acoustic energy (the sound wave) and convert it to electrical power. This electrical energy is routed and eventually turned back into amplified sound waves that the ear can receive. Explain to students that each microphone has two main characteristics: • the way it converts the sound energy (this determines whether it is a "dynamic" or a "condenser" microphone) • the type of pick-up pattern (omnidirectional, cardioid, or super-cardioid).

Learning Objectives	Notes
6.7 To identify the difference between dynamic and condenser microphones.	Even though there are many different types of microphones, at this stage the teacher will concentrate on the common types currently in use. **Dynamic Microphones** Make sure students understand that in the world of audio, the term "dynamic" refers to range of volume. A dynamic performance means an energetic, forceful performance to most people, but to an audio technician it means a performance that covers a wide dynamic range from very soft to very loud volumes. Dynamic microphones are capable of dealing with wide ranges of sound. They are generally less expensive, more rugged, and more practical to use in a wide variety of situations. Even though the sound reproduction is quite realistic, they are not as precise as condenser microphones. Students should understand that, unlike condensers, they do not require phantom power so they are easier to use in field situations. Inform students that a common example of the "industry standard" dynamic microphone is the Shure SM 58 at this time. **Condenser Microphones** Students should learn that condenser microphones reproduce sounds with incredible accuracy. Their main distinguishing feature is that they have an internal preamp requiring power. This additional power source could be any one of the following: • an internal battery in the microphone itself • an external battery pack • phantom power from the mixer. Inform students that some microphones have the ability to change their pick-up pattern to suit the task at hand, so the user must take into account microphone placement as well as the choice of pick-up pattern to achieve the best result. The fact that these types of microphones are highly sensitive allows them to reproduce sounds with a high degree of accuracy. They are also sensitive to wind pressure, so even moving one too fast will produce unwanted noise. This sensitivity makes it essential that the microphone is used in conjunction with an additional wind screen, as even the human voice can cause wind pops, especially with words that begin with *p* or *b*. (**Note:** Condenser microphones are usually more expensive than dynamic microphones and are used by professional studios in controlled settings.)

Learning Objectives	Notes
6.8 To understand the pick-up patterns and positioning of microphones.	**Pick-up Patterns of Microphones** Understanding pick-up patterns or directionality of microphones is essential to knowing the capabilities of particular microphones. Directionality refers to how a microphone "hears" sound arriving from different directions. **Cardioid Microphones** • These microphones pick up sounds in a heart-shaped pattern. • They pick up sounds from the front and reject sounds from the rear. • A lapel microphone clipped to the collar of a subject is one of the most common cardioid microphones used in production. **Super-Cardioid or Hyper-Cardioid Microphones** • These microphones pick up a narrow pattern of sound from the front of the microphone while rejecting sounds from the rear or sides. • A shotgun microphone is an example of a super or hyper-cardioid microphone. **Omnidirectional Microphones** • These microphones pick up sound from all directions. • A microphone built into a video camera is an example. **Audio Lab for Pick-up Patterns** Collect one of each type of microphone and note the pick-up patterns of each. Record audio from the front, back, and sides of each and listen for differences. Note the optional pick-up area for each. Have students determine positioning of microphones for optimum performance in various situations. Have the class create a bank of sound effects, both interior and exterior. These sound effects may be used in radio plays or video productions in the future. Perhaps the local music store or sound company would let the teacher borrow a variety of microphones for demonstration. Or, perhaps an audio technician could do an in-class demonstration using "industry standard" gear. Areas of concentration could be: • microphone and wind screen characteristics • achieving the optimum amount of input • audio technician training.

Learning Objectives	Notes
6.9 To become familiar with tape recorders and their use.	**Tape Recording** Demonstrate the correct use and care of tape recorders. Students should learn about the following: • the composition of audio tape • the function of the component parts of tape recorders • the uses of tape recorders in production • heads, tracking, and alignment • the correct operation of a tape recorder • the controls of a tape recorder and their function • various industry uses for tape recorders • tape machine recording and playback.
6.10 To become familiar with heads on tape recorders, and tape speeds.	Review the three functions of the heads on tape recorders. • Erase: produce a magnetic field that scrambles the pattern of iron oxide particles and obliterates any information previously stored on them. • Record: produce a magnetic field that arranges the iron oxide particles in a particular order, storing information on the tape. • Playback: read the patterns formed by the arrangement of the iron oxide particles and produce an electrical signal carrying the sound information. Inform students that the two most used broadcast tape speeds are 7.5 ips and 15 ips (inches per second).
6.11 To understand the concepts of tracking and monitoring.	Inform students about basic tracking concepts. They should learn that half-track allows the operator to record a monaural signal on both tracks, one at a time, usually by flipping the tape, with no opportunity for reversing the tape or using other tracks. Full track is strictly a monaural configuration where the audio signal is placed across the entire width of the tape, with no opportunity for reversing the tape or using other tracks. The Monitor/Tape buttons allow the tape recorder to *monitor the signals coming from* the playback head, guaranteeing that something is on the tape. The Monitor/Source buttons allow the tape recorder to *monitor the signals coming to* the record head, with no guarantee that the signals have been recorded on the tape. The recommended position for these combination buttons is in the "Monitor/Tape" mode (pushed in), so you always have confirmation that something is on the tape (either during playback or recording).

Learning Objectives	Notes
6.12 To practise basic recording skills.	If students have access to a 1/4 inch reel to reel tape machine, they should use this to mixdown their recording projects. Each student can demonstrate his or her ability to: • thread the tape through the heads to the takeup reel • set proper record levels using the input controls and VU meters • use the auto location controls.
6.13 To become familiar with cassette machines and their use.	Students should: • identify the cassette machine operational controls and describe their functions • demonstrate correct cassette machine use and proper microphone technique • demonstrate correct audio production procedure.
6.14 To understand the importance of maintaining equipment.	It is important for students to learn to take good care of their audio equipment. Dirty heads on the tape recorder can have a devastating effect on a recording. Professional audio people will clean the heads at least once per day, and usually more often if there is extensive use. Refer to the manual that comes with the tape deck for proper cleaning instructions. This is a task that every student must learn to do. Care and maintenance of the gear should be part of the overall responsibility of every class member. When magnetization builds up on the heads (caused by tape constantly moving across them), the result can be anywhere from a loss of high end frequencies to the partial erasing of a recording. Be sure to have students check the tape recorder's manual as well as the head demagnetizer's manual to ensure that demagnetizing is done properly. It is critical that the student give this job the undivided attention that it requires. Permanent damage to the heads, as well as other pieces of equipment in proximity, can result from improper procedures. The heads on a reel to reel should also be re-aligned periodically. This, however, should be done only by trained repair personnel.
6.15 To develop skills in using and maintaining a tape recorder.	**Audio Lab for Using a Tape Recorder** Have students practise recording and applying their knowledge of tape recorders. If more than one tape recorder is available, the teacher might set up work stations so that students can practise in small groups.
6.16 To understand factors that are required for good audio in video production.	**Audio Lab for Video Production** Making sure that the dialogue sounds consistently clear and even is the most important job of the location sound recordist.

Learning Objectives	Notes
	Good audio: • is essential so the audience can clearly understand what performers are saying • creates outdoor/indoor environments • provides supplementary sound (cheering spectators at a sports event). Ensure that students know how to check an audio feed: • plug headphones into the camera to monitor the feed • do several test checks with the subject to determine whether the microphone is picking up the voice clearly and consistently • listen for any undesirable background noise on set (e.g., hair or clothing brushing against a lavalier microphone) • make sure that a shotgun microphone is centred on the subject • make the necessary adjustments to ensure the best possible recording. Set up a situation in which students can practise recording audio for a video production.
6.17 To become familiar with manual tape editing.	**Editing Audio Tape** Explain basic manual tape editing. Ensure that students understand the various reasons for editing, and the difference between "rough" and "fine" techniques. Set up a situation in which students can practise correct rough and fine manual editing of an audio project. (**Note:** Mixers and equalizers are introduced at the intermediate and advanced level.)
6.18 To develop the ability to critique their own work and that of their peers. 6.19 To provide reasons for answers and responses in a critique. (CCT)	**Critiquing and Assessment** It is important that the students try to compare the differences from one audio recording experience to the next, in terms of these criteria: • Overall warmth and presence of the voice (microphone choice and placement). • Detection of any popped p's or b's (use of a windscreen). • Level: Could it have been recorded "hotter" (better *signal to noise*)? Is there any detectable *distortion*? • Choice of location: Was it conducive to achieving clarity? Was there unnecessary echo? Did the location add to the impact of the content? • Was there consistency in level and tone from speaker to speaker? • Was there anything that took away from the overall impact of the message? • What was the most successful piece of audio the students heard and what made it the most successful?

Learning Objectives	Notes
6.20 To select suitable examples for inclusion in the working portfolio.	The students should maintain a portfolio of their work in this module. Encourage students to share ideas and to critique each other's work for the common goal of self-improvement. (The audio technician spends much of his or her time analyzing and comparing sounds.) The students' portfolios will be used as part of the evaluation process. Remind the students that, in the workplace, audio technicians are constantly adding to and updating their résumé or "demo reel" in much the same manner. Professional audio people compile their collective works in order to compete for new challenges that present themselves throughout their careers.

Module 6B: Intermediate Audio Production (Core)

Suggested time: 10 - 20 hours **Level:** Intermediate
Prerequisite: Module 6A

Module Overview
In this module students participate in hands-on labs to refine and increase their knowledge of video production equipment, techniques, and processes.

Foundational Objective
- To increase and refine knowledge, skills, and abilities in video production.

Common Essential Learnings Foundational Objective
- To develop students' appreciation of the value and limitations of technology within society. (TL)

Learning Objectives	Notes
6.21 To identify basic functions and operating procedures for audio equipment.	In the introductory level audio modules students learned about microphones and their use. Review with students basic functions and operating procedures. At the intermediate level students will be introduced to: • audio mixing • amplifiers • acoustics • multiple tracks and sources • digital and analogue formats • mixing different events (live and studio, sports events, ENG, bands, etc.). **A Note About Manuals** Professional audio people accept the fact that they will be reading manuals each and every day they are at work. Equipment can vary a great deal from product to product and from model to model, so the most accurate source of information is the manual that comes with the product. In today's world, these manuals are well written and very conclusive. For all situations that require the teacher and students to learn a new piece of gear, refer to the manual. It will usually not only tell you what to do, but also provide the theory or reasoning behind why you are doing it. Professional audio people are rarely intimidated by manuals, as manuals are a part of their lives.
6.22 To become familiar with mixing boards and their use. 6.23 To understand the benefits and limitations of technological tools used in communication production. (TL)	**Audio Lab - Working with Mixing Boards** Demonstrate and discuss mixing boards, and have students practise their uses. Throughout this exploration, ensure that students: • have a basic understanding of the principles of multi-tracking • have an understanding of the basic functions of a mixing board • know how to set proper input levels on the mixer • be able to patch outboard effects into the mixer • understand the principles of parametric and graphic equalization

Learning Objectives	Notes
	• have an ability to microphone properly and then mix multiple sources through a mixer in order to create a stereo live recording • understand the various ways to trouble shoot in order to reduce extraneous or excessive noise levels in a live recording • review how to handle and maintain analogue tape • review the procedures involved in cleaning tape heads • understand and apply standard recording terminology. If time permits, students might also learn how to add overdubs and punch-ins to a recording and learn to crossfade from one audio element to the next.
6.24 To gain knowledge about signal levels.	Before beginning a discussion of signal levels it is important to address an issue that confuses even people who work with mixers every day. There are four main kinds of level: • microphone level = -60 to -40 db • instrument level = -30 to -20 db (electric guitar plugged straight in) • line level = -10 db (semi-pro tape recorders, other playback units, mixers) or +4 db (pro gear) • speaker level - designed to operate at the level of a power amplifier.
6.25 To practise working with a mixing board. 6.26 To use media techniques, devices, and technology. (TL)	Demonstrate mixing board concepts, controls, and procedures. Make sure that the board is plugged into a set of stereo speakers (or into a power amp, then to the speakers if it is an unpowered board). With the output levels turned all the way down, plug in a microphone and have students set the proper input level. Turn up the output volume to an appropriate level. This is a good time for the teacher to point out that critical listening happens at low volumes, where room acoustics are less of a factor. At this time, students should be interested in the sources only, not what the room does to these sources. Have students: • Identify the overload indicator (it should be showing green) and the input “pad” if there is one. • Illustrate what happens when the stereo pan control is used. • Mute and unmute the channel to show this function. • Route the signal, if the board has buses, a few different ways. • Add some reverb, echo, or any other effect to see what it does to a voice. • Try adding E.Q. (E.Q. refers to the loudness of each frequency) as someone speaks or narrates, to see how the tone of the voice changes. Try to determine if there is too much or not enough of any frequencies and work to improve the sound. Try E.Q.ing several people to see how everyone’s tone has different characteristics and that there is no set E.Q. that applies to everyone. For example, a 100Hz boost will impact a man’s voice more than a small child’s.

Learning Objectives	Notes
	• Put "programmed" music through two of the channels strips. (A compact disc will work best. Tape *hiss*, *wow*, and *flutter* from a cassette unit would add other variables not needed.) Make sure the two channels being used are panned hard left and right to achieve stereo. • Try adding some E.Q. The relationship between the low sounding instruments and the high sounds should change as E.Q. is applied. • Record solo instruments to demonstrate "active E.Q". Ask the students to give a brief explanation of what the following functions are: input trim and input pad; graphic E.Q. and parametric E.Q.; VU meters and LED indicators; pan pots; mute and solo switches; phantom power, 3 band E.Q., sunmaster buses. Have the students demonstrate their ability to plug a microphone into the mixer and achieve proper levels. Ask the students to alter sound in various ways using: the effects send(s); the E.Q. on the channel strip; stereo panning; the main E.Q. (if the mixer can do this).
6.27 To experiment with recording from multiple sources.	**Audio Lab – Recording from Multiple Sources** When recording with more than one source by microphones, students will encounter a whole new set of factors. Not only do the students need to be aware of capturing each source effectively, but they also need to see how each instrument, voice, or sound effect relates to others. Have students use a mixing board to capture each source, and then output this total sound to a stereo tape recorder. This project should be recorded to a regular cassette tape format. Even though students should cover basic techniques, they should also be encouraged to experiment. At this stage the goal is not to make a perfect recording, but rather to learn the process and to become aware that this type of recording takes time to develop. Audio engineers in the field are aware of how complicated this process is and that something new is learned every time they undertake a new recording. Have students spend time problem solving as the lab evolves.
6.28 To become familiar with mini disc decks and their use. 6.29 To explore innovations in media technology. (TL)	**Audio Lab – Mini Disc Decks** If equipment is available, demonstrate and discuss with students the use of mini disc decks. Have students learn about: • the industry uses of mini disc decks • differences between mini disc and reel-to-reel • correct mini disc deck use in both the record and playback mode • the major component parts of both mini discs and mini disc functions • the correct uses for mini disc decks in broadcasting, and the advantages/disadvantages over other recording/playback devices.

Learning Objectives	Notes
6.30 To become familiar with digital audio work stations and their use.	**Audio Lab – Digital Work Stations** Have students demonstrate correct editing and saving of an audio project.
6.31 To explore innovation in media technology. (TL)	Ask students to research and then discuss or write about their understanding of the theory of digital recording. They should be able to demonstrate an understanding of the terminology and similarities between analog equipment and a digital studio. Have students read the manuals and identify and describe how to record, playback, and edit with software such as Audio Workstation.

Module 7A: Introductory Multimedia Production (Core)

Suggested time: 10 - 20 hours **Level:** Introductory
Prerequisite: Modules 1 and 2

Module Overview
In this module, students become familiar with some basic knowledge, skills, abilities, and processes required to develop an effective multimedia product. Students will participate in labs designed to prepare them for the production of their own multimedia projects.

Foundational Objective
- To develop knowledge of basic multimedia production concepts, equipment, and processes.

Common Essential Learnings Foundational Objective(s)
- To develop a contemporary view of technology. (TL)

Learning Objectives	Notes
7.1 To develop an understanding of common multimedia production areas or departments.	This module will explore the nature of multimedia and interactivity, compare different models of multimedia productions, explore the basic elements of the multimedia production process, and examine some development tools.
7.2 To explore the technical aspects of multimedia technology. (TL)	The term multimedia is used in this course to refer to productions that are primarily computer based and employ multiple technologies, e.g., websites and CD-ROMs. Students might also be involved in multimedia presentations such as PowerPoint presentations. Multimedia production areas include: • writing (text and audio narration) • digital graphics • digital audio/video • authoring/programming • animation/virtual reality modelling • project management. **Research Activity** Students may have already conducted research on multimedia careers in Module 4. If not, have them search the Internet and other resources to find a position that interests them. Have each student or group prepare a report using a simple multimedia format. They may present their career research to the class using software such as PowerPoint, or they might use slides and audio.
7.3 To become familiar with the evolution and development of multimedia production. 7.4 To explore historical developments of particular technologies. (TL)	Have students search resources for information regarding the evolution and development of multimedia production. With the advent of the PC revolution, multimedia and interactive media technologies have revolutionized the way information is transmitted from the originator of a product idea to the consumer of the product. Students might have class discussions about the evolution and pervasiveness of the World Wide Web, and its influence on business and daily life.

Learning Objectives	Notes
7.5 To understand the basic elements of the multimedia production process. 7.6 To explore the technical aspects of multimedia production. (TL)	**Basic Elements of the Multimedia Production Process** Remind students that whenever multimedia production is discussed, high-end graphics, engineered sound, interface design, and interactivity levels may also be discussed. These elements are integral to much multimedia development and production. There are five basic phases in the production process. **1. Content Design (What?)** This initial phase of multimedia development includes identifying what the content is and what audience the product targets. The project is then planned and the content organized using concept maps and flowcharts. **2. Interactive Design (How does it work?)** This second phase establishes how the user will navigate through the product and what types and levels of interactivity will be included in the product. A storyboard is usually then prepared. **3. Interface Design (How will it look?)** This third phase establishes the look and feel of the product. It will define the style and layout of the storyboard elements and may result in the assembly of a prototype. **4. Assembly** In this final phase, the prototype design elements are applied to the remaining content. In the case of a CD-ROM, this usually results in a beta version of the product. This beta version may be tested using focus groups. Final editing, scripting, and programming changes are made once the focus testing is completed. **5. Production, Marketing, and Distribution** If the final project is a commercial product such as a CD-ROM, marketing is an important concern. After the final changes are made to the beta version, a gold master or glass master is produced. From this master, duplicates are made for sale and distributed to wholesalers and/or retailers. Although marketing is included in this phase of the development process, aspects of marketing are addressed throughout the process. The identification of the target audience is a marketing concern; design appearance is also a marketing element.

Learning Objectives	Notes
7.7 To become familiar with basic multimedia equipment.	Demonstrate to students the following: • the basic components of a variety of multimedia equipment • the care and maintenance of multimedia equipment Have students examine and learn to use operating manuals. Draft a schedule for students to practise using the equipment. Check for basic competencies including operation, maintenance, handling, storage, and use of basic terminology.
7.8 To develop criteria to evaluate the content and design of multimedia products.	**Multimedia Product Assessment** Discuss with students, and demonstrate where possible, recent advances in consumer level multimedia production tools. Consider some of the implications of the proliferation of millions of homemade websites and business presentation products. As the digital industry responds to popular demand, production tools are becoming more "user friendly". At one time, if a person wanted to include an image in a background of a slide production, he or she had to contract the skills of an artist to accomplish the task. Today, most people have access to clip art, or may capture copyright free graphics files and use graphic editors to edit, reformat, and insert images in their productions. Access to user friendly tools, however, does not guarantee an effective product. The development of a visually appealing and effective multimedia product requires knowledge of audience, purpose, communication, creativity, and visual design concepts. In addition, technical skills are essential to the quality and functionality of the final product. As a class, develop a list of criteria for assessing the quality of multimedia projects. Students may compare and contrast websites, CD-ROMs, presentations, etc. to develop their criteria. Post the criteria in the classroom.
7.9 To become familiar with a range of multimedia software applications.	**Multimedia Product and Software Lab** Have students conduct a survey of software applications in the above-mentioned production areas. Have them note the various uses and features of each application.
7.10 To explore the evolution of technological innovations in the multimedia production industry. (TL)	Digital graphics software might include: • Paint Shop Pro • Adobe Photoshop • Adobe Illustrator • Corel Draw. Digital audio/video software might include: • Adobe Premiere • Movie Cleaner Pro • Adobe After Effects.

Learning Objectives	Notes
	Authoring/programming software might include: • MacroMedia Director • Dreamweaver • Homesite Animation and virtual reality modelling software might include: • Specular Infini-D • Fractal Design Poser • QTVR Object/Panorama Maker • RealVR. There are many freeware or shareware alternatives to these programs. While not as feature laden as more expensive software, they can offer an adequate, cost effective alternative for schools. • Tucows Access Communications: http://tucows.cableregina.com/ • Tucows SaskTel Sympatico: http://tucows.sk.sympatico.ca/ Website visits for research might include: • Adobe: www.adobe.com • MIT Animation and Graphics Club: http://web.mit.edu/magc/www • Quicktime: http://developer.apple.com.quicktime • Alias Wavefront: http://www.aliaswavefront.com
7.11 To develop a multimedia project proposal.	**Product Proposal Lab** Have students develop a multimedia proposal for a fictional client: • Create their own customer profile with a checklist of wants and needs. • Create a concept/script using or identifying the previous checklist items.
7.12 To develop a multimedia presentation.	**Multimedia Presentation Lab** Teachers should remind students about copyright procedures discussed in Module 3. Have each student create a presentation using software like PowerPoint or slides plus audio. They should use a minimum of 10 slides. This lab could be combined with the career research activity in Module 4. Students might create a presentation for other students, to demonstrate their career research findings. Critique each presentation and record comments in student notebooks, or establish criteria for peer evaluation. Refer students to the criteria they developed earlier in the module.
7.13 To select suitable examples for inclusion in the working portfolio.	Have students select examples from their labs to include in their working portfolios.

Module 7B: Intermediate Multimedia Production (Core)

Suggested time: 10 - 20 hours **Level:** Intermediate
Prerequisite: Module 7A

Module Overview
This module introduces students to basic web page design.

Foundational Objective
- To increase and refine knowledge, skills, and abilities in multimedia production.

Common Essential Learnings Foundational Objective(s)
- To develop students' abilities to access knowledge. (IL)

Learning Objectives	Notes
7.14 To learn about home page publishing.	At the intermediate level students will develop: • personal web pages, or • content web pages (e.g., drinking and driving, consumer issue, political issue, etc.) **Note:** Some students may have experimented with web page design. Expectations for students' projects in this module may vary, depending on their prior experience. **Basic Web Page Design** Most students will already be familiar with the concept of a home page. Ask students to share examples of some of their favourites. A home page is the first or topmost page that users see when they enter a particular site. It sets the tone for organization and content in the site. Have students research sites that provide basic information on web page publishing. Have them locate sites where the public can get free home pages, and discuss the process.
7.15 To practise web design in a hypothetical situation. 7.16 To identify and use appropriately a variety of available resources. (IL)	Have the students list their favourite department stores, computer companies, and online stores. Explain to the students that they have been hired to create a web page for a company (their choice) and that the web page is to be aimed at their own age group as a target market. To start with, students will research the Net to see if they can find a company similar to their choice. After locating a similar web page, they will note what elements they should chose to include. Next, students will conduct market research and find out what group of people would likely buy the company's products, and predict how best to promote the products on the market. Finally, students will learn how to create a home page for their business. Initially, teachers may choose to have students begin with a text editor so that they understand the basics of HTML coding. If an editor is used, it is recommended that it be one that allows the user to see the HTML code.

Learning Objectives	Notes
7.17 To create personal web pages or content web pages.	Have each student create a web page. **Sample Web Design Process to Use with Students** 1. Set your Goals Identity the goals for your web page. What do you want to include on your site? What type of interaction do you want? What will the content address? For whom are you designing the site? 2. Surf Before you Create Browse other sites, make a note of the elements that you like and the elements of which you are critical. This will give you ideas about what you would like to include on your home page. 3. Select Appropriate Content Think about what kind of information you want to source, generate, and share that would be of interest to others. 4. Flowchart your Website Create a flow chart or storyboard to sketch the general layout or appearance of the site and how and where resources could be linked. A website may contain a lot of pages and resources linked together. It is important to plan where the links are and how they will be connected before implementing your site plan. 5. Choose the Right Tools. Determine what tools to use to create the website. Your decision depends largely on the complexities of the tasks and your available time and money. 6. Test Your Design Test your web design with a variety of users with different levels of computer expertise or familiarity with the Net. Their feedback will help you to improve your web page design. Newsgroups on web page design and publishing: • www.bizproweb.com/newsgroups/web_design.html • comp.infosystems.www.authoring.html • comp.infosystems.www.authoring.images • comp.infosystems.www.authoring.misc • tile.net/internet/canadaweb.html

Module 8A: Introductory Production Project(s) (Core)

Suggested time: 20 - 30 hours **Level:** Introductory
Prerequisite: Module 5A, 6A, or 7A

Module Overview
This module offers the opportunity for students to create their own production projects in audio, video, or multimedia. At the introductory level, students will participate in pre-production and production phases, but may have limited involvement in the post-production phase of the process. They should, however, understand the tasks involved in post-production and may practise basic editing principles.

Foundational Objective
- To demonstrate basic understanding of communication production technology through the development of one or more projects.

Common Essential Learnings Foundational Objectives
- To develop students' appreciation of the value and limitations of technology within society. (TL)
- To support the development of a positive disposition toward life-long learning. (IL)

Learning Objectives	Notes
8.1 To participate in determining class production ideas and pre-production planning.	**Note:** At the advanced level, some individual students will do their own projects. However, at the introductory level it is recommended that students work as a class or in groups.
8.2 To contribute to the development of objectives. (IL)	In this module, students will create their own class productions as a whole group or in small groups. Student production teams may create one or more projects in video, audio, or multimedia. Productions need not be more than 5 minutes in length. Have students discuss the project ideas on the following pages. Students may wish to brainstorm other ideas. Some projects may require that students work from scripts. Because of time limitations, it is not recommended that students spend a great deal of time on script writing in this course. This is in no way intended to be a devaluation of the importance of a good script, which can save hours of time in production and post-production, especially in dramatic projects or certain types of documentaries. Those students who wish to write scripts for documentaries, dramatic videos, or radio dramas should take optional Module 18. They might also explore the possibility of doing their script as an English project. Alternatively, the CPT teacher could devise a way of recognizing the students' work on their script in the project assessment, without devoting whole-class time to script writing. It is also possible that CPT students could collaborate with other students in a course such as Creative Writing 20, in the same way that professional video/audio directors collaborate with writers. If there are students who express an interest in working with a script, the CPT teacher might approach the Creative Writing 20 teacher (or other English teacher) to explore the possibility of coordinating writing and production projects.

Learning Objectives	Notes
8.3 To apply knowledge, skills, and abilities in video production. 8.4 To work on in-depth studies of choice. (IL)	**Introductory Video Project Ideas** Students should apply the techniques they practised in the video production labs in Module 5A. They might produce the following: • short "how to" video • talk-show interview (3 - 5 minutes) • music video (2 - 4 minutes, find their own talent) • welcome to school video (3 - 5 minutes) • ENG project (5 minutes) • project where they assemble bits of stock footage into a cohesive 1 - 2 minute video using cut editing • public service announcement. In their video project students will: • develop skills in the operation of a video camcorder • follow scripts to develop storyboards • develop skills and technique with focus, tilt, zoom, and angle • develop skills in using two cameras • incorporate audio recording with microphones • set up locations • solve lighting problems. Have students practise their skills in using smooth movements with the camera. Advise them on the overuse of zoom or panning techniques.
8.5 To apply knowledge, skills, and abilities in audio production. 8.6 To work on in-depth studies of choice. (IL)	**Introductory Audio Project Ideas** Students should apply the techniques they practised in the audio production labs in Module 6A. Students may create an audio production of the following: • interviews with seniors or others in the community • a talking book • a 5-minute radio broadcast • a public service announcement (30-60 seconds) • a bank of audio effects, with logical classifications of sound (25 sound minimum). In their audio projects students will: • follow scripts to develop soundboards or outlines for audio productions • demonstrate care and maintenance of audio equipment • operate audio equipment including multiple microphones • record in a variety of situations • incorporate sound effects and/or dialogue as appropriate.

Learning Objectives	Notes
8.7 To apply knowledge, skills, and abilities in multimedia production.	**Introductory Multimedia Project Ideas** Students should apply the techniques they practised in the multimedia production labs in Module 7A.
8.8 To work on in-depth studies of choice. (IL)	Have each student do a presentation using PowerPoint, Claris Works, or slides plus audio. Productions might include the following: • "how to" presentation using presentation software • presentation for younger students in the school (on a science or visual art topic, for example) • presentation on the school for parent-teacher nights • campaign presentation (e.g., for SRC elections) • consumer presentation (e.g., on the results of a product survey). In their multimedia projects students will: • follow scripts or develop concepts and/or storyboards • use two or more media and technologies • demonstrate set-up and shut down of presentation situations • demonstrate the ability to transfer images, messages, and symbols between different media including computer, video, print, and audio • convey a message, theme, or impression, and include a beginning and ending title • cite references and adhere to copyright law.
8.9 To identify roles and responsibilities within class productions.	**Pre-Production Activities** If students are working in groups, review the concept of production teams and the roles and responsibilities of each of the members. Review pre-production activities with students (see Module 2).
8.10 To complete a project proposal or contract.	**Project Proposals or Contracts** Have students complete and submit a project proposal or contract. The proposal or contract should include a description of the project type: video, audio, CD-ROM, website, presentation, etc. It should include a project description, project goals, the intended audience, equipment requirements, hardware and software requirements, a treatment or storyboard, starting and completion dates, and teacher conference dates. Students and teachers should discuss the assessment and evaluation criteria for projects in advance. Specific assessment criteria should be determined and included in the proposal or contract.

Learning Objectives	Notes
8.11 To work as a team member in production stage activities in video, audio, or multimedia.	**Production Activities** View a documentary that demonstrates the production process such as: • *The Making of the Maximum Dimension* • *The Making of Shooting Star* • *The Producer's Notes for Making of Guitar Man*
8.12 To use media techniques, devices, and technology. (TL)	All students should participate in the production phase of their projects. Review production stage activities from Module 2.
8.13 To demonstrate independence while working within the parameters of the production team.	During the production projects the teacher should function as executive producer. The teacher should watch for lagging productions, student participation, and time problems. The teacher should work with each group to encourage creative problem solving.
8.14 To engage in basic post-production activities. 8.15 To use media techniques, devices, and technology. (TL)	**Post Production Activities** Post-production may be somewhat limited at the introductory level depending on available equipment. Sometimes, another school with editing equipment or a local company may be willing to assist with editing. Although the school may not have sophisticated editing equipment, students should still view all the material and complete an edit log. This can be done in class with a stopwatch and VCR. Simple graphics can be created by hand, on computers, or with video. The teacher as executive producer should help set up the edit schedule and travel details for any off-site post-production. The editing will have to be done in shifts. If time is a constraint, one student can be elected to oversee each group's editing. Have students demonstrate the following activities used in the post-production activities for each media: • Video: simple editing techniques of a self-shot tape • Multimedia: simple editing and formatting techniques of a multimedia presentation • Audio: simple editing techniques of an audio tape.

Learning Objectives	Notes
8.16 To develop the ability to critique personal work and that of peers.	**Critiques** Have a class preview of all completed projects. In advance, discuss criteria and processes for critiquing student work. Students should review the projects in their notebooks and be prepared to discuss. Students should use appropriate vocabulary in their critiques.
8.17 To cooperate with and help one another in order to enhance their understanding. (IL)	In addition to the product critiques, have students prepare aural or written critiques of the post-production process including: • editing decisions • a variety of editing techniques. Have students prepare a written critique of their own work and of a selection from another student's working portfolio. Critiques should focus on development and structure, technical merit, and how the work demonstrates knowledge of the relationship between message, audience, and media. Self-assessments might include a list of the techniques involved, explanations of processes, any difficulties that students encountered, and suggestions for improvements. Students may wish to organize a festival during class time or after school, in which they preview their productions for other students, parents, and community members.

Module 8B: Intermediate Production Project(s) (Core)

Suggested time: 20 - 30 hours **Level:** Intermediate
Prerequisite: Module 8A. At least one of Module 5B, 6B, or 7B.

Module Overview
This module allows students to apply the knowledge and abilities gained in their production labs in Modules 5B, 6B, and 7B. Students refine their skills and gain confidence during a production project in video, audio, or multimedia. Teachers may find the checklist in Appendix C useful in determining areas where students need to refine skills and abilities.

Foundational Objectives
- To demonstrate understanding of communication production technology through development of one or more projects
- To incorporate techniques and practices recommended within the industry into projects.

Common Essential Learnings Foundational Objective(s)
- To support the development of a positive disposition toward life-long learning. (IL)

Learning Objectives	Notes
8.18 To identify personal roles and responsibilities within the production team.	**Note:** At the advanced level, some students may be capable of doing their own independent projects. However, at the intermediate level it is recommended that students work as a class or in groups.
8.19 To cooperate with group members in order to enhance understanding. (IL)	In this module, students will create their own productions as a class or in small groups, depending on the size of the class. Student production teams may create one or more projects in video, audio, or multimedia. Students will gain experience with: • multiple cameras • video mixing • broadcast (output) • CD vs. Internet vs. video vs. cable, etc. • analogue vs. digital • creating titles that blend into the rest of the production • investigating a variety of titling software options.
8.20 To produce a video, audio, or multimedia production.	Have students prepare a project proposal, as they did in Module 8.
8.21 To make choices in learning that reflect needs and interests. (IL)	**Intermediate Video Project Ideas** Intermediate video projects could include: • instructional video on a topic of choice (5 minutes) • grade 12 cap and gown ceremony • news events • weather reports • sports stories • video advertisement (30 seconds) • music video with dramatic or narrative elements.

Learning Objectives	Notes
	Intermediate Audio Project Ideas Intermediate audio projects could include: • documentary (5 minutes) • radio drama (5 minutes) • recording events in the school or community • recording a performance • audio advertisement (30 seconds). **Intermediate Multimedia Project Ideas** Intermediate multimedia projects could include: • website comparisons and evaluations • website for a fictitious character or place • school or CPT website.
8.22 To understand and apply post-production techniques.	**Post-Production** Post-production may be somewhat limited at the intermediate level, depending on available equipment; however, students should begin to see the importance of post-production activities and incorporate them to the extent possible. Industry professionals might be brought into the classroom to assist, or it might be possible to arrange off-site post-production opportunities for the students.
8.23 To critique and evaluate personal work and that of peers.	**Peer and Self-Assessment** As a group, determine the criteria for assessing production experiences. Make sure that students include criteria for both process and product. Criteria might include: • how well the production team functioned • whether the planning was adequate and comprehensive • whether timelines were met • how successful the product was in meeting its intentions. Students and teachers together might create a checklist that could form the basis for group discussion and/or student-teacher conferences.
8.24 To demonstrate personal achievements in a range of appropriate ways. (IL)	**Premiering Student Projects** Hold a festival and invite other students, parents, and community members. Create an atmosphere of support and encouragement as students present and share their work.

Module 8C: Advanced Production Project(s) (Core)

Suggested time: 50 - 100 hours **Level:** Advanced
Prerequisites: Module 8B

Module Overview
This module provides students with opportunities to carry out one or more major production projects. Before beginning this module, students are required to have basic and intermediate competencies with the various production technologies. See the checklist in Appendix C.

Working portfolios will contain exhibits of the production projects as well as a written critique.

Equipment Requirements: Studio facilities and equipment would be advantageous if possible. Two cameras are required to produce more advanced shots. Audio production requires mixing/editing consoles and digital sound production equipment. Editing equipment and software suites are required. Multimedia production should include digital video and audio components.

Foundational Objectives
- To demonstrate understanding of communication production technology through development of one or more projects
- To demonstrate a high level of critical and creative thinking regarding decision making and the application of techniques and practices recommended within the industry, in projects.

Common Essential Learnings Foundational Objective(s)
- To develop students' abilities to meet personal learning needs. (IL)

	Learning Objectives	Notes
8.25	To develop a proposal for an advanced production project.	See Appendix B for advanced level project ideas. In this module students will be expected to: • follow industry recommended practices in pre-production, production, and post-production • enhance and apply basic project planning skills in developing audio, video and multimedia productions • develop advanced competencies in one area of production technology • evaluate a video, audio, or multimedia production based on structure, technical merit, and good communication practices • participate fully as a member of a production team. The expectation is that advanced level projects will be done primarily in the classroom and other recording and shooting locations, but not at home. Each production team (or individual) should prepare a project proposal that includes: • concept and media • rationale (message or purpose) • target audience • members of production team (if applicable) and roles and responsibilities of the members • completion date • story idea • a storyboard, soundboard, shot list, or multimedia components • technology and equipment requirements
8.26	To plan self-directed projects and develop criteria for assessment. (IL)	

Learning Objectives	Notes
8.27 To demonstrate the ability to "pitch" a project idea to another individual or group.	Have students or teams "pitch" their proposal to the teacher or to the class.
8.28 To demonstrate confidence when participating in the processes associated with production of audio, video, or multimedia production. 8.29 To develop and use appropriate documentation for productions.	Review with students the processes associated with production including: • selecting equipment • gathering props, making travel arrangements to locations • setting the scene • rehearsal • shooting or taping • evaluation of the footage, audio tape, or multimedia presentation • equipment operation and maintenance • managing production teams • preparing various logs including equipment, shot, and location • creating and integrating various elements as required by the treatment, script, storyboard, or soundboard. Students should be prepared to develop and use their own equipment logs, shot lists, and location lists.
8.30 To understand the processes of post-production.	Post-production includes: • editing • viewing/listening, making decisions, and then re-editing • presenting to focus groups or trial audiences • peer and self-critique. Explain processes involved in advanced editing. Review criteria for critique and assessment.
8.31 To develop a presentation portfolio.	Have students prepare their presentation portfolios. Remind students that portfolios can be used for employment and post-secondary applications. They can also form a major component of student evaluation.
8.32 To cooperate with teachers and others to monitor learning. (IL)	

Module 9: Software and Technology Research and Exploration (Optional)

This module provides students with an opportunity to explore recently developed communication production software, technological innovations, and applications. Because this industry is changing so rapidly, it is essential that students accept ongoing independent research as part of one's professional responsibility.

Suggested time: 2 hours **Level:** Intermediate and Advanced
Prerequisite: Module 5A, or 6A, or 7A

Foundational Objective

- To develop an understanding of various communication production software, technological innovations, and applications.

Common Essential Learnings Foundational Objective(s)

- To develop a contemporary view of technology. (TL)

	Learning Objective	Notes
9.1	To become familiar with examples of software and innovative computer technology associated with communication production.	Have students find current information and examples of innovative software, equipment, and processes used in communication production technology. Have students develop a list with anecdotal comments on a variety of websites that demonstrate or offer examples of software and new technology.
9.2	To understand the importance of keeping up-to-date in a rapidly changing industry.	Have students search the Internet for recent free software available for download that is applicable to audio, video, or multimedia productions. Or, the school may have purchased new software or equipment that students can learn to use.
9.3	To explore technical developments. (TL)	Have students learn to apply the new technology individually or in pairs. Ask each student to teach the others about the new technology he or she selected. Students could work in pairs. Have students conduct an evaluation of the new technology and write a review for a fictional consumer report. Add the students' product reviews to the school website. Provide a rating system for the reviews (e.g., 1 - 4 stars).
9.4	To examine websites for examples of innovative technology.	Examine and evaluate websites that demonstrate use of innovative software, video clips, flash technology, and unique graphic design. Lord of the Rings is an example: http://www.lordoftherings.net/index.html

Module 10: Effective Communication (Optional)

Suggested time: 2 - 4 hours **Level:** Introductory
Prerequisite: Modules 1 and 2

Module Overview
In this module students explore the relationship between the message, the audience, and the medium. Students should reflect on and critique productions based on their effectiveness in reaching the target audience.

The module also encourage students to reflect on the prevalence of communication technologies, and the effect they can have on public perception. Students should reflect on the responsibility of producers toward their audience, given the influence of communication technology.

Foundational Objectives
- To consider the relationship between the message, the audience, and the medium.
- To evaluate the effectiveness of a communication production in terms of its success in reaching the intended audience with the intended message.
- To consider the potential impact of effective communication and the responsibility of producers toward their audience.

Common Essential Learnings Foundational Objectives
- To enable students to use language for differing audiences and purposes that are relevant to the student and to Communication Production Technology. (COM)
- To promote both intuitive, imaginative thought and the ability to evaluate ideas, processes, experiences, and objects in meaningful contexts. (CCT)

Learning Objectives	Notes
10.1 To identify the roles and use of various communication media in the students' community.	Have students design and conduct surveys on radio, television, film, and multimedia usage. Ask students to include "age categories" in their survey so they can compare the preferences and uses of various age groups. They might survey members of their household, school, and/or community about their use of radio, television, or the Internet. They might ask how often their subjects attend a movie in a theatre, attend a drive-in, or watch a movie on video. They might investigate the use of websites, e-mail servers, search engines, etc. Have students determine the amount of time (duration) and how often (frequency) in a given time period (e.g., one week) the subjects of their survey use various technologies, and for which purposes.
10.2 To organize information for reporting and discussing. (COM)	
10.3 To analyze data. (CCT)	As a class, discuss the survey findings. Ask students to reflect on how media influence their lives, family, or community. Consider these comments in relation to the prevalence of technology in our everyday experience.
10.4 To understand that all communication productions are created for an audience.	Remind students that all of the communication media they investigated through their survey are concerned with audience. Create a brainstorm list of *specific* television and radio programs, commercials, videos, websites, etc. with which students are at least somewhat familiar. Examples might include: • various rock videos • radio programs (e.g., *Dr. Laura*; CBC's *Ideas)*

Learning Objectives	Notes
10.5 To discover patterns and relationships. (CCT)	• television programs – entertainment (e.g., *Simpsons, Jerry Springer*) • television programs – current events (e.g., *W5, Witness*) • specific commercials (e.g., various car commercials) • specific Internet web pages. Once the students have a list, determine who the audience is for each item on the list. Within categories, the audiences may vary. For example, one rock video might be aimed at a pre-teen audience, while another might be aimed at a middle-aged audience. Ask the students to reflect on how they were able to tell who the audience is for each item.
10.6 To understand the interrelationship between message, audience, and medium.	View a short television program or segment (e.g., a children's program, a soap opera, a toothpaste commercial) and ask students to suggest who the audience might be. Discuss who generated the production and for what reason. How does the medium (in this case television) serve the producer's intended purpose?
10.7 To discuss the meaning of a message and the appropriateness of the medium used. (COM)	Have students, as a class, list various purposes for creating a video, audio, or multimedia production. To get them started suggest examples such as: • to advertise a new car • to tell a dramatic story • to convince people to vote for a certain political candidate • to organize and present pictures of a holiday • to raise awareness about an environmental issue • to present the work of a stand-up comedian • to give a weather report Once students have compiled a list, discuss the potential audience for each purpose. Then discuss the pros and cons of using various production technologies for each purpose (television, radio, CD, Internet, CD-ROM). Does the intended audience influence the choice of technology? Do certain media attract an audience demographic more than others? Students might turn to their survey results. For example, does a younger age demographic make more use of the Internet than an older age demographic? If the students found that the older generation (their grandparents) does not make much use of the Internet, would it make sense to advertise holiday opportunities for seniors on the Internet? What conclusions can the students suggest about choosing the medium for a particular message and audience?
10.8 To understand that the desire to reach the intended audience is a major consideration in planning communication productions.	Have students work in small groups. Give each group one of the following categories (or other similar category): • product advertisement (e,g., breakfast cereal) • political candidate promotion (e.g., election) • public service announcement (e.g., new bicycle traffic lanes) • fund-raising campaign (e.g., Humane Society) • event promotion (e.g., pop music concert) • exposé on a controversial issue (e.g., a dangerous prescription drug).

Learning Objectives	Notes
10.9 To discuss the meaning of a message and the appropriateness of the medium used. (COM)	Have each group plan its hypothetical campaign, considering the following questions: • What message to do you want to get across? • Who is the audience for your message? • What medium (or media) will you use to reach your target audience most successfully? Have the groups present or "pitch" their campaigns. The rest of the students will act as "producers" who might or might not decide to fund the campaign. Remind the producers that their decision should rest on the proposed campaign's potential to reach the target audience with the intended message.
10.10 To evaluate the effectiveness of a communication production. 10.11 To critique sources of information. (CCT) 10.12 To render a judgement. (CCT)	Have each student choose a production and write a critique of the production in terms of its success or lack of success in reaching its target audience. Productions might include: • television programs • websites • music videos • commercials • radio or television documentaries • weather or sports reports. In their critiques, students should answer the following: • What was the production's message? • Who was the production aimed at (audience)? • How did the medium chosen help to convey that message? Was it the best medium for the message and the intended audience? • What factors stand out as contributing to the production's ability to attract its audience? (e.g., costumes, humour, acting, shock value, etc.) How are these factors related to the chosen medium? • Was the production successful in reaching its audience? Why?
10.13 To examine the wide-ranging impact that communication production technology can have. 10.14 To apply conclusions and generalizations. (CCT)	Have students select a major media event with which they are familiar and discuss the impact of communication technology on the event. How did media influence public perception and consequences? Suggestions might include: • the Gulf War • the Quebec referendum • a trial such as the trial of O.J. Simpson or Robert Latimer • the APEC Inquiry.
10.15 To organize information for discussing or debating. (COM)	Invite an expert such as a journalist to discuss the issue with students. OR In small groups, have students answer the following question, giving reasons and/or examples to support their answer: *Has recent communication technology changed the level of public involvement in decision making around current events?*

	Learning Objectives	Notes
		In order to answer the question, students might have to conduct research, looking for articles or editorials. Encourage students to think about the role of the Internet in addition to that of broadcast journalism. Ask students to reflect in their journals on the responsibility of a person working in the communication industry, given the influence that effective communication can have. OR Organize a formal debate in which students argue for or against a statement such as the following: *People who work in communication industries are responsible for the effects of their productions on their audience.*
10.16	To understand that media critics play an important role in raising public awareness about the influence of media.	Have students search for information about media critics such as Marshall McLuhan (*The Medium is the Message*) or Noam Chomsky (*Manufacturing Consent*). Students might watch and discuss excerpts from videos in which media critics and industry representatives present their viewpoints about the effects of media and new technologies. Students might summarize essays or articles, and then discuss them in small groups.
10.17	To share ideas in their own words. (COM)	

Module 11: Special Effects (Optional)

Suggested time: 5 hours
Level: Intermediate and Advanced
Prerequisite: Module 4, 5A, or 6A

Module Overview
This module is used to provide students with the opportunity to add special effects to their productions, and to enhance their general knowledge about the use of special effects in the communication industry.

Foundational Objectives
- To develop abilities in creating and using special effects.
- To develop understanding of the use of special effects in the communication industry.

Common Essential Learnings Foundational Objective(s)
- To promote both intuitive, imaginative thought and the ability to evaluate ideas, processes, experiences, and objects in meaningful contexts. (CCT)

Learning Objectives	Notes
11.1 To research technologies and processes used to create a variety of special effects.	Have students explore a range of physical and digital effects employed in the communication industry. Some categories of special effects include: ▪ *Optical effects* using mirrors, false perspectives, projected images, fades, lighting, and diffusion. ▪ *Chemical effects* using rain, snow, smoke, fog, fire, explosions. ▪ *Mechanical effects* using props, furniture, film, computer images. ▪ *Electronic effects* using inserts, computer images, superimposing. ▪ *Sound effects* using separate effects, computer sound effects, editing, voice overs, synchronized effects with video. (Fish, 1988)
11.2 To compare similarities and differences. (CCT)	Research how various special effects are created in audio, video, and multimedia productions. View a video that contains examples of various effects, and their creation and application. Consult the Media Group Catalogue for examples and ordering information.
11.3 To explore the application of various special effects.	Listen to various audio special effects and try to determine how they might have been created. Create and catalogue samples of audio effects that could be used in future student productions.
11.4 To discover relationships and patterns. (CCT)	View old films to see how early special effects were used, or view examples of visual effects used in film, video, and multimedia. Have students write critiques or discuss examples focusing on the effectiveness of the effects. Have students make a list of situations in which simple special effects would add to the impact of the audio or visual presentation. Pick two or three examples, and in a production lab try to create special effects using available materials and technology. Students might, for example, create masks for a video they are producing, or add digital effects during the editing stage of a production. Be sure to remind students that safety is a priority and that all special effects must be approved by the teacher before use.

| Learning Objectives | Notes |

11.5 To become familiar with new developments in special effects.	Have students search the Internet for sites that deal with 3D modelling, animation, and motion editing. Companies such as the following might provide useful information:
11.6 To compare and evaluate. (CCT)	Weta Visual Effects: http://www.wetafx.co.nz/WetaLtd-Index.html Alias Wavefront: http://www.aliaswavefront.com/ Biomechanics Inc.: http://www.biomechanics-inc.com/ SoftImage: http://www.softimage.com/ 3D Studio: http://www2.discreet.com/index-nf.html Blue Moon Rendering Tools (BMRT) - Shareware: http://www.bmrt.org/index.html High End 3D: http://www.highend3d.com/ 3D Site: http://www.3dsite.com/ VisualFX Pro: http://www.vfxpro.com/ Giant Studios: http://www.giantstudios.com/ Biomechanics World Wide: http://www.per.ualberta.ca/biomechanics/

Module 12: Animation (Optional)

Suggested time: 20 - 30 hours
Level: Intermediate and Advanced
Prerequisite: Module 5A or 7A

Module Overview
This module is intended to introduce students to video and/or multimedia animation. The projects that students undertake will depend on the equipment and software that is available. All students taking this optional module should be able to produce at least a short animated video. Even where the software is not available for students to create animation on computers, students should conduct research on the Internet so that they are introduced to the basics of multimedia animation. Many good books are available on animation techniques and many animation studios have informative websites (e.g. www.pixar.com).

Students should be able to carry out the basic functions of video production prior to taking this module. A work station is required that can remain in place for a period of time while students complete the module.

Equipment/supplies (video): camcorder, stopwatch, tripod, television, and VCR

Equipment /supplies (multimedia): computer animation software, computers with sufficient memory to support the software programs

Foundational Objectives
- To develop understanding of a range of animation techniques and products
- To develop basic skills in animation.
- To use production techniques in animation.

Common Essential Learnings Foundational Objectives
- To develop the students' abilities to access knowledge. (IL)
- To develop a contemporary view of technology. (TL)
- To promote both intuitive, imaginative thought and the ability to evaluate ideas, processes, experiences, and objects in meaningful contexts. (CCT)

Learning Objectives	Notes
12.1 To reflect on the range of animated products and techniques with which students are already familiar.	Ask students to list examples of animated videos and multimedia products with which they are familiar: • television shows • movies • commercials • children's cartoons • lyrical or "art" animations.
12.2 To identify and use a variety of resources. (IL)	Do the students know how any of the examples they listed were created? Have them find out what they can by searching the Internet. They could search, for example, "The Simpsons" or "Toy Story". Have small groups make brief presentations to the rest of the class on what they find.
12.3 To explore how animation has evolved from the first animated film to the computer animation of today.	Present information to the students on the history of animation (see bibliography for resource list). If possible, view clips from different time periods. The NFB has many old and new animated films/videos that can be borrowed. Students might have animated computer games in their own collections. Much animation is available on television and the Internet.
12.4 To explore historical developments of particular technologies. (TL)	View a video on the animation process such as *F.X.!* Consult the Media Group catalogue for ordering information.

Learning Objectives		Notes
12.5	To reflect on the purposes and advantages of using animation rather then live action.	Have students list reasons why a person might choose to create an animated story or other animation product. In creating their list, students should reflect on the following questions: • What are some characteristics of animated products with which they are familiar? • What can you do with animation that you cannot do with live action? • What might attract a person to working in animation?
12.6	To discover relationships and patterns. (CCT)	
12.7	To create a bank of animation resources.	Have students compile a bibliography of information on animation. The teacher will probably have resource books that he/she can contribute, as well as favourite websites.
12.8	To contribute to a catalogue of available resources. (IL)	Students can spend time searching the Internet for useful and informative sites, of which there are many. Because of rapid and continuous changes in the industry, the Internet is a source of up-to-date information, and will be a particularly useful component of the class bibliography.
12.9	To review the purpose and method of storyboarding.	Students will probably be familiar with storyboarding by the time they take this module. Review the importance of storyboarding, even for a short animated project. Remind students that storyboards are not fixed in stone, and that they might revise their storyboards as they progress through their project.
12.10	To create a simple video animation project.	Present students with several types of animation from which they can choose for their first project. Suggestions include cut paper, sequential drawings, claymation (using clay or plasticine), and animation with plastic action figures or common objects. It would be useful to encourage individual students or groups of students to choose different types of animation so that the class can view and learn from the variety of experiments. The object of this first project is to create a simple action sequence: a figure walking, a tea cup sliding across the table cloth, a clay duck waddling in a circle, construction paper shapes moving in a lyrical sequence, etc. This animation project need only be seconds in length – 15 seconds, perhaps. Students should create a storyboard as part of their planning. As a class, view the students' projects. What reflections do students have on the limitations and advantages of animation after completing and viewing these first projects?
12.11	To design and construct. (CCT)	
12.12	To introduce students to the terminology and software used in multimedia animation.	Many good resources on animation exist, to which the teacher can refer. See the bibliography for this course. Search the Internet. The following terms are ones that teachers can present and/or demonstrate to students using the respective software. **Cel animation:** This refers to animation in which the animator draws or paints a background. Over this background the animator lays transparent sheets containing components of the frame that have moved since the

Learning Objectives	Notes
12.13 To explore the evolution of technological innovations. (TL)	preceding frame. This is a film technique that computer programs can electronically recreate. In computer terminology, drawing/painting refers to creating figures, objects, etc. using draw and paint programs. **Pixel animation:** This type of animation has the capability to create three-dimensions as opposed to the "flat" nature of cel animation. Terms include: • modelling – the creation of three-dimensional characters, props, sets, etc. • animation – creating motion • shading – creating surface characteristics • lighting – digitally creating lighting effects • rendering – creating finished images from the information determined in the above programs. Draw and paint programs are the more traditional animation programs, and the ones which will most likely be available to students. If possible, create computer work stations where students can experiment with the available software.
12.14 To create a simple multimedia animated project. 12.15 To explore the technical aspects of various media. (TL)	This activity is dependent on the availability of computer software and hardware. Have students create a short animation using the available paint or draw software. The "bouncing ball" is a common introductory activity in multimedia production. Have students create a ten to fifteen second animation of a ball bouncing. Students should consider questions such as the following and then create a storyboard: • What is the ball made of (e.g., rubber, cement, water)? • What characteristics will the ball have because of the material from which it is made? • Does the ball have a personality or mood? • What will happen to the ball's shape when it hits the ground? • How will the shape change when it is in the air? Have students view and critique each other's productions. What worked especially well? What difficulties did they encounter? What were they able to do to create a feel of motion? What characteristics were they able to give the ball that a viewer would be able to detect?
12.16 To plan an animation production.	The remainder of the module should be spent on student projects. Students might work individually or in small production teams.
12.17 To create an animation production.	Depending on the time allotted to this module and the resources available, student projects will vary. Students might produce: • one video or one multimedia animation • one video and one multimedia animation two animations in either video or multimedia format.

Learning Objectives	Notes
12.18 To design and construct. (CCT)	Students should develop an animation production using the same sequence of production phases as other types of production.
12.19 To explore the technical aspects of various media. (TL)	All student animation projects should be short, probably not more than a few minutes in duration.
12.20 To reflect on personal and peer projects. 12.21 To evaluate creative processes and projects. (CCT)	Have students complete self-assessments of their projects. Ask them to focus on the following: • Their planning process. Did they plan sufficiently? Was their storyboard adequate? Did they manage their time well? • Their skill development. What skills did they develop? What skills are needed to improve their work in animation? • The creative aspects of their project. Are they happy with their animation "story"? Are they satisfied with the overall look of their animation project? If they had time to do it again, what might they do to make improvements? Hold an animation festival, at which student projects are showcased for each other or for other students in the school. After the festival, conduct a class discussion on the overall success of the animation projects. What did students learn from each other's projects?

Module 13: CPT Script Writing (Optional)

Suggested time: 10 hours **Level:** Intermediate and Advanced
Prerequisite: Module 1 or 2

Module Overview
In this module students will be introduced to the challenges of script writing for audio, video, or multimedia. Although the module length does not allow for extensive study, it will give interested students an opportunity to learn the basics of structure and formatting. Students with a keen interest in script writing should take Creative Writing 20 and arrange with their teacher to write a script as one of their projects.

Storyboarding is one way of organizing and planning a production. Storyboarding focuses the students' attention on the progression of visual elements. The script is a much more detailed planning device that combines visual and text elements (for video production) or sound effects and text (for audio production). Because it will not be possible to explore all forms of script writing in this module, most activities focus on dramatic writing. Learning about the elements of dramatic writing will help the student who wishes to produce:

- a radio drama
- a video drama
- a structured documentary with text bridges and/or dramatization
- a public service video with dramatic segments (e.g., SADD video)
- dramatic video or audio segments for multimedia production.

Equipment/supplies: access to word processing equipment, books on script writing

Foundational Objective
- To gain a rudimentary knowledge of the craft of writing scripts for audio, video, or multimedia production.

Common Essential Learnings Foundational Objectives
- To use language for differing audiences and purposes that is relevant to the students and to Communication Production Technology. (COM)
- To promote both intuitive, imaginative thought and the ability to evaluate ideas, processes, experiences, and objects in meaningful contexts. (CCT)

	Learning Objectives	Notes
13.1	To appreciate the importance of a good script in achieving a high quality product.	Contact Saskatchewan and Canadian organizations to find out the names of recent films/videos that have won awards for their scripts (e.g., contact Saskatchewan Filmpool Co-operative, Video Verité, Yorkton Short Film and Video Festival, National Film Board). Check with your school board to see if it has purchased a license for public performance with a film/video distributor or collective. Preview all films/videos you propose to show students. All of the above organizations should be able to tell you how the films/videos can be accessed for educational purposes. View one or more of the short films or videos that have won script awards. Discuss why the students think the film/video won the award for its script. How would a good script have affected the finished product? List the students' ideas about characteristics of a good script.
13.2	To compare and evaluate what is being viewed. (CCT)	

	Learning Objectives	Notes
13.4	To gain knowledge of the elements of dramatic script writing.	As most (although not all) students who wish to work from a script will be producing some form of dramatic script, this section of the module explores the elements or components of dramatic script writing. There are many good books on the subject. Refer to the bibliographies for this course and secondary level English Language Arts and Arts Education. The Creative Writing 20 curriculum guide has much information on the elements of story writing, which can be adapted to suit the purposes of video or audio stories.
13.5	To critique films, videos, or radio dramas. (CCT)	Topics commonly discussed include: • setting • character • plot (cause and effect) • dialogue • atmosphere • theme • genre. The student writer will need to decide: • Where is the story set? • How will the setting affect the characters? • Who is the story about? • What happens? What incident causes something to happen? What are the consequences? • What parts of the story can be shown visually? • What will the role of dialogue be? • What atmosphere will be established? How? • What is the story's theme? • Will the story be any particular genre (mystery, thriller, romance, etc.)? View or listen to a dramatic film, video, or radio drama. Discuss the above elements. Answer the above questions.
13.6	To learn that plot involves characters, their actions, and consequences of their actions.	Referring to the same film, video, or radio drama, focus on the characters and the plot, and determine how the two are connected. Have the students look for actions of the characters in response to an incident or starting point, and then examine how the characters' actions lead to other complications in the plot. Plot is composed of characters, actions, and consequences.
13.7	To begin developing the plot for their own script.	Have students begin work on their own script by writing down their story idea in a few sentences. Have them draw a concept map or web of how the story might develop. Have them consider all of the components listed above. Have them think about ways their plot could develop.
13.8	To organize information. (COM)	

Learning Objectives	Notes
13.9 To learn the meaning of text and sub-text in dialogue. 13.10 To apply conclusions and generalizations to new situations. (CCT)	Study a page or two of dialogue from a published screenplay. Discuss the concepts of text and sub-text. Explain that dramatic dialogue is seldom about what it appears to be about on the surface. Have students write a page of dialogue between two characters in their story idea, following these guidelines: • Their dialogue should have text and sub-text. For example, two teenagers might be talking about the basketball game (text) when they are really checking each other out (sub-text). In a mystery, a private investigator might be asking someone about the basketball game when he's really trying to find out if his suspect has an alibi. • Their dialogue should have a purpose connected to moving their story forward. No dialogue should use camera or audio time without doing duty for the story. • In the case of video, their dialogue should not do a job that can be done visually. A character does not need to say, "I see a car coming." The camera can show that. In the case of radio drama, the dialogue should not do a job that a simple sound effect can do. A character does not need to say, "I hear thunder."
13.11 To explore the concept of structure in script writing.	In this module, students will have time for only a brief introduction to structure, a full understanding of which would take many hours of study and practical experience.
13.12 To discover relationships and patterns. (CCT)	Most commercially successful movies with which students are familiar follow a three-act structure. Although some independent filmmakers use less traditional structures, it is probably a good idea for students to begin with three-act structure, even for a very short video or audio story. Three act structure can be explained as follows: **Act 1**. The first act is short and shows the audience the situation in which the story begins. *Marcia happily delivers papers in her suburban neighbourhood every morning at 6 AM. One of her customers is a nice elderly man who is always up when she delivers his paper.* At the end of the first act, something happens that throws the situation into chaos and forces the character(s) to make a decision. *Marcia sees a UFO, which quickly disappears. A reporter careens around the corner and tells Marcia the elderly man reported seeing a UFO and asks Marcia if she's seen it. Marcia is afraid of being laughed at and tells the reporter that she didn't see anything.* End of Act 1. **Act 2**. The second act is the main part of the story and follows the consequences and complications of the character's decision. *The elderly man who says he saw a UFO becomes a laughing stock. Marcia feels sorry for him and sends an anonymous letter to the paper saying she also saw a UFO. The paper traces the letter to Marcia's house. She admits to seeing the UFO, but now no one will believe her and she gets accused of writing a hoax letter. Marcia doesn't know what to do. Both she and the elderly man are now being laughed at. Marcia starts carrying a camera so she can take a picture if she sees the UFO again.* At the end of Act 2, something happens that sends the story to a rapid conclusion. This is called the climax. *Marcia is out delivering papers. The moon is still visible. She sees the UFO again.*

Learning Objectives	Notes
	The man is there too. They take a picture. They now have their proof. They talk about how beautiful and mysterious it is, and how lucky they are to have seen it. The man says, "I never should have told anyone." They see the reporter coming. The UFO zooms off. They look at each other. The reporter asks them if they saw anything. Marcia hides her camera. They both say they've only seen the moon and they've decided that's what they saw the first time. **Act 3**. The third act moves quickly to a conclusion, based on the actions at the end of Act 2. *The reporter leaves. The story cuts to Marcia placing her photograph in an envelope and delivering it to the man, along with his paper.* End of Act 3. For homework, have students watch a movie, television drama, situation comedy, or cartoon that they like. Can they identify three acts?
13.13 To develop a story treatment using a three-act structure	Have the students develop their story ideas in paragraph form using a three-act structure. This is called the treatment.
13.14 To learn about the components of a "shooting script". 13.15 To critique texts. (CCT)	Video scripts are taken to the "shooting script" stage. In practice, this is not always done by the writer, but sometimes by the director who wants to make his/her own decisions about shots and camera angles. Who prepares the shooting script depends on the relationship between the writer and director. Radio dramas are usually taken to the final stage by the writer, in consultation with the producer/director. The final script includes cues for sound and music. Have students examine a shooting script so that they can see the kinds of decisions that can be made prior to the actual shooting of the drama. The care taken at this stage can save them hours of time later; in production, time is money.
13.16 To examine acceptable formats for scripts, based on common industry practice. 13.17 To summarize information in a variety of ways. (CCT)	Have small groups of students research formats for different types of scripts. Include dramatic scripts, radio dramas, nonlinear multimedia scripts, documentaries, etc. (*Stories Made for Radio*, Coteau Books, Regina, contains several produced radio drama scripts.) Have the groups present to the rest of the class. Compile a reference binder of format examples to which student can refer when they are writing and formatting their own scripts.
13.18 To write a short script for audio, video, or multimedia.	Have students develop a short script. It would be especially useful for students to develop the script for one of their production projects (10, 20, or 30 level).
13.19 To use writing to record their ideas. (COM)	

Module 14A, B: Work Study Preparation and Follow-up Activities (Optional)

Suggested time: 5 - 10 hours **Level:** Intermediate and Advanced
Prerequisite: Modules 1 and 2

Module Overview
This module prepares students for work study placement. The module includes pre-placement information, preparation for interviews, and expectations for the workplace experience.

Foundational Objectives
- To develop workplace skills that may lead to successful employment.
- To recognize how the work skills developed in the classroom will be used to meet workplace expectations.

Common Essential Learnings Foundational Objectives
- To use a wide range of language experiences that are required in the workplace. (COM)
- To treat self and others with respect. (PSVS)

Learning Objectives	Notes
14.1 To create an awareness of the expectations of each of the partners in the work study component.	In order to establish a successful working relationship with all of the partners involved in the workplace, it is important to define the expectations of each partner. Refer to the Work Study Guidelines, a section of the *Practical and Applied Arts Handbook,* for roles and expectations of business, student, teacher monitor, and school.
14.2 To work toward improving self-esteem and self-confidence. (PSVS)	The students may formulate a list of what they can bring to the workplace and how each item may impact on their job(s): • school subjects • past experiences • self-concept and personality • needs, values, and interests • knowledge, skills, abilities, and attitudes • career goals and plans. Ask students to do a self-assessment, using the items in the above list as a guide. They are to explain how these attributes would be valuable to the communication industry. Try to incorporate the value of communication and teamwork in the discussion.
14.3To foster an awareness of building good communication skills for the workplace.	Discuss verbal and non-verbal communication. List some ways in which negative non-verbal communication may be displayed. Have students role play ways of demonstrating effective verbal communication on the job (e.g., when giving or receiving instructions, or resolving conflict). Divide the students into groups and provide each group with a case study or a situation.
14.4To discuss ideas presented. (COM)	

Learning Objectives	Notes
14.5 To develop a résumé and cover letter that can be forwarded to a potential employer.	Have each student develop a résumé and cover letter using the correct format. (Writing résumés and cover letters is also included in English Language Arts B10, 20, 30, Information Processing, and Career and Work Exploration 20.)
14.6 To create a student guide in preparation for an interview.	Students should develop their résumé on a computer disk and update it during the course, as work placement references are accumulated. A personal website that highlights the student's skills and training might be created and referred to in the résumé. If students have already completed a résumé and cover letter in another course, the teacher may do a review and encourage students to update their information. Each student should submit a résumé for teacher approval prior to going to an interview or directly to the workplace.
14.7 To show their understanding of ideas. (COM)	Through a classroom discussion or in groups, students should compile a "guide" for job interviews. After the students formulate their guide, the teacher may prompt them for missing items. Outline and describe the three stages of an interview: The **greeting** involves an introduction between the student and employer. This is the student's chance to make a good first impression. The **exchange** is where the employer asks a series of questions and engages in a conversation with the student about information on the résumé and other matters relating to the job placement. The **parting** brings the interview to a close. It can be just as important as the greeting. Provide the students with a list of questions frequently asked by employers or ask students to formulate a list as a group. Have them role play the stages of the interview.
14.8 To develop a procedural guide for the work site. 14.9 To demonstrate respect for persons. (PSVS)	Discuss the following work site items with students: • transportation • hours of work • absence and tardiness • procedures for conflict resolution • role of the student, teacher, and workplace supervisor • dress code • job description • school and employer expectations. Ensure that students understand expectations regarding the above.

	Learning Objectives	Notes
		Remind students that they will be expected to send a thank you note or card to the employer upon the completion of each work placement.
14.10	To relate feedback from the work placement.	Students provide feedback about work placement including: where they were placed, type of business, duties, most rewarding experience, most difficult situation, and how they handled it. Note: It is recommended that each student send a thank you note or card to the employer upon the completion of each work placement. If more than one placement has been made in the course, follow-up activities must be completed after each placement. Ensure that students understand these guidelines by asking students to describe each of these items. (**Note:** Look for opportunities to introduce and reinforce ideas about Labour Standards, Occupational Health and Safety; and Workplace Hazardous Materials Information System (WHMIS). Use *the Career and Work Exploration Curriculum Guide*, the *PAA Handbook*, the Saskatchewan Labour website (http://www.readyforwork.sk.ca), and other recommended resources.

Module 15A, B: Work Study (Optional)

Suggested time: 25 - 50 hours **Level:** Intermediate and Advanced
Prerequisite: Module 14

Foundational Objectives

- To be aware of careers and opportunities in the communication production sector in Saskatchewan and other provinces.
- To integrate classroom learning with work-related learning.
- To increase awareness of employability skills as they relate to the work environment.

Common Essential Learnings Foundational Objectives

- To develop compassionate, empathetic, and fair-minded students who can make positive contributions to society. (PSVS)
- To develop students' abilities to meet their own learning needs. (IL)

For more information about implementing a work study program see the Work Study Guidelines included in the *Practical and Applied Arts Handbook.*

In this module, teachers should develop learning objectives appropriate to the foundational objectives above and the students' particular work study placements. Discuss criteria for assessment with students before their placement and determine who will participate in the assessment. Conduct post-experience conferences with students, encouraging them to articulate what they learned and in what areas they could improve their work skills and abilities.

Note: Consult the renewed/new *Career and Work Exploration Curriculum Guide* and the Department of Labour for content about Labour Standards, Occupational Health and Safety, and WHMIS. If several work study opportunities are offered during grade 11 or 12 in a course series, add more depth to the next experience.

Module 16: Advanced Independent Study (Optional)

Suggested time: 20 - 50 hours **Level:** Advanced
Prerequisite: Module 8C

Module Overview
This module provides students with an opportunity to pursue a special interest after they complete the regular Level 30 production projects. Some individual students or groups of students may be ready to benefit from an individualized advanced study focus. The decision for some students to study independently should be assessed and approved by their teacher and school administrator.

Individualized studies should be an extension and a culmination of the student's previous learning. For example, one student who has completed the computer animation module and expresses a serious interest in further study may want to develop a specific skill in 3D modelling without his or her study resulting in a complete animation project. Or, a small group of students may want to participate in an Internet-based collaboration with students in another school or country that may not result in an actual production project. This module provides the flexibility for selected students to pursue advanced level special interests in addition to the regular Level 30 production projects.

Foundational Objective
- To pursue a special interest in the area of audio, video, or multimedia production technology.

Common Essential Learnings Foundational Objective(s)
- To support the development of a positive disposition toward life-long learning. (IL)

Learning Objectives	Notes
16.1 To develop an independent learning contract. (IL)	Students at the advanced level who have a special interest in a particular area of audio, video, or multimedia production may propose to undertake independent study with the approval of the teacher and administrator.
16.2 To make choices in learning that reflect their needs and interests. (IL)	Students should complete a sample contract that will describe in detail the objectives and proposed content, and outline criteria for assessment and evaluation of the study. See Appendix D for Independent Study Module Sample Contract.
16.3 To conduct an independent study on a topic of personal interest related to CPT.	The following suggested time allotment for the individualized study is based on a range of 20 to 50 hours. All times are approximate and will vary with individual situations.
16.4 To work on in-depth studies of their choice. (IL)	Research and project conception: 5-10 hours Teacher/student conferences: 1 hour (4 @ 15-minutes or 2 @ 30-minutes) Preparation and presentation of contract: 1 hour Involvement in study: 10-30 hours Presentation of work: 1 hour Final report on study outcomes: 2-7 hours
16.5 To develop a final report on the experience and outcomes of the study.	Copies of a final study report and the Independent Study Contract must be completed by the student and submitted to the teacher and school administration.

Module 99A, B, C: Extended Study (Optional)

Note: The extended study module may be used only once in a pure or survey Practical and Applied Arts course. It is important to record the title of the extended study module on the recordkeeping chart. Record 99A for the first extended study module offered in the course series, 99B for the second extended study module offered, etc.

Suggested time: 5 - 20 hours **Level:** Introductory/Intermediate/Advanced

Module Overview
Evolving social and personal needs of society, advances in technology, and demands to solve current problems require a flexible curriculum that can accommodate new ways and means to support learning in the future. The extended study module is designed to provide schools with an opportunity to meet current and future demands that are not provided for in current modules in the renewed PAA curriculum.

The flexibility of this module allows a school/school division to design **one new module per credit to complement or extend the study of pure core and optional modules**, which were configured to meet the specific needs of students or the community. The extended study module is designed to extend the content of the pure courses and to offer survey courses beyond the scope of the available selection of PAA modules from the pure courses.

The list of possibilities for topics of study or projects for the extended study module approach is as varied as the imagination of those involved in using the module. These optional extended study module guidelines should be used to strengthen the knowledge, skills, and processes advocated in the Practical and Applied Arts curriculum.

For more information on the guidelines for the Extended Study module see the *Practical and Applied Arts Handbook* (Draft 2000).

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Appendix A: Sample Module Recordkeeping Charts

Communication Production Technology 10

Student Name: _____

School Name: _____

Module Code	Modules	Hours	Date	Teacher Initial
CPTE01	Module 1: Overview of Communication Production Technology C			
CPTE02	Module 2: Introduction to Production Stages C			
CPTE03	Module 3: Legal and Ethical Issues C			
CPTE04	Module 4: Career Opportunities C			
CPTE05A	Module 5A: Introductory Video Production C			
CPTE06A	Module 6A: Introductory Audio Production C			
CPTE07A	Module 7A: Introductory Multimedia Production C			
CPTE08	Module 8A: Introductory Production Project(s) C			
CPTE10	Module 10: Effective Communication O			
CPTE99	Module 99: Extended Study O			

C = Core module
O = Optional module

Note: When the Extended Study, Work Study Preparation and Follow-up Activities, and Work Study modules are studied for the first time, record the module number and the letter A (Extended Study Module 99A). If the module is repeated at another level, the module is recorded using the letter B (Extended Study Module 99B).

It is recommended that module recordkeeping charts be printed on school letterhead.

Sample Module Recordkeeping Chart

Communication Production Technology 20

Student Name: _____

Student Number: _____

Module Code	Modules	Hours	Date	Teacher Initial
CPTE05B	Module 5B: Intermediate Video Production C			
CPTE06B	Module 6B: Intermediate Audio Production C			
CPTE07B	Module 7B: Intermediate Multimedia Production C			
CPTE08B	Module 8B: Intermediate Production Project(s) C			
CPTE11	Module 11: Special Effects O			
CPTE12	Module 12: Animation O			
CPTE14	Module 14: Work Study Preparation and Follow-up Activities O			
CPTE15	Module 15: Work Study O			
CPTE99	Module 99: Extended Study O			

C = Core module
O = Optional module

Note: When the Extended Study, Work Study Preparation and Follow-up Activities, and Work Study modules are studied for the first time, record the module number and the letter A (Extended Study Module 99A). If the module is repeated at another level, the module is recorded using the letter B (Extended Study Module 99B).

It is recommended that module recordkeeping charts be printed on school letterhead.

Sample Module Recordkeeping Chart

Communication Production Technology 30

Student Name: _____

Student Number: _____

Module Code	Modules	Hours	Date	Teacher Initial
CPTE08C	Module 8C: Advanced Production Project(s) C			
CPTE09	Module 9: Software and Technology Research and Exploration O			
CPTE13	Module 13: CPT Scriptwriting O			
CPTE14	Module 14: Work Study Preparation and Follow-up Activities O			
CPTE15	Module 15: Work Study O			
CPTE16	Module 16: Advanced Independent Study O			
CPTE99	Module 99: Extended Study O			

Note: This is a suggested configuration only. With the exception of Module 21, optional modules may be incorporated at any level.

C = Core module
O = Optional module

Note: When the Extended Study, Work Study Preparation and Follow-up Activities, and Work Study modules are studied for the first time, record the module number and the letter A (Extended Study Module 99A). If the module is repeated at another level, the module is recorded using the letter B (Extended Study Module 99B).

It is recommended that module recordkeeping charts be printed on school letterhead.

Appendix B: Suggestions for Production Projects

The following are suggestions only. Decisions regarding production projects will depend on students' interests and skill levels, and the availability of equipment.

	Level 10 Projects for Level 10 (Module 8) should be short and should be designed so that students can apply what they have learned in the Level 10 production labs.	**Level 20** Projects for Level 20 (Module 12) can be longer than in Level 10, incorporating more advanced skills or technology. They should be designed so that students can apply what they have learned in the Level 20 production labs.	**Level 30** Grade 12 students should choose projects for Module 13 based on their personal interests. Projects should reflect the students' growing skill development and proficiency with technology.
Video	"How to" video (3 min.) Talk show interview (3-5 min.) Garage band music video (2-4 min.) Welcome to school (3-5 min.) Electronic news gathering (ENG) project (5 min.) Cut-edit project using stock footage (1-2 min.) Public service announcement	Instructional video on a topic of student choice (5 min.) Grade 12 cap and gown ceremony News events and weather reports Sports stories Music video with dramatic or narrative elements Video advertisement (30 sec.)	Documentary (5-15 min.) with multiple elements (narration, location footage, still photos, interviews, etc.) Short dramatic productions (5-10 min.) of local story, legend, or other story idea Advertisement or infomercial Music video with special effects
Audio	Interviews with seniors or others in the community Talking book recordings Radio broadcast (5 min.) Public service announcement (30-60 sec.) Cut-edit sound effects project creating logical classifications of sounds (25 sound minimum)	Documentary (5 min.) Radio drama (5 min.) Recording of event in the school or community Recording of a performance Audio advertisement (30 sec.)	Documentary with multiple elements (narration, sound effects, etc.) Radio drama with interior and exterior scenes, and sound effects Talk radio program Audio advertisement with multiple elements Demo for local band
Multimedia	Presentation using software such as Powerpoint (5 min.); e.g. "how to", author study, science topic, etc.	Website comparisons Website for fictitious character or place School or CPT Website	CD-ROM yearbook or other CD-ROM project Multimedia presentation incorporating visuals and audio Website with internal links, graphics, etc. based on a design concept

Appendix C: Video, Audio, and Multimedia Competencies Checklist

Camera		**Audio**	
Operation and maintenance of equipment		Operation and maintenance of equipment	
Use of tripod		Placement of various microphones	
Telephoto lens		Filtering unwanted noise	
Wide angle lens		Adjusting sound level	
Zoom lens		Knowledge/use of transducer types:	
Camera angles:		condenser	
wide shot		dynamic	
full shot		Knowledge/use of pick-up patterns:	
medium shot		cardioid	
3/4 shot		super-cardioid	
long shot		omnidirectional	
head and shoulders		Attaching cables and connectors	
close up		Using sound effects	
extreme close up		Using musical components	
two shot		Other audio techniques (list below):	
medium two shot			
travel/follow shot			
Camera position:			
eye level			
high angle		**Lighting**	
point of view		Operation and care of equipment	
Camera movement:		Light measurement (natural & artificial)	
tilt		Adjustments for colour, contrast, etc.	
pan		Outdoor lighting	
zoom in		Indoor lighting	
zoom out		Flood lights	
dolly in		Spot lights	
dolly out		Special effects lighting	
Manipulate depth of field:		**Editing**	
vary focal length		Operation and maintenance of equipment	
vary distance		Use of log sheet for raw footage	
vary lighting conditions		Develop and use an edit list	
Fade in		Sequencing shots/audio segments	
Fade out		In camera editing	
Dissolve		VCR to VCR editing	
Swish pans		Audio editing (dubs, voice over, etc.)	
Special effects (list below):		Nonlinear editing	
		Multimedia	
		Operation and maintenance of equipment	
		Integrate two or more media elements	
		Use of computer hardware and software	
		Create presentations	
Other:		Edit presentations	
		Set up and shut down presentations	
		Create Web pages/sites	
		Practise backup and file management	

Appendix D: Independent Study Sample Contract

Name:

Answer the applicable questions

1. **Concept**
   How would you describe this project? What is your purpose? Is there a target audience? If so, who?

2. **Technical Skills and Knowledge**
   What skills and knowledge will you need to complete this project? How will you learn what you need to know?

3. **Medium**
   What materials, resources, etc. will you need to complete your project?

4. **Production Team**
   Will you work independently on this project, or will you work with others? If you work with others, what are the roles of the team members?

5. Time Frame

You will have a maximum of _____ hours of class time to complete this project. Set up a schedule and establish deadlines and key steps. List important dates below.

6. Facilities

What shared facilities and equipment will you need to book? At what times in your schedule? You will be asked to accommodate other class members.

7. Evaluation

Your project will be assessed at various stages and not just when it is completed. At what points will your project be assessed? What will be the criteria for assessment? Who will be included on the assessment team (e.g., teacher, self, peer, industry professional)?

_____	_____	_____
(Student)	(Teacher)	(Principal)
_____	_____	
(Parent/guardian)	(Date)	

(Contract adapted from sample provided by Rod Olson, Unity Composite High School)

Appendix E: Career Research Interview Questions

Adapted from *Business Education A Curriculum Guide for the Secondary Level Accounting 10, 20, 30* (Saskatchewan Education 1992).

Interview someone who currently works in this career.

The assignment may be completed independently, in pairs, in small groups, or by whichever method is chosen by the student(s) and teacher. The teacher should encourage students to use a variety of resources to gather information about the career that they are researching. The student may use letters, the Internet, phone or a personal interview to gather information.

After the students have discussed different career paths, students may prepare a short journal writing explaining why they are interested in the career area they are about to investigate.

Students may proceed to develop a list of questions to collect the information they require to help them understand more about the career area they have chosen.

The following list of questions may be included in the students' interview project.

1. What is the title of your job?

2. What are your normal duties on the job?

3. What are some of the things that you enjoy about your job?

4. Are there any things about your job that you dislike? What are those things?

5. Does your company have a dress code for employees? What is considered suitable?

6. How often is working overtime required in your job?

7. Do you have to work nights or weekends?

8. What aptitudes and abilities are needed to succeed in your career?

9. What are the post-secondary education and training requirements to enter and advance in your career?

10. Can you give an approximate starting salary for someone just starting out in your occupation? How much does the average person earn after five years? After ten years? What types of employee benefits, such as sick leave or dental plans, do workers in your career usually receive?

11. Do you think the demand for workers in your career will increase or decrease over the next five years? Why?

12. What changes have you seen over the past 5-10 years in this career?

13. What are the advantages and disadvantages of entering and being in your career?

14. Is there any advice you would give to a young person just making a career choice?

After the interview session, students may summarize the information they received and draw a conclusion as to whether they would like to learn more about this career. They may also determine whether they would like to join that organization based on their experience.

Students may brainstorm different ways to present their career research to the class. Presentation ideas may include:
Oral presentation
Power point presentation
Written report
Creating a website with links to career information
Role playing a student interviewing a career professional
Role playing a professional promoting his/her career at a career fair