

Public and Catholic District School Board Writing Partnerships

Course Profile **Communications Technology**

Grade 11
Workplace Preparation
TGJ3E

• *for teachers by teachers*

This sample course of study was prepared for teachers to use in meeting local classroom needs, as appropriate. This is not a mandated approach to the teaching of the course. It may be used in its entirety, in part, or adapted.

Course Profiles are professional development materials designed to help teachers implement the new Grade 11 secondary school curriculum. These materials were created by writing partnerships of school boards and subject associations. The development of these resources was funded by the Ontario Ministry of Education. This document reflects the views of the developers and not necessarily those of the Ministry. Permission is given to reproduce these materials for any purpose except profit. Teachers are also encouraged to amend, revise, edit, cut, paste, and otherwise adapt this material for educational purposes.

Any references in this document to particular commercial resources, learning materials, equipment, or technology reflect only the opinions of the writers of this sample Course Profile, and do not reflect any official endorsement by the Ministry of Education or by the Partnership of School Boards that supported the production of the document.

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Acknowledgments

Public and Catholic District School Board Writing Teams –

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Course Overview

Communications Technology, Grade 11, Workplace Preparation, TGJ3E

Secondary Policy Document: *The Ontario Curriculum, Grades 11 and 12, Technological Education, 2000*

Course Description

This course examines communications systems and design and production processes in the areas of electronic, live, recorded, and graphic communications. Students are given the opportunity to develop and apply practical skills to assemble, repair, operate, maintain, and test various systems. Students also study industry standards and regulations and health and safety issues, and explore careers, the importance of lifelong learning, and the impact of communications technology on society and the environment.

The course is divided into four units: Commercial Promotion and Communication; Studio Production; Interactive Media; and Digital Video Production. The projects are designed to equip students with the knowledge and skills required to meet the expectations of employers, apprenticeship, or other training programs.

How This Course Supports the Ontario Catholic School Graduate Expectations

The role of Technological Education in the Catholic faith community is to enable students to develop and utilize their gifts and talents while creating products that benefit others in a way that models gospel values. The focus of the curriculum is to enable students to become critical and innovative problem-solvers who question the use of resources and understand the implications of technological innovations. An emphasis on process as well as results ensures that students create products and provide services that recognize our God-given responsibility to respect the dignity and value of the individual and the community.

Course Notes

Technological education focuses on developing student ability to work creatively and competently with technologies that are central to their lives. It promotes the integration of learning across many subject disciplines. Similarly, technology supports student work in other subject areas. It develops research skills, supports development in literacy and mathematics, and fosters creativity and critical thinking. In addition, it promotes global citizenship and environmental awareness. Technological education contributes to learning in other areas of the curriculum by providing practical contexts and applications for the knowledge and skills acquired.

This Communications Technology program introduces students to a wide variety of equipment and technologies; however, it is not only about equipment use. This program also focuses on the transmission of images that reflect Christian values. It is expected that all student work contain positive images of race, gender, and religion. Stereotypes, acts of violence, sexual themes, or use of profanity in student work is unacceptable.

Students learn how to plan for participation in the working world of Communications Technology. The world is increasingly characterized by innovation, project-based teamwork, entrepreneurship, change, and the challenge of life-long learning. Through ongoing career research, students learn the intrinsic value of work and discover techniques to realize their potential for dignity, self-respect, and success. This research is presented in the form of an interactive multimedia presentation to all students at the end of the course.

Teachers address safety/censorship on the Internet at the start of the course by implementing their school board's policies on appropriate student use and access to Internet services. Students are informed of appropriate copyright laws and the correct use of any copyrighted materials used in project work.

In addition to specific skills developed throughout the course, students learn:

- to solve problems through careful analysis, cooperation, and communication. The student-centred, activity-based mode of delivery encourages the development of the unique potential of each individual. At the same time, there must be an emphasis on the co-ordination of several individual talents to effect the successful completion of projects.
- personal and teamwork skills:
 - to enhance group effectiveness including: questioning, debating, defending, presenting, and evaluating;
 - to show openness for the opinions and ideas of others;
 - to demonstrate confidence in the value of their own ideas;
 - to demonstrate skill in using a variety of strategies when working in team situations, including conflict resolution, evaluation of personal effectiveness, and peer mentoring skills.
- time-management skills:
 - to demonstrate the ability to design and follow an organizational plan for the completion of a range of different tasks;
 - to show commitment to a task by maintaining a level of effort required to work toward a product;
 - to develop the ability to monitor one's own progress using a variety of record-keeping and tracking procedures, including logs, journals, and work portfolios.

Units: Titles and Times

| | | |
|----------|--|------------|
| * Unit 1 | Commercial Promotion and Communication | 27.5 hours |
| Unit 2 | Studio Production | 27.5 hours |
| Unit 3 | Digital Video Production | 27.5 hours |
| * Unit 4 | Interactive Media | 27.5 hours |

* These units are fully developed in this Course Profile.

Unit Descriptions

Unit 1: Commercial Promotion and Communication

Time: 27.5 hours

Unit Description

In this unit, students explore the graphic concepts and processes of commercial promotion and communication. Students apply techniques and technologies in practical activities focused on product promotion and packaging. This unit introduces students to potential careers in graphic design and production. It aims to develop their design and problem-solving skills and increase their knowledge of graphic design and the technologies associated with product promotion, display, and packaging. Students demonstrate their learning through discussions, written submissions, and the preparation of mechanical art, prototypes, and presentations.

Unit Overview Chart

| Activity | Expectations | Assessment | Focus |
|---|---|---|--|
| 1. The Role of Graphic Processes in Commercial Communications | TFV.03, TFV.04, ICV.01 TF1.01, TF3.01, IC1.01, IC2.01, IC2.02 CGE 2a, b, c, d, e; 3b, c, d, e; 4a, b, c, e, f; 5a, e, f, g; 7b, i, j | Thinking/ Inquiry Knowledge Communication Application | Research and report on changes in the technologies and methodologies applied to the promotion and packaging of a commercial product |
| 2. Promotional Graphic Material | TFV.01, TFV.02, SPV.01 TF1.01, TF1.02, TF2.03, TF2.09, TF3.02, TF3.03, SP1.01, SP1.06, SP2.01, SP2.02, SP2.03, SP3.01 CGE 2a, b, c, d, e; 3b, c, d, e; 4a, b, c, e, f; 5a, e, f, g; 7b, i, j | Thinking/ Inquiry Knowledge Communication Application | Apply the principles of design and graphic processes in the production of mechanical art and film-ready files for promotional materials. |
| 3. Product Packaging | SPV.02, SPV.03, SPV.04, ICV.03, ICV.04 TF2.01, SP1.02, SP1.03, SP1.04, SP1.06, SP2.01, SP2.02, SP2.03, SP2.06, SP3.04, IC2.02, IC2.03, IC3.01, IC3.03 CGE 2a, b, c, d, e; 3b, c, d, e; 4a, b, c, e, f; 5a, e, f, g; 7b, i, j | Thinking/ Inquiry Knowledge Communication Application | Design and fabricate three-dimensional product packaging |
| 4. Presenting a Graphic Concept | TFV.01, ICV.01 SP1.03, SP1.04, SP2.03, SP2.04, SP4.02, SP4.03 CGE 2a, b, c, d, e; 3b, c, d, e; 4a, b, c, e, f; 5a, e, f, g; 7b, i, j | Thinking/ Inquiry Knowledge Communication Application | Use software to create presentation of package design concept |

Unit 2: Studio Production

Time: 27.5 hours

Unit Description

In this unit, students explore the skills, concepts, and techniques of audio/visual production in a studio setting. The unit focuses on the production of a newsmagazine that includes feature stories on relevant issues, news and sports reports, performances, and other activities happening within the school or the community. Students gain practical experience in developing a studio production through pre-production, production, and post-production stages. Students set up, troubleshoot, and operate the necessary lighting, sound, and video systems, as well as develop their design and problem-solving skills. Students demonstrate their learning through discussions, research, written work, and the preparation and use of the studio environment for a variety of production purposes.

Unit Overview Chart

| Activity | Expectations | Assessment | Focus |
|---|--|--|--|
| 1. Careers in Studio Production and Planning the News Magazine Format | TFV.01, TFV.04, SPV.01, ICV.03 TF1.01, TF1.02, TF3.01, TF3.03, SP1.01, SP1.02, SP1.03, SP1.04, SP1.05, SP1.06, SP2.06, IC3.01, IC3.02, IC3.03 CGE 2a, b, c, d, e; 3b, c, d, e; 4a, b, c, e, f; 5a, e, f, g; 7b, i, j | Knowledge/ Understanding Thinking/ Inquiry Application | Identify technical and administrative occupations associated with studio productions, plan all requirements, and set up all necessary equipment for the production |
| 2. Lighting in the Studio | TFV.02, SPV.02, ICV.02 TF2.07, TF2.08, SP2.04, SP3.01, SP3.02, SP3.04, SP4.03, IC2.02, IC2.03 CGE 2a, b, c, d, e; 3b, c, d, e; 4a, b, c, e, f; 5a, e, f, g; 7b, i, j | Knowledge/ Understanding Thinking/ Inquiry Application | Acquire knowledge and practical skills applicable to the operation and use of various types of lighting equipment |
| 3. Video in the Studio | TFV.04, TFV.03, SPV.02, SPV.03, ICV.02 TF2.03, TF2.04, TF2.05, TF2.10, TF2.12, TF2.13, TF2.14, TF3.02, SP2.01, SP2.02, SP2.05, SP2.06, SP3.01, SP3.02, IC2.01 CGE 2a, b, c, d, e; 3b, c, d, e; 4a, b, c, e, f; 5a, e, f, g; 7b, i, j | Knowledge/ Understanding Thinking/ Inquiry Application | Acquire knowledge and practical skills applicable to the operation and use of various types of audio/video equipment |
| 4. Post-production | TFV.03, SPV.04 TF2.06, TF2.09, TF2.11, SP1.06, SP2.02 CGE 2a, b, c, e; 3b, c, d, e; 4a, b, c, f; 5a, e, f, g; 7b, j | Knowledge/ Understanding Thinking/ Inquiry Application | Acquire knowledge and practical skills applicable to the equipment and practices used in the completion of an audio/visual studio production |

Unit 3: Digital Video Production

Time: 27.5 hours

Unit Description

This unit introduces students to the processes involved with digital image production. Students examine fundamental digital concepts, basic equipment functions, and their interface with computer technology. Students investigate the process of digitization and the transfer of data through the use of still and moving images in audio/video, recording, and photographic media. Emphasis is placed on the set-up, testing, and maintenance of the systems, (i.e., hardware, software, peripheral relationships, and connectivity), necessary to create digital productions. Critical evaluation and problem solving help students make decisions in light of gospel values with an informed moral conscience.

Unit Overview Chart

| Activity | Expectations | Assessment | Focus |
|--|---|---|--|
| 1. Still Image Storyboarding | TFV.01, TFV.02, TFV.03, TFV.04, SPV.01, SPV.02, SPV.03, ICV.03, ICV.04 TF1.02, TF2.01, TF2.02, TF2.03, TF2.06, TF2.10, TF2.11, TF3.01, SP1.01, SP1.02, SP2.04, SP3.03, SP3.04, SP4.01, IC1.01, IC3.01 CGE 2b, c, e; 3b, c, e; 4a, e, f; 5a, e, g; 7b, j | Knowledge/ Understanding Thinking/Inquiry Communication Application | Digitization techniques and manipulation of still images |
| 2. The Power of Audio | TFV.01, TFV.02, TFV.03, TFV.04, SPV.01, SPV.02, SPV.03, ICV.03, ICV.04 TF1.02, TF2.01, TF2.02, TF2.03, TF2.06, TF2.10, TF2.11, TF3.01, SP1.01, SP1.02, SP2.05, SP2.06, SP3.03, SP4.01, IC1.01, IC3.01 CGE 2a, b, c; 3b, c; 4b, e, f; 5a, e, f; 7b, j | Knowledge/ Understanding Thinking/Inquiry Communication Application | Digital audio techniques |
| 3. Community Service Announcement | TFV.01, TFV.02, TFV.03, TFV.04, SPV.01, SPV.02, SPV.03, ICV.01, ICV.03, ICV.04 TF1.01, TF1.02, TF2.01, TF2.02, TF2.03, TF2.06, TF2.09, TF2.10, TF2.11, TF3.01, TF3.03, SP1.01, SP1.02, SP1.03, SP1.04, SP1.05, SP1.06, SP3.01, SP3.03, SP3.04, SP4.01, SP4.02, IC1.01, IC3.01 CGE 1d; 2c, e; 3b, c, d, e; 4b, c, d, f, g; 5a, c, f, g; 7b, e, j | Knowledge/ Understanding Thinking/Inquiry Communication Application | Integration and editing of digital images |
| 4. “Re-purposing” Digital Video - Digital Editing Output Options | TFV.01, TFV.02, TFV.03, TFV.04, SPV.01, SPV.02, SPV.03, ICV.03, ICV.04 TF1.02, TF2.01, TF2.02, TF2.03, TF2.05, TF2.06, TF2.10, TF2.11, TF3.01, SP1.01, SP1.02, SP3.03, SP4.01, IC1.01, IC3.01 CGE 2c, f; 3c, e; 4b, e, f; 5a, e, f; 7b, j | Knowledge/ Understanding Thinking/Inquiry Communication Application | The process of digital output and output options |

Unit 4: Interactive Media

Time: 27.5 hours

Unit Description

This unit gives students the opportunity to develop an understanding of interactive media. A variety of interactive computer software is used by students to develop practical workshops that investigate uses for interactive technology and employment opportunities in communications technology. Emphasis is placed on the set-up, testing, and maintenance of the systems, (i.e., hardware, software, peripheral relationships, and connectivity), necessary to create their interactive projects. Students learn the intrinsic value of the support worker and realize their potential for dignity, self-respect, and success in their essential roles as supporting team players.

Unit Overview Chart

| Activity | Expectations | Assessment | Focus |
|---|---|---|---|
| 1. Community Service Presentation | SPV.01, SPV.02, SPV.03, ICV.03, ICV.04 TF1.02, TF2.03, SP1.01, SP1.02, SP2.01, SP2.02, SP3.03, SP3.04, SP4.02 CGE 2c, e; 3b, c, e; 4a, f; 5a, e, f; 7b, j | Knowledge/ Understanding Thinking/Inquiry Communication Application | Presentation software applications |
| 2. Career Study-Research and Presentation | TFV.01, TFV.02, SPV.01, SPV.02, SPV.03, ICV.03, ICV.04 SP1.01, SP1.02, SP2.01, SP2.02, SP3.03, SP4.02, IC1.01 CGE 2a, b, c; 3b, c; 4b, e, f; 5e, g; 7b, j | Knowledge/ Understanding Thinking/Inquiry Communication Application | Multimedia software applications |
| 3. Co-curricular Activities Web Design | TFV.01, TFV.02, TFV.03, SPV.01, SPV.02, ICV.03, ICV.04 TF1.02, TF2.01, TF2.02, TF2.03, TF3.01, SP1.02, SP2.01, SP2.02, SP3.03 CGE 2a, b, c, e; 3b, c, e; 4b, f; 5a, e, g; 7b, j | Knowledge/ Understanding Thinking/Inquiry Communication Application | Web-based applications |
| 4. Interactive Portfolio/Resume | TFV.03, SPV.02, SPV.03, ICV.04 TF2.02, TF2.03, TF2.09, SP1.01, SP1.02, SP1.03, SP1.04, SP1.05, SP1.06, SP2.01, SP2.02, SP3.01, SP3.03, SP4.02, IC3.01, IC3.02, IC3.03, IC3.04 CGE 2b, c, e; 3b, c, e; 4a, b, e, f; 5a, g; 7b, j | Knowledge/ Understanding Thinking/Inquiry Communication Application | Tying it all together - an interactive resume/portfolio |

Teaching/Learning Strategies

Students are introduced to practical aspects of communications technology using electronic, live, and graphic communications methods. The curriculum provides opportunities for students to undertake hands-on practical activities, as well as to conduct research and analysis. There is a wide range of teaching/learning strategies and accommodations to meet the needs of all students.

Throughout this profile, the teacher:

- monitors and observes all student/group activity;
- conferences with students on an ongoing basis to provide assistance when problems arise;
- reviews project expectations;
- modifies project activities to deal with the availability of equipment.

Teachers encourage attitudes and values, founded on Catholic social teachings, which promote social responsibility, human solidarity, and the common good.

Each unit provides the opportunity for students to focus on career options and provide insights into the skills required for a variety of related professions. A number of teaching/learning strategies employed in the classroom allow for career orientation (e.g., job shadowing, computer research, field trips, and guest speakers). Career education can be most effectively delivered by the integration of topics throughout the course. Classroom teachers work closely with the Guidance Department to co-ordinate the planning of career study. Students have the opportunity to explore a variety of career options, in the Communications Technology field, that are appropriate for the range of ability levels within the classroom.

Teaching/learning strategies include the following:

- *Brainstorming* – group generation of initial ideas expressed without criticism or analysis;
- *Buddy System* – links students for peer/cross-age support;
- *Case Study* – investigation of real and simulated issues;
- *Class Discussion* – students actively participate by taking turns while discussing current issues;
- *Collaborative/Cooperative Learning* – small-group learning providing high levels of student engagement and interdependence;
- *Computer-assisted Learning* – learning of new material or review/reinforce material previously learned;
- *Conferencing/Discussion* – student-to-student discussion and teacher-to-student discussion to encourage confidence and motivation to success in all learners;
- *Design Process* – a problem-solving approach using a prescribed process involving a number of steps;
- *Independent Study* – exploration and research of a topic interesting to students;
- *Journal Writing* – the practice of expressing ideas, experiences, questions, reflections, personal understanding, or new learning in written form on a regular basis;
- *Mind Map* – involves representing physical, demographic, and numerical data through visual formats that show relationships among ideas;
- *Problem-solving Strategies* – helps students work through problems;
- *Problem Solving* – model for helping students to identify and work through a problem design process;
- *Report/Presentation* – oral, visual, and written presentation of researched topic to class or community;
- *Research* – various models of investigation;
- *Socratic Lesson* – oral presentation of information by the teacher;
- *Theological Reflection* – students examine issues in relation to spiritual understanding as it reflects on them individually, in their families, and in their communities.

Assessment & Evaluation of Student Achievement

Assessment/Evaluation Techniques

Paper-and-Pencil Tests

- Ongoing quizzes
- Final evaluation (tests and final exam)

Performance Assessment

- Assigned exercises
- Skills demonstrations
- Checklists
- Worksheets
- Log/journal entries
- Presentation/exhibitions
- Finished product checklists
- Portfolios

Personal Communication

- Conferencing
 - Student-teacher
 - Teacher-group
- Instructional questions and answers
- Self-/peer assessment
- Daily log/journal
- Ongoing verbal feedback
- Critique

Teacher Observation

- Formal/informal

Reflection

- Self-/peer assessment
- Log/journal
- Portfolio

Assessment Tools

- Checklists
- Marking schemes
- Quizzes/tests
- Rubrics/rating scales
- Anecdotal comments with suggestions for improvement

Assessment Methods

Diagnostic: occurs at the beginning of a term, a unit of study, or whenever information about prior learning is useful.

Formative: during learning; ongoing feedback to the teacher and student about the quality of learning and the effectiveness of instruction.

Summative: usually carried out at the end of a learning process; may include feedback and/or judgement.

Activities developed throughout the course are skill oriented. As students develop skills, they are motivated to acquire related knowledge and develop attitudes, values, and understanding based on Catholic social teaching. The skills are reflected in the expectations set by the curriculum.

Assessment of skill development involves focus on both the process and the product. Checklists are commonly used to identify the operational steps of the process, whether it is creating a brochure in a desktop-publishing activity or producing a short video. Significant aspects of the completed product or service are identified and assessed on a rating scale. Checklists and rating scales are available at the start of the course; students can use them for self-assessment as they strive for acceptable standards of achievement. Checklists and rating scales provide both the student and teacher with an up-to-date and ongoing means of monitoring the level of achievement attained. Through teacher/student discussion, comparisons of the teachers and student's assessment of the skill can often clarify the standards that are expected. The addition of a peer assessment component, for group situations, also helps to clarify expectation achievement.

- Self-assessment helps students develop a sense of responsibility for their own learning. It encourages students to reflect on their growth and learning, giving them a sense of where they have been, where they are, and where they are going.
- When self-assessment and peer assessment occur with teacher guidance, students are provided with reactions to their work besides those of the teacher. Through the use of modelling and coaching, teachers can help students provide constructive and supportive feedback to themselves and to one another.

A variety of assessment techniques should be used in the evaluation process. The vocabulary used in test questions should reflect that used in the lab situation. The option for oral testing and student demonstrations of acquired skills should also be used. Although students should be encouraged to write answers in proper sentence form, questions and answers that involve diagrams are effective assessment instruments in technological education. The ability to combine skill and knowledge successfully in practical work tasks is demonstrated by students in their planning and implementation of projects, work assignments, and problem-solving activities. Daily teacher observation of the student's achievement on assignments is a technique for assessing progress in these areas.

How Assessment Strategies Are Used to Determine Final Course Mark

Assessment instruments are designed to provide information about student achievement. Learning skills, effort, punctuality, and recorded absences are reported separately and are not considered in the determination of the percentage grade. Assessment instruments may be used in more than one achievement category. The final grade is determined using the weighting below as a guideline to reflect the student's most consistent performance level.

Final Course Grade

| | |
|---|------------|
| Final Evaluation | 30% |
| <ul style="list-style-type: none"> • Formal Exam • Portfolio | |
| Term Evaluation | 70% |
| Knowledge/Understanding <ul style="list-style-type: none"> • Unit/Activity Tests and Quizzes • Unit Exercises | |
| Thinking/Inquiry <ul style="list-style-type: none"> • Assignments/Worksheets • Unit Projects • Independent Research (Career) • Unit Exercises | |

| | |
|---|-------------|
| Communication <ul style="list-style-type: none"> • Unit Exercises • Presentations | |
| Application/Productivity <ul style="list-style-type: none"> • Unit Projects | |
| TOTAL | 100% |

Accommodations

Teachers using this course profile should be acquainted with Individual Education Plans (IEPs) and their unique learning characteristics in order to make the necessary accommodations for students.

There is a wide range of teaching/learning strategies that can be used to meet the needs of all students.

Teachers are encouraged to alter and expand teaching strategies to accommodate learning styles.

Accommodations may include:

- Alter assessment plans.
- Use conferencing/discussion.
- Students work with classroom partners and/or peer tutors.
- Students act as lab assistants.
- Provide a list of terminology (possibly simplified) before an activity begins.
- Arrange small-group learning.
- Set flexible timelines.
- Adapt handouts.
- Alter project specifications.
- Incorporate task modifications (e.g., fewer/more websites, sources, informational items).
- Provide enrichment and extension activities.

Resources

Specific resources are listed at the end of each activity.

Course Development Resources

The Bible for Catholics. CD-ROM. Washington: Liguori Publications, 1996. ISBN 0-7648-0065-5

Blueprints: A Resource Tool for Writing Catholic Secondary School Course Profiles. Catholic Curriculum Cooperative, Central Region.

Choices Into Action: Guidance and Career Education Program Policy for Ontario Elementary and Secondary Schools, 1999.

Coping With the New Curriculum: Practical Strategies for Implementing the New Curriculum. Toronto: Educational Services Committee, OSSTF, 2000. ISBN 0-920930-53-0

Survival Strategies: Practical Tools for Educators. Toronto: Educational Services Committee, OSSTF, 1999. ISBN 0-920930-51-4

The Ontario Curriculum, Grades 9 to 10, Technological Education, 1999.

The Ontario Curriculum, Grades 11 to 12, Technological Education, 2000.

The Ontario Curriculum, Grades 9 to 12, Program Planning and Assessment, 2000.

Ontario Secondary Schools, Grades 9-12, Program and Diploma Requirements, 1999.

Trafford, Larry. *Educating the Soul: Writing Curriculum for Catholic Secondary Schools*. Toronto: Institute for Catholic Education, 1998. ISBN 0-9699178-5-6

Websites

Note: The URLs for the websites have been verified by the writer prior to publication. Given the frequency with which these designations change, teachers should always verify the websites prior to assigning them for student use.

Catholic Information Network — <http://www.cin.org>

Information for the Catholic community with links to other sites.

Catholic On-line Interactive Forum — <http://www.catholic.org>

Information for the Catholic community with links to other sites.

Curriculum Services Canada (Ontario Curriculum Centre - OCC) — <http://www.curriculum.org>

Ministry-approved resources, course profiles, and links to other educational sites.

Educational Computing Organization of Ontario (ECOO) — <http://www.ecoo.org/>

Resources for teachers and links to other educational sites.

Education Network of Ontario (ENO) — <http://www.enoreo.on.ca/>

Resources for teachers and links to other educational sites.

Media Awareness Network — <http://www.media-awareness.ca/>

Practical support for teaching media in the classroom with links to other sites.

New Advent – Catholic Encyclopedia — <http://www.newadvent.org/cathen>

A source for Catholic interests, action, and doctrine.

Ontario Ministry of Education — <http://www.edu.gov.on.ca/>

Ministry site with up-to-date information and useful links.

School Net — <http://www.schoolnet.ca/>

Learning resources, programs, and links to other educational sites.

Technology Educators of Ontario (TEO) — <http://www.teo.on.ca/>

Learning resources, programs, and links to other educational sites.

TV Ontario (Educational Programming & Services) — <http://www2.tvo.org/eduprog/>

Learning resources, programs, and links to other educational sites.

TV Ontario (Edulinks) — <http://www2.tvo.org/edulinks/>

Technological Education page with lesson plans and other resources to meet curriculum expectations using Internet-based resources. Links to other educational sites.

TV Ontario (Pdonline) — <http://www.tvo.org/pdonline/>

Professional development for teachers on-line with links to other useful educational sites.

TV Ontario (OESS) — <http://www.tvo.org/oess/>

Ontario Education Software Service – Ministry-licensed educational software.

YTV (In Class) — <http://inclass.ytv.com/>

Media-related teacher resources and links to other sites.

Women in Trades and Technology Network — <http://www.wittnn.com/>

An education and advocacy organization dedicated to promoting and assisting in the recruitment, training, and retention of women in trades and technology. Useful links to other sites.

OSS Considerations

Grade 11 Communications Technology, Workplace Preparation, is designated as a Technological Education, Part A, Broad-Based Technology program. The philosophy that underlies the teaching of broad-based technology is that students learn best by doing. Workplace preparation courses are designed to equip students with the knowledge and skills they require to meet the expectations of employers (if they plan to enter the workplace directly after graduation) or the requirements for admission to apprenticeship or other training programs. (See *The Ontario Curriculum, Grades 9 to 12, Program Planning and Assessment, 2000* for a description of the different types of secondary school courses).

Ontario secondary school graduates are expected to be technologically literate as stated in *Ontario Secondary Schools, Grades 9 to 12, Program and Diploma Requirements, 1999*. They should be able to understand and apply technological concepts, use computers in various applications, and analyse the implications of a wide range of technologies for individuals and society.

To ensure that all students in the province have equal opportunity to achieve their full potential, the education system must be free from discrimination and must provide all students with a safe and secure environment so that they can participate fully and responsibly in the educational experience. Anti-discrimination education, equity/social justice issues, conflict resolution/violence prevention, community partnerships, and faith development are addressed in the course. These support the Ontario Secondary School board policies as well as the Ontario Catholic School Graduate Expectations.

Career exploration is a component of all units and is aligned with *Choices Into Action: Guidance and Career Education Program Policy for Elementary and Secondary Schools, 1999*. Teachers ensure that students have a broad range of career exploration opportunities.

Overview Appendix I

Student Manual

(To be given out at the start of the course)

COMMUNICATIONS TECHNOLOGY GRADE 11, WORKPLACE PREPARATION MANUAL FOR NEW STUDENTS

Introduction

Welcome to Grade 11 Communications Technology! During this semester you have the opportunity to complete a range of communications technology projects. You also have the opportunity to learn transferable skills that are valuable in all your courses. Your “job description” as a member of this class is described below. Follow it closely for the best chance of success!

Secondary Policy Document Course Description

This course examines communications systems and design and production processes in the areas of electronic, live, recorded, and graphic communications. Students are given the opportunity to develop and apply practical skills to assemble, repair, operate, maintain, and test various systems. Students also study industry standards and regulations and health and safety issues, and explore careers, the importance of lifelong learning, and the impact of communications technology on society and the environment.

The course is divided into four units: Commercial Promotion and Communication; Studio Production; Interactive Media; and Digital Video Production. The projects are designed to equip students with the knowledge and skills required to meet the expectations of employers, apprenticeship or other training programs.

Unit Titles

| | | |
|--------|--|------------|
| Unit 1 | Commercial Promotion and Communication | 27.5 hours |
| Unit 2 | Studio Production | 27.5 hours |
| Unit 3 | Digital Video Production | 27.5 hours |
| Unit 4 | Interactive Media | 27.5 hours |

Student Job Description

- Follow all class guidelines and procedures.
- Maintain your notebook following the specified guidelines.
- Maintain your supplementary notes and folders as required:
 - glossary of terms;
 - technical journal;
 - portfolio (hard and electronic copy);
 - career exploration research;
 - summary of marks and marked tests, quizzes, and assignments.
- Complete all projects for all units.

Overview Appendix I (Continued)

Student Notebook

As you progress through this course, a great deal of information on relevant topics is going to be presented. Much of this information is to be filed in a separate Com Tech notebook. A well-organized and complete notebook is a valuable reference and study resource for you. It is recommended that you use a three-ring binder where material can be easily inserted.

Glossary

Glossaries are like dictionaries and are useful for reference and studying purposes. The glossary for this course contains terms and expressions relevant to Communications Technology. In the beginning, the glossary is updated using pen and paper. Later in the course, the glossary is organized and updated electronically. The glossary should include:

- Unit #: Title of Unit
- Activity #: Title of Activity
- Term - Explanation

Example:

- Unit 3: Digital Video Productions
- Activity 2: The Power of Audio
- CD-Audio — Sounds that have been digitized at a sampling rate almost high enough to duplicate reality. CD-Audio is the same format and quality as the discs played on a CD player.
- MIDI — Acronym for Musical Instrument Digital Interface. It is a standard communications protocol used by electronic music equipment allowing device control from personal computers.

Technical Journal

You are required to maintain a Technical Journal in which you record newly learned procedures. This serves as a handy personal reference to which you can refer for specific procedures that are difficult to memorize. For example, you might begin by listing the steps required to access your computer and later note the website that was particularly useful for one of your searches.

Portfolio

Your portfolio contains samples of your exemplary work. This work should be saved electronically: in your directory on the school file server, on a disk (floppy or zip), or transferred to a videotape or CD. A paper copy, if possible, should be placed in the portfolio section of your notebook. The work could be presented to a potential employer as a demonstration of what you are able to do. Sample work is collected from most, if not all, of the activities. As work is filed in your portfolio, you should update the Portfolio Table of Contents.

Example:

Unit 1, Activity 1: The Role of Graphic Processes in Commercial Communications

- Packaging Research

Unit 3, Activity 1: Still Image Storyboard

- Digital Storyboard (See Digital Tape 1)

Coded Expectations, Communications Technology, Grade 11, Workplace Preparation, TGJ3E

Theory and Foundation

Overall Expectations

- TFV.01** · apply the design process to develop solutions, products, processes, or services in response to simple challenges or problems in electronic, live, recorded, or graphic communications;
- TFV.02** · identify the mechanical and electronic characteristics of the components and processes required to produce a product or a service in communications technology;
- TFV.03** · demonstrate an understanding of electronic, live, recorded, and graphic communications systems;
- TFV.04** · describe industry standards applicable to communications technology.

Specific Expectations

The Design Process

- TF1.01** – explain how a human need or want can be met through a new or improved product;
- TF1.02** – apply the following steps of the design process to solve a variety of simple communications technology challenges or problems:
- identify what has to be accomplished (the problem);
 - gather and record information, and establish a plan of procedures;
 - brainstorm a list of as many solutions as possible;
 - identify the resources required for each suggested solution, and compare each solution to the design criteria, refining and modifying it as required;
 - evaluate the solutions (e.g., by testing, modelling, and documenting results) and choose the best one;
 - produce a drawing, model, or prototype of the best solution;
 - evaluate the prototype and what is required to produce it;
 - communicate the solution, using one or more of the following: final drawings, technical reports, electronic presentations, flow charts, storyboards, mock-ups, prototypes, and so on;
 - obtain feedback on the final solution and repeat the design process if necessary to refine or improve the solution.

Components, Systems, and Processes

- TF2.01** – explain the processes and components (e.g., photography, desktop publishing, printing, web-page creation) used in current communications technology;
- TF2.02** – explain different methods of storing and retrieving information and the advantages of each;
- TF2.03** – explain how digitization is used for print, audio, video, recording, and photographic media and in the transfer of data;
- TF2.04** – explain how microchip advancements have affected the development of computers and other electronic devices;
- TF2.05** – explain how signals are transmitted via wire, cable, fibre optic filaments, electromagnetic waves, and satellites;
- TF2.06** – explain fundamental digital concepts and the functions of basic equipment, including analog and digital signals, logic gates and circuits, counters and readout devices, and peripheral communications devices that interface with computers;
- TF2.07** – explain the relationship among current, voltage, and resistance;
- TF2.08** – define the following terms: watt, kilowatt, amp, volt, direct current, alternating current, parallel circuit, series circuit;

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- TF2.09** – explain how different materials and components are converted or assembled to make finished products;
 - TF2.10** – analyse and describe the electronic components of an industry-standard communications system;
 - TF2.11** – explain how the concepts of encoding, storing, decoding, transmitting, and receiving apply to electronic, live, recorded, and graphic projects in communications technology;
 - TF2.12** – explain how electricity and magnetism form the basis for audio and video communications;
 - TF2.13** – describe the effects of frequency and phase modulation in a communications system;
 - TF2.14** – explain the purpose of transmitters, receivers, and antennas in a communications technology system.

Standards

- TF3.01** – define the terminology used in the areas of electronic, live, recorded, and graphic communications;
- TF3.02** – recognize symbols used for identification in current electronic, live, recorded, and graphic communications systems;
- TF3.03** – identify industry regulations that affect systems and components in electronic, live, recorded, and graphic communications.

Skills and Processes

Overall Expectations

- SPV.01** · function effectively as individuals and as members of a cooperative team to produce a product or service;
- SPV.02** · produce, assemble, connect, and operate current equipment and components to perform specific functions related to communications technology;
- SPV.03** · use appropriate equipment and techniques to communicate, describe, and market solutions to communications technology problems;
- SPV.04** · use mathematical and language skills effectively and apply scientific principles to construct products that adhere to design specifications.

Specific Expectations

Organizational Skills

- SP1.01** – demonstrate the interpersonal skills required for effective teamwork;
- SP1.02** – develop the time management and problem-solving skills required to complete projects;
- SP1.03** – accurately document planning and production processes;
- SP1.04** – effectively apply a variety of planning tools (e.g., storyboards, flow charts, schematic diagrams);
- SP1.05** – select and use appropriate software to manage the production process;
- SP1.06** – use time management schemes to ensure that their productions meet client deadlines.

Production Skills

- SP2.01** – use appropriate techniques to model and communicate project ideas, materials, and specifications;
- SP2.02** – demonstrate the skills required to complete communications technology projects, both independently and in a group;
- SP2.03** – use a variety of communications equipment and processes to produce pictorial and technical drawings, models, and prototypes of a communications product or a service;
- SP2.04** – produce, repair, use, and maintain components and systems;

SP2.05 – demonstrate troubleshooting and testing skills using measurement and quality control instruments;

SP2.06 – follow assembly and prescribed maintenance procedures for components or systems in communications technology.

Documentation and Standards

SP3.01 – use a variety of methods to document the planning and production processes;

SP3.02 – use specific gauges and meters to monitor, test, and modify processes or systems to ensure adherence to industry-recognized standards;

SP3.03 – use industry-standard guidelines, conventions, and rules for composition and design;

SP3.04 – use colour theory and colour standards to create presentations that adhere to industry standards.

Interdisciplinary Applications

SP4.01 – apply mathematical equations to solve simple problems (e.g., calculating current loads and resistance, file sizes for bitmaps, or frame rates for animation);

SP4.02 – use appropriate language in reports and presentations;

SP4.03 – apply scientific principles related to concepts such as light, magnetism, and colour.

Impact and Consequences

Overall Expectations

ICV.01 · describe the social, environmental, and economic impacts of communications technology;

ICV.02 · identify pertinent legislation and practices related to safety in a communications technology facility and in the workplace;

ICV.03 · describe the career opportunities available in the communications technology sector immediately on graduation from high school;

ICV.04 · identify the employability skills required to be successful in the workplace.

Specific Expectations

Impacts

IC1.01 – describe the social, environmental, and economic effects of technological advancements in the communications sector.

Safety and Legislation

IC2.01 – identify hazards related to materials, processes, and equipment in a communications technology work environment;

IC2.02 – describe health and safety precautions for students and workers in a communications technology environment, and apply where appropriate;

IC2.03 – explain the need for health and safety laws and regulations related to a communications technology environment;

IC2.04 – explain how to handle hazardous materials in accordance with the Workplace Hazardous Materials Information System (WHMIS) guidelines.

Education, Training, and Career Opportunities

IC3.01 – identify career opportunities in the communications sector;

IC3.02 – describe the prerequisites for employment in communications sector careers and assess their own aptitude for such careers;

IC3.03 – identify the employability skills that employers seek in potential employees;

IC3.04 – explain the importance of lifelong learning for individuals in the communications technology sector.

Ontario Catholic School Graduate Expectations

The graduate is expected to be:

A Discerning Believer Formed in the Catholic Faith Community who

- CGE1a** -illustrates a basic understanding of the **saving story** of our Christian faith;
- CGE1b** -participates in the **sacramental life** of the church and demonstrates an understanding of the centrality of the Eucharist to our Catholic story;
- CGE1c** -actively reflects on **God’s Word** as communicated through the Hebrew and Christian scriptures;
- CGE1d** -develops attitudes and values founded on Catholic **social teaching** and acts to promote social responsibility, human solidarity and the common good;
- CGE1e** -speaks the **language of life**... “recognizing that life is an unearned gift and that a person entrusted with life does not own it but that one is called to protect and cherish it.” (Witnesses to Faith)
- CGE1f** -seeks intimacy with God and celebrates **communion** with God, others and creation through prayer and worship;
- CGE1g** -understands that one’s purpose or **call in life** comes from God and strives to discern and live out this call throughout life’s journey;
- CGE1h** -respects the **faith traditions**, world religions and the life-journeys of **all people of good will**;
- CGE1i** -integrates faith with life;
- CGE1j** -recognizes that “sin, human weakness, conflict and forgiveness are part of the human journey” and that the cross, the ultimate sign of forgiveness is at the heart of **redemption**. (Witnesses to Faith)

An Effective Communicator who

- CGE2a** -listens actively and critically to understand and learn in light of gospel values;
- CGE2b** -reads, understands and uses written materials effectively;
- CGE2c** -presents information and ideas clearly and honestly and with sensitivity to others;
- CGE2d** -writes and speaks fluently one or both of Canada’s official languages;
- CGE2e** -uses and integrates the Catholic faith tradition, in the critical analysis of the arts, media, technology and information systems to enhance the quality of life.

A Reflective and Creative Thinker who

- CGE3a** -recognizes there is more grace in our world than sin and that hope is essential in facing all challenges;
- CGE3b** -creates, adapts, evaluates new ideas in light of the common good;
- CGE3c** -thinks reflectively and creatively to evaluate situations and solve problems;
- CGE3d** -makes decisions in light of gospel values with an informed moral conscience;
- CGE3e** -adopts a holistic approach to life by integrating learning from various subject areas and experience;
- CGE3f** -examines, evaluates and applies knowledge of interdependent systems (physical, political, ethical, socio-economic and ecological) for the development of a just and compassionate society.

A Self-Directed, Responsible, Life Long Learner who

- CGE4a** -demonstrates a confident and positive sense of self and respect for the dignity and welfare of others;
- CGE4b** -demonstrates flexibility and adaptability;
- CGE4c** -takes initiative and demonstrates Christian leadership;
- CGE4d** -responds to, manages and constructively influences change in a discerning manner;
- CGE4e** -sets appropriate goals and priorities in school, work and personal life;
- CGE4f** -applies effective communication, decision-making, problem-solving, time and resource management skills;
- CGE4g** -examines and reflects on one's personal values, abilities and aspirations influencing life's choices and opportunities;
- CGE4h** -participates in leisure and fitness activities for a balanced and healthy lifestyle.

A Collaborative Contributor who

- CGE5a** -works effectively as an interdependent team member;
- CGE5b** -thinks critically about the meaning and purpose of work;
- CGE5c** -develops one's God-given potential and makes a meaningful contribution to society;
- CGE5d** -finds meaning, dignity, fulfillment and vocation in work which contributes to the common good;
- CGE5e** -respects the rights, responsibilities and contributions of self and others;
- CGE5f** -exercises Christian leadership in the achievement of individual and group goals;
- CGE5g** -achieves excellence, originality, and integrity in one's own work and supports these qualities in the work of others;
- CGE5h** -applies skills for employability, self-employment and entrepreneurship relative to Christian vocation.

A Caring Family Member who

- CGE6a** -relates to family members in a loving, compassionate and respectful manner;
- CGE6b** -recognizes human intimacy and sexuality as God given gifts, to be used as the creator intended;
- CGE6c** -values and honours the important role of the family in society;
- CGE6d** -values and nurtures opportunities for family prayer;
- CGE6e** -ministers to the family, school, parish, and wider community through service.

A Responsible Citizen who

- CGE7a** -acts morally and legally as a person formed in Catholic traditions;
- CGE7b** -accepts accountability for one's own actions;
- CGE7c** -seeks and grants forgiveness;
- CGE7d** -promotes the sacredness of life;
- CGE7e** -witnesses Catholic social teaching by promoting equality, democracy, and solidarity for a just, peaceful and compassionate society;
- CGE7f** -respects and affirms the diversity and interdependence of the world's peoples and cultures;
- CGE7g** -respects and understands the history, cultural heritage and pluralism of today's contemporary society;
- CGE7h** -exercises the rights and responsibilities of Canadian citizenship;
- CGE7i** -respects the environment and uses resources wisely;
- CGE7j** -contributes to the common good.

Unit 1: Commercial Promotion and Communication

Time: 27.5 hours

Unit Description

In this unit, students explore the graphic concepts and processes of commercial promotion and communication. Students apply techniques and technologies in practical activities focused on product promotion and packaging. This unit introduces students to careers in graphic design and production. It aims to develop their design and problem-solving skills and increase their knowledge of graphic design and the technologies associated with product promotion, display, and packaging. Students demonstrate their learning through discussions, written submissions, and the preparation of mechanical art, prototypes, and presentations.

Unit Synopsis Chart

| Activity | Time | Expectations | Assessment | Tasks |
|---|-----------|--|---|--|
| 1. The Role of Graphic Processes in Commercial Communications | 6 hours | TFV.03, TFV.04, TF1.01, TF3.01 ICV.01, IC1.01, IC2.01 IC2.02 | Thinking/ Inquiry Knowledge Communication Application | - Research and report on changes in the technologies and methodologies applied to the promotion and packaging of a commercial product. |
| 2. Promotional Graphic Material | 7 hours | TFV.01, TFV.02, TF1.01, TF1.02, TF2.03, TF2.09, TF3.02, TF3.03 SPV.01, SP1.01, SP1.06, SP2.01, SP2.02, SP2.03, SP3.01 | Thinking/ Inquiry Knowledge Communication Application | - Apply the principles of design and various graphic processes in the production of mechanical art and film-ready files for promotional materials. |
| 3. Product Packaging | 9.5 hours | TF2.01 SPV.02, SPV.03, SPV.04, SP1.02, SP1.03, SP1.04, SP1.06, SP2.01, SP2.02, SP2.03, SP2.06, SP3.04 ICV.03, ICV.04, IC2.02, IC2.03, IC3.01, IC3.03 | Thinking/ Inquiry Knowledge Communication Application | - Design and fabricate three-dimensional product packaging. |
| 4. Presenting a Graphic Concept | 5 hours | TFV.01 ICV.01 SP1.03, SP1.04, SP2.03, SP2.04, SP4.02, SP4.03 | Thinking/ Inquiry Knowledge Communication Application | - Use software to create a presentation of the package design concept. |

Activity 1: The Role of Graphic Processes in Commercial Communications

Time: 360 minutes

Description

Students research and prepare a written outline of historical changes in technologies and the methodologies applied to the promotion and packaging of a specified product or product type. Choosing an old but extant commercial product (e.g., hand soap), students analyse historical differences in the techniques, approaches, and meanings of its promotion and packaging. In their written submission, students demonstrate an understanding of the technologies and processes of graphic production, and they describe the mutually determining relationship between technological processes and cultural change.

Strand(s) & Learning Expectations

Strand(s): Theory and Foundation, Skills and Processes, Impact and Consequences

Overall Expectations

TFV.03 - demonstrate an understanding of electronic, live, recorded, and graphic communications systems;

TFV.04 - describe industry standards applicable to communications technology;

ICV.01 - describe the social, environmental, and economic impacts of communications technology.

Specific Expectations

TF1.01 - explain how a human need or want can be met through a new or improved product;

TF3.01 - define the terminology used in the areas of electronic, live, recorded, and graphic communications;

IC1.01 - describe the social, environmental, and economic effects of technological advancements in the communications sector;

IC2.01 - identify hazards related to materials, processes, and equipment in a communications technology work environment;

IC2.02 - describe health and safety precautions for students and workers in a communications technology environment, and apply where appropriate.

Prior Knowledge & Skills

Students should be able to locate library resources, conduct an Internet search using key words, and use a computer for the preparation of a written submission.

Planning Notes

The activities in this unit are thematically linked and build upon knowledge and skills in a progressive manner. For Activity 1, students need access to a computer for Internet research and the writing of their reports. Teachers should create a list of products and product types, for students to research, and facilitate research by preparing lists of links and search paths. Teachers should also provide an overview of the graphic technologies and processes (e.g., printing methods) prevalent in commercial promotion and product packaging now and in the past. Students need guidance in order to make the required connections between evolving technological processes, trends in graphic design, and cultural change. As a result of their research, students demonstrate an understanding of how the current global economy is reflected in, and determining of, aspects of graphic promotion and production.

Teaching/Learning Strategies

- This activity provides students with opportunities to demonstrate initiative and critical analysis.
- To help students achieve the best results, teachers need to make students aware of the objectives of their research and demonstrate how to draw conclusions from observations of graphic products.
- Discuss pictorial representations or actual samples of promotional graphics and product packaging, from a variety of historical periods and geographic areas, in a large group. Analyse them in terms of the graphic processes and technologies inherent in their making
- Student research should be guided by a series of open-ended questions that require students to draw connections between the technological processes used to make a graphic product and the economic and cultural impulses from which it emerged. Cultural diversity may be addressed by encouraging students to discover different techniques and approaches applied to promotion and packaging.

Assessment & Evaluation of Student Achievement

| Task/Product | Tool | Purpose | Achievement |
|---------------------------------|---|-----------|---|
| Research and Written Submission | Appendix I.1 – Graphic Processes in Commercial Communication Rubric | Formative | Knowledge/ Understanding, Communication |

Accommodations

Teachers review students' IEPs and adapt the activity and teaching strategies to meet individual needs. All students should be encouraged to share their knowledge of content, learning strategies, and computer use. Various accommodations and modifications may be made to assist students, including:

- timelines for completion may be modified to suit student need;
- students requiring extra help may be assigned peer tutors;
- student-to-student discussion and teacher-to-student conferencing may be provided throughout the project;
- provide an outline for the written submission;
- the length of the written submission may vary.

Resources

Print

Barden, Robert and Michael Hacker. *Communication Technology*. Canada: Nelson Canada, 1990. ISBN 0-8273-3225-4

Broekhuizen, Richard. *Graphic Communications*. USA: Glencoe Macmillan/McGraw-Hill, 1995. ISBN 0-02-676305-2

Jensen, C. and F. Mason. *Fundamentals of Engineering Graphics, SI Metric*. McGraw Hill Ryerson Ltd., 1988. ISBN 0-07-549209-1

Johnson, Charles. *Communication Systems*. USA: Goodheart-Wilcox Co., Inc., 1992. ISBN 0-87006-961-6

Karsnitz, John. *Graphic Arts Technology*. USA: Delmar Publishers Inc., 1984. ISBN 0-8273-1828-6

Pool, Robert. *Beyond Engineering: How Society Shapes Technology*. London: OUP, 1999. ISBN 0195129113

Purst, Zeke. *Graphic Communication, The Printed Image*. USA: Goodheart-Wilcox Co., Inc., 1989. ISBN 0-87006-961-6

Thode, T. and B. *Technology*. Delmar Publishers Inc., 1994. ISBN 0-8273-5098-8

Websites

www.harpweek.com

Fashion, appliances, packages

www.gono.com/museum/mtour

Beverage containers – pop bottles, cans

www.gov.mb.ca

Hudson Bay company archives

www.lifebefore1900.com

Pre-1900s - products in use with samples of advertising

<http://www.desktoppublishing.com/linkus.html>

Desktop publishing

<http://www.gatf.org>

Graphic Arts Technical Foundation Site contains educational information on the graphic arts and helpful links to graphic utilities

www.looksmart.com/eus1/eus65300/eus65317/eus66894/eus71040/

Promotional Product Printers and Graphic Designers

www.hrdc-drhc.gc.ca/JobFutures

Local businesses that print banners, signs, and paper promotional products.

Job Futures 2000 (information about careers, education, training, and future trends in Canada's workplace)

www.worklogic.com:81/noc

National Occupation Classification (NOC)

www.jobprofiles.com

Job Profiles (real people answering questions about their careers)

www.edu.gov.on.ca/careers

Career Gateways

www.workinphonet.ca

Contains general information on jobs and careers

Other

School Library/Resource Centre and local libraries (sources of advertisements)

Activity 2: Promotional Graphic Material

Time: 420 minutes

Description

Students apply design, composition, and typographical principles to produce a promotional product such as a brochure, sign, or display. Using computer hardware and graphics applications, they learn to prepare camera- and film-ready files for print production. Using available methods of reproduction, students produce a proof copy of their promotional product.

Strand(s) & Learning Expectations

Strand(s): Theory and Foundation, Skills and Processes, Impact and Consequences

Overall Expectations

TFV.01 - apply the design process to develop solutions, products, processes, or services in response to simple challenges or problems in electronic, live, recorded, or graphic communications;

TFV.02 - identify the mechanical and electronic characteristics of the components and processes required to produce a product or a service in communications technology;

SPV.01 - function effectively as individuals and as members of a cooperative team to produce a product or service.

Specific Expectations

TF1.01 - explain how a human need or want can be met through a new or improved product;

TF1.02 - apply the following steps of the design process to solve a variety of simple communications technology challenges or problems:

- identify what has to be accomplished (the problem);
- gather and record information, and establish a plan of procedures;
- brainstorm a list of as many solutions as possible;
- identify the resources required for each suggested solution, and compare each solution to the design criteria, refining and modifying it as required;
- evaluate the solutions (e.g., by testing, modelling, and documenting results) and choose the best one;
- produce a drawing, model, or prototype of the best solution;
- evaluate the prototype and what is required to produce it;
- communicate the solution, using one or more of the following: final drawings, technical reports, electronic presentations, flow charts, storyboards, mock-ups, prototypes, and so on;
- obtain feedback on the final solution and repeat the design process if necessary to refine or improve the solution;

TF2.03 - explain how digitization is used for print, audio, video, recording, and photographic media and in the transfer of data;

TF2.09 - explain how different materials and components are converted or assembled to make finished products;

TF3.02 - recognize symbols used for identification in current electronic, live, recorded, and graphic communications systems;

TF3.03 - identify industry regulations that affect systems and components in electronic, live, recorded, and graphic communications;

SP1.01 - demonstrate the interpersonal skills required for effective teamwork;

SP1.06 - use time management schemes to ensure that their productions meet client deadlines;

SP2.02 - demonstrate the skills required to complete communications technology projects, both independently and in a group;

SP2.03 - use a variety of communications equipment and processes to produce pictorial and technical drawings, models, and prototypes of a communications product or a service;

SP3.01 - use a variety of methods to document the planning and production processes.

Prior Knowledge & Skills

This activity assumes students have basic computer skills, such as text manipulation and file management.

Planning Notes

In this activity, students apply a rigorous design process in the production of their promotional material. They need instruction in the purposes and methodologies of each step in the design and production process. Teachers should be prepared to use exemplars demonstrating how to perform the required steps, which include how to: explore design ideas through sketches; modify and refine a chosen idea in a rough layout; use mechanical or electronic equipment to produce a composite layout; and use computer hardware and software to produce a colour proof of the product and files ready for film output. Similarly, teachers should acquire and present a range of commercial promotions (magazine advertisements, newspaper ads, flyers, brochures, signs, and retail displays) to illustrate the principles of design and composition. Cross-curricular opportunities are available with Business (marketing and product promotion) and Visual Arts (advertising and promotion).

Teaching/Learning Strategies

- Graphic design and production activities incorporate a variety of learning strategies, such as teacher-led discussion, independent and group work, problem solving, cooperation, communication, time management, and brainstorming new ideas.
- Demonstrate the required steps students need to complete the task. Students should keep a list of design ideas that come to mind as the steps and exemplars are demonstrated.
- Design ideas should be assessed at a meeting of a peer review group (in which students describe their concepts and intentions, receive input on the success of their treatment, and offer constructive criticism to others).
- Students work independently to produce their finished product, consulting with peers and teachers for input.
- Students maintain a log of the comments and suggestions they receive in review sessions and describe the actions they have taken as a result of this input.

Assessment & Evaluation of Student Achievement

| Task/Product | Tool | Purpose | Achievement |
|--|----------------|-----------|----------------------------|
| Research into pre-press techniques and printing technologies | Question Sheet | Formative | Knowledge |
| Peer Review Log | Checklist | Formative | Thinking/Inquiry |
| Design and Preparation of Promotional Product | Rubric | Summative | Communication, Application |

Accommodations

Teachers must review students' IEPs and adapt the activity and teaching strategies to meet the needs of individual students. Students with special needs may be accommodated through an adjustment (omission or expansion) in the design and layout stages of the project. Design templates for the computer applications can be made available to students at the production stage. Students should be encouraged to share their knowledge of computer software and hardware with their peers.

Resources

The equipment and tools required to complete the activity include: computers and a colour printer; Internet access for research; illustration, image-editing, and page layout software; a means of acquiring photographic images such as a scanner or Internet access; mechanical drawing and illustration tools.

Video

Graphic Design: 1 & 2. Step-by-Step Video, 1989. 45 min.

Paste-Up: 1 & 2. Step-by-Step Video, 1988. 45 min.

Print

Software and equipment instruction manuals.

Barden, Robert and Michael Hacker. *Communication Technology*. Canada: Nelson Canada, 1990. ISBN 0-8273-3225-4

Brainerd, T. *Graphic Design - Letterhead and Logo Design*. Rockport Publisher, 1998. ISBN 0-15649-6618-6

Broekhuizen, Richard. *Graphic Communications*. USA: Glencoe Macmillan/McGraw-Hill, 1995. ISBN 0-02-676305-2

Cloghessy, Florence, John Ritz, and Richard Seymour. *Exploring Communication*. USA: Goodheart-Wilcox Co., Inc., 2000. Text ISBN 1-56637-678-5, Student Activity Manual ISBN 1-56637-679-3, Instructor's Manual ISBN 1-56637-680-7

Heller, S. and T. Fernandes. *Becoming a Graphic Designer: A Guide to Careers in Design*. Wiley, John and Sons, 1999. ISBN 04712990

Johnson, Charles. *Communication Systems*. USA: Goodheart-Wilcox Co., Inc., 1992. ISBN 0-87006-961-6

Karsnitz, John. *Graphic Arts Technology*. USA: Delmar Publishers Inc., 1984. ISBN 0-8273-1828-6

Purst, Zeke. *Graphic Communication, The Printed Image*. USA: Goodheart-Wilcox Co., Inc., 1989. ISBN 0-87006-961-6

Thinking Creatively: New Ways to Unlock your Visual Imagination. F.W. Publishing, 1998. ISBN 0-8913-4843-3

Websites

<http://www.corel.com/index.htm>

Corel Corporation website – contains information about *CorelDraw*

<http://www.desktoppublishing.com/linkus.html>

Desktop publishing

<http://www.gatf.org>

Graphic Arts Technical Foundation – contains educational information on the graphic arts and helpful links to graphic utilities

<http://desktoppublishing.com/design.html>

Graphic Designers' Paradise – contains information and advice for graphic designers

Activity 3: Product Packaging

Time: 570 minutes

Description

Students investigate the printing and manufacturing technologies associated with product packaging. They prepare conceptual drawings of a three-dimensional package, research the technological processes required to produce it, and use computer software to prepare a prototype. In addition to the package prototype, students submit a descriptive essay on the careers associated with the design and manufacture of the packaging for a particular product.

Strand(s) & Learning Expectations

Strand(s): Theory and Foundation, Skills and Processes, Impact and Consequences

Overall Expectations

SPV.02 - produce, assemble, connect, and operate current equipment and components to perform specific functions related to communications technology;

SPV.03 - use appropriate equipment and techniques to communicate, describe, and market solutions to communications technology problems;

SPV.04 - use mathematical and language skills effectively and apply scientific principles to construct products that adhere to design specifications;

ICV.03 - describe the career opportunities available in the communications technology sector immediately on graduation from high school;

ICV.04 - identify the employability skills required to be successful in the workplace.

Specific Expectations

TF2.01 - explain the processes and components (e.g., photography, desktop publishing, printing, web-page creation) used in current communications technology;

SP1.02 - develop the time management and problem-solving skills required to complete projects;

SP1.03 - accurately document planning and production processes;

SP1.04 - effectively apply a variety of planning tools (e.g., storyboards, flow charts, schematic diagrams);

SP1.06 - use time management schemes to ensure that their productions meet client deadlines;

SP2.01 - use appropriate techniques to model and communicate project ideas, materials, and specifications;

SP2.02 - demonstrate the skills required to complete communications technology projects, both independently and in a group;

SP2.03 - use a variety of communications equipment and processes to produce pictorial and technical drawings, models, and prototypes of a communications product or a service;

SP2.06 - follow assembly and prescribed maintenance procedures for components or systems in communications technology;

SP3.04 - use colour theory and colour standards to create presentations that adhere to industry standards;

IC2.02 - describe health and safety precautions for students and workers in a communications technology environment, and apply where appropriate;

IC2.03 - explain the need for health and safety laws and regulations related to a communications technology environment;

IC3.01 - identify career opportunities in the communications sector;

IC3.03 - identify the employability skills that employers seek in potential employees.

Prior Knowledge & Skills

This activity assumes prior knowledge of the manipulation, acquisition, and management of graphic resources such as photographs, illustrations, and display typography. Students are required to possess an understanding of research techniques and tools and the ability to write a descriptive essay using primary and secondary sources. Students must also possess the ability to use various graphics applications (illustration, image-editing, and page layout) to produce and organize files adhering to standards used in commercial reproduction.

Planning Notes

A variety of resources are needed to complete the research and reporting components of this activity, including up-to-date textbooks or websites dealing with packaging processes and technologies, web- and paper-based information related to careers, and a computer lab for preparation of a written report.

Teachers should prepare a list of product types for students to choose from. Having chosen a product, students use available resources to prepare a step-by-step diagram of the printing and manufacturing processes required for its packaging. Teachers can facilitate research into both production processes and careers by creating question sheets and preparing electronic and paper-based search paths. Teachers prepare templates showing the number of steps in the production path and require students to find the process at each step and the job(s) associated with it. From their knowledge of the jobs encountered on the production path, students prepare a who-does-what description of the conception and manufacture of product packaging. Knowledge of printing and manufacturing technologies is used in Activity 4.

As with Activity 2, it is important for teachers to present commercially-produced samples of packaging types. Samples should be analysed as a class and discussed in terms of the use and variety of materials, design qualities, and promotional impact. After completing their report, students create a development drawing of the package, including folds and glue flaps. Teachers consider available output devices when providing students with specifications about package construction. (Students may be able to output only one or two panels at a time, depending on overall package size and maximum printable area on their printer.)

Teaching/Learning Strategies

(Whole-group discussions)

- The teacher uses exemplars to present an overview of the printing and manufacturing processes related to three-dimensional product packaging. The teacher discusses the purposes of product packaging, such as:
 - protection of the product from damage (both during transportation to store and home from store);
 - display of information about the cost of the product and instructions on safe usage;
 - prevention of theft by shoplifting;
 - attraction of consumers.
- In this discussion, students should be encouraged to assess the environmental impact of packaging techniques and to take it into account in their own designs.
- The teacher describes the means and objectives of the research/report components.
- Students choose from the list of suggested products and use available resources to research the technologies, processes, and career paths associated with the packaging most commonly used for that product type. The teacher presents an example of how to turn information gathered during research into a descriptive essay focussing on the jobs involved in the production process.
- The teacher provides instruction in the development of drawings and construction of a prototype. Students are provided with detailed specifications about graphic content and are instructed to:
 - determine package dimensions (bearing in mind the constraints imposed by available output devices);
 - develop rough and final drawings of the package shape and use;
 - create a layout of the graphic content of each panel of the package;
 - use computer hardware and software to produce the printed content of the prototype.

(Work in pairs)

- With a partner, students use available resources to complete and record the required research.

(Individual work)

- Students use their research notes to prepare the descriptive essay.
- Students prepare developmental drawings of their package design.
- Students create the printed content of their package prototype.
- Students use a variety of hand tools and materials to produce a prototype of their packaging concept.

Assessment & Evaluation of Student Achievement

| Task/Product | Tool | Purpose | Achievement |
|---|-----------|-----------|---------------------------------|
| Description of production path and related careers | Checklist | Formative | Knowledge |
| Job Profile (Appendix 1.2) and descriptive essay | Rubric | Formative | Thinking/Inquiry, Communication |
| Design and preparation of three-dimensional package | Rubric | Summative | Communication, Application |

Accommodations

Teachers must review students' IEPs and adapt the activity and teaching strategies to meet the needs of individual students. Students with special needs may complete the entire activity with a partner and be accommodated through modified research requirements and the use of design templates for their prototype. Students should be encouraged to share their knowledge of computer software and hardware with their peers, as well as provide assistance in the assembly of the prototype.

Resources

The following resources are required for this activity:

- a sufficient number of computers to conduct research in pairs, write a report, and produce the graphic content of the package design;
- colour printer;
- acquisition devices such as a scanner or digital camera;
- illustration, image-editing, and page layout software;
- mechanical layout and cutting tools;
- adhesives such as spray mount;
- cardboard substrate;
- acetate or mylar.

Print

AutoCAD reference manuals

Guptill, W. *Packaging Design*. USA. ISBN 0823065022

Hine, M. and M. Pietsch. *The Total Package. The Secret History and Hidden Meanings of Boxes, Bottles, Cans, and Other Persuasive Containers*. USA. ISBN 0316365467

Meyers, H. and M. Lubliner. *The Marketer's Guide to Successful Package Design*. USA: NTC Publishing Group, 1998. ISBN 0-0844234389

Sanders, M. *Communication Technology - Today and Tomorrow*. Canada: Glencoe/McGraw-Hill, 1984. ISBN 0-02-677110-1

Websites

<http://www.amcham.ru/news16/35.htm>

article on the changing face of packaging

<http://www.edu.gov.on.ca/careers>

Career Gateways

<http://www.hrdc-drhc.gc.ca/JobFutures>

Job Futures 2000 (information about careers, education, training, and future trends in Canada's workplace).

<http://www.jobprofiles.com>

National Occupation Classification (NOC) Job Profiles (real people answering questions about their careers).

<http://www.pac.ca>

Packaging Association of Canada - Information about the packaging industry in Canada, including a Job Mart and links to related sites. The site has information about the industry's environmental issues and an order form for Careers in a Package. Additionally, the site has information about the Packaging Association's Student Competition, sponsored every two years. The 1999 sponsor was Tetley Canada Inc.

<http://www.womeninpackaging.org/>

An international, non-profit, professional packaging organization dedicated to the growth and success of packaging professionals.

<http://www.workinfont.ca>

Contains general information on jobs and careers.

Activity 4: Presenting a Graphic Concept

Time: 300 minutes

Description

Students apply communication skills and demonstrate their knowledge of graphic processes to make a presentation for the packaging concept developed in Activity 3. Students use presentation software to present text and graphical descriptions of their prototype, as well as the printing and manufacturing processes required to produce the finished package. Employing design and literacy skills, the presentation enables students to demonstrate knowledge of communication software and the packaging technologies acquired in previous activities.

Strand(s) & Learning Expectations

Strand(s): Theory and Foundation, Skills and Processes, Impact and Consequences

Overall Expectations

TFV.01 - apply the design process to develop solutions, products, processes, or services in response to simple challenges or problems in electronic, live, recorded, or graphic communications;

ICV.01 - describe the social, environmental, and economic impacts of communications technology.

Specific Expectations

SP1.04 - effectively apply a variety of planning tools (e.g., storyboards, flow charts, schematic diagrams);

SP1.06 - use time management schemes to ensure that their productions meet client deadlines;

SP2.01 - use appropriate techniques to model and communicate project ideas, materials, and specifications;

SP2.02 - demonstrate the skills required to complete communications technology projects, both independently and in a group;

SP2.03 - use a variety of communications equipment and processes to produce pictorial and technical drawings, models, and prototypes of a communications product or a service;

SP4.02 - use appropriate language in reports and presentations.

Prior Knowledge & Skills

Students have completed the research components of previous activities and kept detailed notes of the processes and techniques required to produce the kind of package they have designed. They are also able to use the language of graphic design. Although this activity assumes no prior knowledge of presentation software, it assumes that students have acquired proficiency in the manipulation, acquisition, and management of graphic resources such as photographs, illustrations, and typography.

Planning Notes

This activity requires students to describe their packaging concept and the technological processes inherent in its manufacture. Teachers need to emphasize this fact; students are to inform and persuade others about the packaging concept, not the qualities of the product itself. Students are required to describe the intentions of their design concept in language that demonstrates their understanding of the principles and elements of design. They are also required to describe technological processes using industry-standard terminology.

Teachers should investigate and discuss presentation techniques and content, particularly:

- definition of background and foreground images;
- use of emphasis by means of colour and size of objects;
- impediments to communication such as illegibility, visual noise, and lack of organization;
- use of key points.

Teachers also describe and demonstrate the use of presentation software. Text versions of the demonstration should be available for students in hard copy or electronic form. The logistics of sharing input and output devices (digital cameras, scanners, and printers) need to be addressed.

Teaching/Learning Strategies

- This activity requires whole group discussions, teacher-led demonstrations, and individual student work. Students need to see what a good presentation looks like, so it is important to find or create exemplars that model characteristics and qualities required by this activity.
- Students should assist one another by proofreading text and offering constructive criticism about the clarity of presentation content.

Assessment & Evaluation of Student Achievement

| Task/Product | Tool | Purpose | Achievement |
|-----------------------------------|------------------------------------|-----------|---|
| Presentation of packaging concept | Appendix 1.3 – Presentation Rubric | Summative | Thinking/Inquiry Communication Knowledge Application |

Accommodations

Teachers must review students' IEPs and adapt the activity and teaching strategies to meet the needs of individual students. Students with special needs may be accommodated through the use of pre-designed templates for the presentation software. Students should be encouraged to share their knowledge of computer software and hardware with their peers.

Resources

Print

Guptill, W. *Packaging Design*. USA. ISBN 0823065022

Karsnitz, John. *Graphic Arts Technology*. USA: Delmar Publishers Inc., 1984. ISBN 0-8273-1828-6

Hine, M. and M. Pietsch. *The Total Package. The Secret History and Hidden Meanings of Boxes, Bottles, Cans, and Other Persuasive Containers*. USA. ISBN 0316365467

Sanders, M. *Communication Technology - Today and Tomorrow*. Canada: Glencoe/McGraw-Hill, 1984. ISBN 0-02-677110-1

Meyers, H. and M. Lubliner. *The Marketer's Guide to Successful Package Design*. USA: NTC Publishing Group, 1998. ISBN 0-0844234389

Websites

<http://www.corel.com/index.htm>

Corel Corporation website – contains information about *CorelDraw*

<http://www.presentations.com/>

Site contains information and tips to produce presentations

<http://www.designsense-cd.com/home.html>

A graphic training program that teaches presentation design techniques

Appendix 1.1

Graphic Processes in Commercial Communications Rubric

| Expectations/ Criteria | Level 1 (50-59%) | Level 2 (60-69%) | Level 3 (70-79%) | Level 4 (80-100%) |
|---|---|--|--|---|
| Knowledge/ Understanding TFV.03, TFV.04, TF1.01, TF3.01 <ul style="list-style-type: none"> Identifies and describes changes in printing and manufacturing processes applied to an identified product | - limited identification and description of changes in printing and manufacturing processes | - some identification and description of changes in printing and manufacturing processes | - considerable identification and description of changes in printing and manufacturing processes | - extensive identification and description of changes in printing and manufacturing processes |
| Communication ICV.01, ICV.03, TF1.01, IC1.01, IC2.01, IC2.02 <ul style="list-style-type: none"> Uses text and graphics to communicate the relationship between technological processes, cultural change, and environmental impact | - communicates the relationships with limited depth and clarity | - communicates the relationships with some depth and clarity | - communicates the relationships with considerable depth and clarity | - communicates the relationships with a high degree of depth and clarity |

Note: A student whose achievement is below level 1 (50%) has not met the expectations for this assignment or activity.

Appendix 1.2

Job Profile

Using the websites listed below, find an occupation that is involved in the commercial production of the packaging for the product you have selected. This occupation must not require postsecondary education. Describe the job by answering the questions.

National Occupation Classification – www.worklogic.com:81/noc

Job Futures – www.hrdc-drhc.gc.ca/JobFutures

Job Profiles – www.jobprofiles.com

What job have you selected?

What do people in this occupation do? What are their main duties?

What skills would an employer look for in a candidate for this job?

Is any other training or certification required besides a high school diploma?

What are the immediate prospects of finding work in this occupation?

What are the long-term prospects for this occupation?

Describe related jobs that require further postsecondary training or education.

Appendix 1.3

Presentation Rubric

| Expectations/ Criteria | Level 1 (50-59%) | Level 2 (60-69%) | Level 3 (70-79%) | Level 4 (80-100%) |
|---|--|---|---|--|
| Knowledge/ Understanding SP2.02 <ul style="list-style-type: none"> • Uses text and images to demonstrate knowledge and understanding of processes and technologies involved in package design and production | - demonstrates limited knowledge and understanding of processes and technologies | - demonstrates some knowledge and understanding of processes and technologies | - demonstrates considerable knowledge and understanding of processes and technologies | - demonstrates extensive knowledge and understanding of processes and technologies |
| Thinking/Inquiry SP1.04 <ul style="list-style-type: none"> • Describes package design in terms of visual appeal, protection, and communication of product information | - limited description of package design | - some description of package design | - considerable description of package design | - thorough description of package design |
| Communication SP4.02 <ul style="list-style-type: none"> • Describes relevant production technologies and processes using text and images | - limited description of relevant production technologies | - some description of relevant production technologies | - considerable description of relevant production technologies | - extensive description of relevant production technologies |
| Application TFV.01, SP2.03, SP1.06 <ul style="list-style-type: none"> • Applies knowledge of creation and manipulation of text and graphic content | - limited creation and manipulation of text and graphic content | - some creation and manipulation of text and graphic content | - considerable creation and manipulation of text and graphic content | - extensive creation and manipulation of text and graphic content |

Note: A student whose achievement is below level 1 (50%) has not met the expectations for this assignment or activity.

Unit 4: Interactive Media

Time: 27.5 hours

Unit Description

This unit gives students the opportunity to develop an understanding of interactive media. A variety of interactive computer software is used by students to develop practical workshops that investigate uses for interactive technology and employment opportunities in the field of communications technology.

Emphasis is placed on the set-up, testing, and maintenance of the systems, (i.e., hardware, software, peripheral relationships, and connectivity), necessary to create their interactive projects. Students learn the intrinsic value of the support worker and realize their potential for dignity, self-respect, and success with respect to their essential roles as supporting team players.

Unit Synopsis Chart

| Activity | Time | Expectations | Assessment | Focus |
|---|-----------|---|---|---|
| 1: Community Service Presentation | 5 hours | SPV.01, SPV.02, SPV.03, ICV.03, ICV.04 TF1.02, TF2.03, SP1.01, SP1.02, SP2.01, SP2.02, SP3.03, SP3.04, SP4.02 CGE 2c, e; 3b, c, e; 4a, f; 5a, e, f; 7b, j | Knowledge/ Understanding Thinking/Inquiry Communication Application | Presentation software applications |
| 2: Career Study – Research and Presentation | 7.5 hours | TFV.01, TFV.02, SPV.01, SPV.02, SPV.03, ICV.03, ICV.04 SP1.01, SP1.02, SP2.01, SP2.02, SP3.03, SP4.02, IC1.01 CGE 2a, b, c; 3b, c; 4b, e, f; 5e, g; 7b, j | Knowledge/ Understanding Thinking/Inquiry Communication Application | Multimedia software applications |
| 3: Co-curricular Activities Web Design | 10 hours | TFV.01, TFV.02, TFV.03, SPV.01, SPV.02, ICV.03, ICV.04 TF1.02, TF2.01, TF2.02, TF2.03, TF3.01, SP1.02, SP2.01, SP2.02, SP3.03 CGE 2a, b, c, e; 3b, c, e; 4b, f; 5a, e, g; 7b, j | Knowledge/ Understanding Thinking/Inquiry Communication Application | Web-based applications |
| 4: Interactive Portfolio/ Resume | 5 hours | TFV.03, SPV.02, SPV.03, ICV.04 TF2.02, TF2.03, TF2.09, SP1.01, SP1.02, SP1.03, SP1.04, SP1.05, SP1.06, SP2.01, SP2.02, SP3.01, SP3.03, SP4.02, IC3.01, IC3.02, IC3.03, IC3.04 CGE 2b, c, e; 3b, c, e; 4a, b, e, f; 5a, g; 7b, j | Knowledge/ Understanding Thinking/Inquiry Communication Application | Tying it all together - an interactive resume/ portfolio |

Activity 1: Community Service Presentation

Time: 300 minutes

Description

Students use presentation software to develop a resource that can be used by a specific non-profit community service, social justice group, or charity organization. Working cooperatively with the community, students incorporate video, audio, graphics, photos, and text to create an effective presentation. Completed projects ultimately support the community as resources for group presentations or individual kiosk presentations. Students are encouraged to examine, evaluate, and apply knowledge (physical, political, ethical, socio-economic, and ecological) for the development of a just and compassionate society.

Strand(s) & Learning Expectations

Strand(s): Theory and Foundation, Skills and Processes, Impact and Consequences

Overall Expectations

SPV.01 - function effectively as individuals and as members of a cooperative team to produce a product or service;

SPV.02 - produce, assemble, connect, and operate current equipment and components to perform specific functions related to communications technology;

SPV.03 - use appropriate equipment and techniques to communicate, describe, and market solutions to communications technology problems;

ICV.03 - describe the career opportunities available in the communications technology sector immediately on graduation from high school;

ICV.04 - identify the employability skills required to be successful in the workplace.

Specific Expectations

TF1.02 - apply the following steps of the design process to solve a variety of simple communications technology challenges or problems:

- identify what has to be accomplished (the problem);
- gather and record information, and establish a plan of procedures;
- brainstorm a list of as many solutions as possible;
- identify the resources required for each suggested solution, and compare each solution to the design criteria, refining and modifying it as required;
- evaluate the solutions (e.g., by testing, modelling, and documenting results) and choose the best one;
- produce a drawing, model, or prototype of the best solution;
- evaluate the prototype and what is required to produce it;
- communicate the solution, using one or more of the following: final drawings, technical reports, electronic presentations, flow charts, storyboards, mock-ups, prototypes, and so on;
- obtain feedback on the final solution and repeat the design process if necessary to refine or improve the solution;

TF2.03 - explain how digitization is used for print, audio, video, recording, and photographic media and in the transfer of data;

SP1.01 - demonstrate the interpersonal skills required for effective teamwork;

SP1.02 - develop the time management and problem-solving skills required to complete projects;

SP2.01 - use appropriate techniques to model and communicate project ideas, materials, and specifications;

SP2.02 - demonstrate the skills required to complete communications technology projects, both independently and in a group;

SP3.03 - use industry-standard guidelines, conventions, and rules for composition and design;
SP3.04 - use colour theory and colour standards to create presentations that adhere to industry standards;
SP4.02 - use appropriate language in reports and presentations.

Ontario Catholic School Graduate Expectations

CGE2c - presents information and ideas clearly and honestly and with sensitivity to others;
CGE2e - uses and integrates the Catholic faith tradition, in the critical analysis of the arts, media, technology, and information systems to enhance the quality of life;
CGE3b - creates, adapts, and evaluates new ideas in light of the common good;
CGE3c - thinks reflectively and creatively to evaluate situations and solve problems;
CGE3e - adopts a holistic approach to life by integrating learning from various subject areas and experience;
CGE4a - demonstrates a confident and positive sense of self and respect for the dignity and welfare of others;
CGE4f - applies effective communication, decision-making, problem-solving, time, and resource management skills;
CGE5a - works effectively as an interdependent team member;
CGE5e - respects the rights, responsibilities, and contributions of self and others;
CGE5f - exercises Christian leadership in the achievement of individual and group goals;
CGE7b - accepts accountability for one's own actions;
CGE7j - contributes to the common good.

Prior Knowledge & Skills

- Students should be familiar with the operation of a computer and be able to save, import, export, and create files.
- understanding of the basic principles of design (from Unit 1).

Planning Notes

- Cross-curricular connections include Religion, Social Science, and English.
- Students may get involved in a small group to decide what might be included in the production.
- Provide teacher-generated handouts and worksheets.
- Review the principles of managing various audio, video, picture, and text files.
- Stress the correct and safe use of all equipment and materials throughout the activity.
- Make available resources that may be used in the activity and provide student exemplars or an industry standard in multimedia production.
- Provide the opportunity for students to focus on specific career options and provide insights into the skills required for related professions:
 - Teaching/learning strategies that allow for career links should be investigated (e.g., job shadowing, career and education research, field trips, and guest speakers). Arrange for appropriate speakers, whose careers are related to this activity, to share their education and career paths with students. Members of the community may provide students with some insights into career opportunities and issues.
- Remind students to update the career research section of their Student Manual.

Teaching/Learning Strategies

- The teacher encourages attitudes and values, founded on Catholic social teachings, which promote social responsibility, human solidarity, and the common good.
- The teacher introduces the project and initiates a discussion on the importance of interactive presentations in communicating information today.

-
- The teacher should discuss with students the variety of social issues that may be researched for this multimedia project.
 - Students decide on a focus for their project and brainstorm a list of images and words that would help convey the message.
 - Students, through discussion with other design team members, make final design decisions in light of Gospel values with an informed moral conscience.
 - Establish design review group sessions aimed at creating a positive environment for sharing of ideas and concepts. Students should be encouraged to critique each other's work. The aim of each session is to gather a variety of views on how to enhance the material being produced, to proofread work, and to ensure that ethical standards and policies of communications technology are met as well as Gospel values.
 - Students conference with the teacher during the development of the project.
 - Each student creates a storyboard that diagrams the project frame by frame.
 - The teacher demonstrates the basic set-up and correct handling procedures for all equipment and software, through a series of small-group lessons as equipment is required (e.g., cameras and scanners at the start, a projector for the final output).
 - Students complete a series of short exercises reinforcing the safe and correct use of all equipment, software, and the basic techniques and options that the equipment and software provide.
 - Students research their topic, gathering and compiling all resource material.
 - Students are now at the editing/authoring stage that includes constructing, collecting, and editing all raw materials (text, photos, sound, and video) to be used in the project. Using the materials and presentation software, students can create multimedia projects based on their storyboard guide.
 - Students present their projects to the class and the group that the project was prepared for. A presentation to the larger school community (a school event – Arts Night or in the cafeteria during lunch) should be discussed by the class and left open as an option.
 - Upon completion of the activity and after all student work has been presented, the overall project is discussed and the opportunity for all students to complete a self- and peer assessment is given.

Assessment & Evaluation of Student Achievement

Diagnostic assessment of definition of communication:

- skills inventory/checklist is given at the start of the activity.

Formative assessment of the student's ability to work cooperatively in groups:

- students assess the contribution of the individual group members by completing daily log sheets;
- personal communication through teacher/student conferencing.

Summative assessment of finished multimedia presentation:

- performance assessment of finished product – project evaluation sheet.

Summative assessment of the concepts and techniques utilized in this activity:

- paper and pencil test.

Summative assessment of project presentation and class discussion of student work:

- performance assessment of finished presentation;
- personal communication through self-/peer assessment and critique;
- reflection through self-/peer assessment.

Accommodations

- Teachers should be acquainted with Individual Education Plans (IEP) and their unique learning characteristics in order to make the necessary accommodations. Teachers should be aware of students who require modification to the mandated expectations for this course. *Ontario Secondary Schools* (p. 24) allows teachers to modify the learning expectations for exceptional students in order to support the contents of the student's IEP. This applies also to students who have not been identified as exceptional but are receiving Special Education programs and services.
- Students with special artistic abilities may wish to add original drawings, music, or other media to the final animation.
- Students use *AutoContent Wizard* to design a presentation.
- The opportunity for peer tutoring is provided for students requiring extra help.

Resources

Teacher-developed resources including handouts, worksheets and activity sheets

Student exemplars

Software manuals and tutorial exercises

The school Library/Resource Centre

Books

Adams, Marianne. *Teaching For Diversity and Social Justice*. USA: Routledge, 1997. ISBN 0415910579

Bell, Lee, Marianne Adams, and Pat Griffin. *Teaching For Diversity & Social Justice: A Sourcebook for Teachers & Trainers*. USA: Routledge, Chapman & Hall Inc., 1997. ISBN 0415910560

Allen, JoBeth. *Class Actions: Teaching Social Justice in Elementary and Middle Schools*. USA: College Press, 1999. ISBN 0807738565

Ayers, William. *Teaching for Social Justice: A Democracy & Education Reader*. USA: New Press, 1998. ISBN 1565844203

Brown, L. Allen. *Power Pitches - How to Produce Winning Presentations Using Charts, Slides, Video & Multimedia*. USA: Professional Publishing, 1997. ISBN 0786309725

Jasmine, Grace. *Creating a Winning PowerPoint 2000 Presentation*. USA: IDG Books Worldwide, 1999. ISBN 0764585 665

Lehaman, Carol. *Creating Dynamic Multimedia Presentations Using Microsoft Powerpoint*. USA: Course Technology, 1999. ISBN 0324025378

Monsen, Laura. *Easy Microsoft PowerPoint 2000*. USA: Que Corporation, 1999. ISBN 0789718464

Rathbone, Andy. *Multimedia & CD-ROMs for Dummies*. Foster City, CA: IDG Books Worldwide, Inc., 1997. ISBN 1-5688-4225-2

Robbins, Jo. *High Impact Presentations: A Multimedia Approach*. USA: John Wiley & Sons, 1997. ISBN 0471157813

Roman, Kenneth and Joel Paphaelson. *Writing that Works: How to Write Effective Emails, Letters, Resumes, Presentations, Plans, Reports, and Other Business*. USA: Harper Resource, 2000. ISBN 0060956437

Sheridan, E.F. *Do Justice: The Social Teaching of Canadian Catholic Bishops*. Toronto: Mediapaul, 1999. ISBN 2890391132

Wolfgram, Douglas E. *Creating Multimedia Presentations*. USA: Que Corporation, 1994. ISBN 1-5652-9667-2

Video

The Gospel is a Social Message. Richard Sparks, CSP (Available through the Catholic Office of Religious Studies - 1155 Yonge St. Toronto (416) 934-0606)

Marketplace Prophets: Voices for Justice in the 20th Century. (Available through the Catholic Office of Religious Studies)

Think Again - Challenging Attitudes to Poverty. (Available through American conference of Catholic Bishop's 1-800-235-8722 or <http://www.nccbuscc.org>)

The Richest Dog in the World. (Available through the American conference of Catholic Bishops)

Websites

Aboriginal Rights Coalition (ARC) — <http://home.istar.ca/~arc>

This site works in partnership with Aboriginal peoples and regional activist groups to build solidarity in the struggle for Aboriginal justice.

Canadian Catholic Organization for Development of Peace — <http://www.devop.org>

This site provides a mandate for the development of peace and provides information on the causes of poverty and injustice especially among poor populations in countries in the south.

Ecumenical Coalition for Economic Justice — <http://www.ecej.org>

This site promotes economic justice in both Canada and the third world.

GreenPeace — <http://www.greenpeacecanada.org>

This site provides information about environmental degradation and injustice found in the world.

Inter-Church

- Action for Development, Relief and Justice (ICA) — <http://www.web.net/~icact>
- Coalition on Africa (ICCAF) — <http://www.web.net/~iccaf>
- Committee for Refugees (ICCR) — <http://www.web.net/~iccr>
- Committee for World Development Education — <http://www.web.net/~tendays>
- Committee on Human Rights Latin America (ICCHRLA) — <http://www.web.apc.org/~icchrla>

These sites all deal with social injustices around the world. The information provided ranges from refugee rights, human rights policies, relief from disasters, low-income self-help groups and the pursuit of economic justice.

Kodak: Digital Learning Centre — <http://www.kodak.com/US/en/digital/dlc>

This site provides a picture centre, photography tutorials, multimedia presentations on digital photography, and photographic equipment.

Macromedia — <http://www.macromedia.com>

This site provides multimedia tips, training resources, exchange groups, and products that can be incorporated in multimedia presentations.

MNSJ – Metro Network for Social Justice — <http://www.mnsj.org>

This site is a non-profit coalition of organizations and groups committed to promoting social justice in Toronto.

Project Ploughshares — <http://www.ploughshares.ca>

This site promotes disarmament and demilitarization with the peaceful resolution of political conflict and the pursuit of security based on equity and justice.

Task Force on the Churches and Corporate Responsibility — <http://www.web.net/~tccr>

This site deals with the social, ecological, and environmental responsibility of Canadian-based corporations and financial institutions.

Web Monkey — www.hotwired.com/webmonkey/design/graphics/

An interactive site that provides tutorials on image-editing software.

Activity 2: Career Study – Research and Presentation

Time: 450 minutes

Description

Throughout all units of study in this profile, students learn how to plan for participation in the working world of Communications Technology. Through ongoing discussion of careers in the field of Communications Technology, students are provided with the opportunity to do in-depth research on a specific career in each unit. Students are encouraged to gather career information in their student portfolio for use in this activity. Teachers should introduce the career research component of this activity at the start of the course, and then return to the activity near the completion of the course to allow for student presentations to occur.

Part 1 – Career Exploration

Students are introduced to the overall Career Exploration project using traditional and electronic research methods. Through this part of the activity (and the continuation of this activity throughout all units), students come to appreciate the scope of career opportunities in the field of Communications Technology. Students are provided with the opportunity to do in-depth research on a specific Communications Technology career. Students learn the intrinsic value of work and discover techniques to realize their potential for dignity, self-respect, and success.

Part 2 – Career Presentation

In the second part of the activity, students use the career information they have compiled throughout each unit to create a multimedia presentation on a career of their choice. Students use digital video and still images, record original narration, add musical clips, prepare graphic content, and assemble all resources using multimedia software. The finished product is presented to the class and archived for future class use. Output options for their final multimedia package are investigated (video, CD, web/Internet). Students are encouraged to examine and reflect on their personal values, abilities, and aspirations influencing life's choices and opportunities.

Strand(s) & Learning Expectations

Strand(s): Theory and Foundation, Skills and Processes, Impact and Consequences

Overall Expectations

- TFV.01 - apply the design process to develop solutions, products, processes, or services in response to simple challenges or problems in electronic, live, recorded, or graphic communications;
- TFV.02 - identify the mechanical and electronic characteristics of the components and processes required to produce a product or a service in communications technology;
- SPV.01 - function effectively as individuals and as members of a cooperative team to produce a product or service;
- SPV.02 - produce, assemble, connect, and operate current equipment and components to perform specific functions related to communications technology;
- SPV.03 - use appropriate equipment and techniques to communicate, describe, and market solutions to communications technology problems;
- ICV.03 - describe the career opportunities available in the communications technology sector immediately on graduation from high school;
- ICV.04 - identify the employability skills required to be successful in the workplace.

Specific Expectations

- SP1.01 - demonstrate the interpersonal skills required for effective teamwork;
- SP1.02 - develop the time management and problem-solving skills required to complete projects;
- SP2.01 - use appropriate techniques to model and communicate project ideas, materials, and specifications;

SP2.02 - demonstrate the skills required to complete communications technology projects, both independently and in a group;
SP3.03 - use industry-standard guidelines, conventions, and rules for composition and design;
SP4.02 - use appropriate language in reports and presentations;
IC1.01 - describe the social, environmental, and economic effects of technological advancements in the communications sector.

Ontario Catholic School Graduate Expectations

CGE2a - listens actively and critically to understand and learn in light of gospel values;
CGE2b - reads, understands, and uses written materials effectively;
CGE2c - presents information and ideas clearly and honestly and with sensitivity to others;
CGE3b - creates, adapts, and evaluates new ideas in light of the common good;
CGE3c - thinks reflectively and creatively to evaluate situations and solve problems;
CGE4b - demonstrates flexibility and adaptability;
CGE4e - sets appropriate goals and priorities in school, work, and personal life;
CGE4f - applies effective communication, decision-making, problem-solving, time, and resource management skills;
CGE5e - respects the rights, responsibilities, and contributions of self and others;
CGE5g - achieves excellence, originality, and integrity in one's own work and supports these qualities in the work of others;
CGE7b - accepts accountability for one's own actions;
CGE7j - contributes to the common good.

Prior Knowledge & Skills

Career Exploration

- Students possess an understanding of Communications Technology and an awareness of various technologies and careers.
- An understanding of the services provided by the Student Services/Guidance Department.

Career Presentation

- Students possess a sound understanding of Communications Technology topics that have been covered throughout this profile and an awareness of various technologies and careers from research data.
- Students possess an understanding of presentation techniques and skills developed throughout each unit, including use of media equipment.

Planning Notes

- Students keep a log sheet, recording brief notes of their accomplishments each day and outlining any future needs that this activity requires.
- The career exploration is run concurrently with the other four units in this profile and must be reinforced at the start of each unit.
- Students should also be reminded at the start of each unit that their Student Manuals should include career research information for the unit. The content is used to complete their career presentation at the completion of the course (see Appendix 4.2a). Consult with the Student Services/Guidance Department on existing school-based career planning initiatives.
- The teacher arranges access to various occupational research software programs available in the school: *Choices*, *Career Explorer*, *Career Gateway*, and *MazeMaster*.

Teaching/Learning Strategies

- The teacher encourages attitudes and values, founded on Catholic social teachings, which promote social responsibility, human solidarity, and the common good.

Career Exploration

- The teacher begins by discussing the need for students to plan their future academic and career endeavours. In this discussion, point out that there are tools to help them plan, such as Individual Education Plans, documentation of personal assessments regarding interests and skills, and a portfolio of their work to demonstrate particular skills.
- The teacher introduces the Career Exploration project and outlines how it is an ongoing project that culminates at the end of the course with a final presentation. Provide samples of past work.
- The teacher outlines how the research component of their Student Manuals must be kept up-to-date throughout the activities; (it is checked for completion at the end of each unit) (see Appendix 4.2a).
- Links to the student portfolio, which is created as each unit is completed, and the final career presentation should be addressed at this point.
- Exemplar work added to the portfolio helps demonstrate particular skills that students possess.
- The teacher administers aptitude/interest inventories that outline the student's possible career areas. Consider inventories such as on-line programs (*Career Gateway*, *The Edge*), CD-delivered packages (*Choices*, *Career Explorer*), and paper-based traditional inventories (*Strong-Campbell Jackson Vocational Inventory*, *Harrington-O'Shea Career Decision-Making System* – available through Student Services/Guidance Department).
- Students complete the inventories and summarize possible career areas of interest. These inventories are an inquiry of students' interests and skills. Forms are assessed for completion only. (Teachers may wish to comment on each student's forms and have a follow-up discussion on the skills they have, skills they need to develop, and how to develop them.)
- Forms are returned to students and placed in Student Manuals for future reference.
- This exercise may be repeated at the end of the course. Differences between "before and after" can then be discussed.
- Throughout unit activities, students gather required career research data to include in Student Manuals. They access occupational research software (*Choices*, *Bridges: Career Explorer*, *Career Gateway*, and *Mazemaster*) for further research and visit and use the resource materials in the school Guidance/Career Education centre and Library/Resource Centre.
- Students create a list of available career/life-planning resources (human, print, technological) and research other sources of information (e.g., local youth employment centre, Human Resources Development Canada, Ontario Ministry of Education).
- Students collect exemplars from all activities for inclusion in their portfolio.

Career Presentation

- The teacher reviews with students the requirements of the Career Exploration project and presentation techniques and skills covered in previous units.
- Students, by this point, have developed detailed Student Manuals including self-assessments, results from inventories, and career information. They use the information from their Student Manuals to select a career area of interest.
- Students may once again access occupational research software (*Choices*, *Bridges: Career Explorer*, *Career Gateway*, and *Mazemaster*) to further research career options.
- Students may work with other students who have similar career interests.
- Students develop storyboards that diagram the project frame by frame.
- Basic set-up and correct handling procedures for equipment and software is demonstrated by the teacher through a series of small-group lessons as new equipment is required (e.g., cameras and scanners at the start, a projector or CD burner for the final output).

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- Students complete a series of exercises reinforcing the safe and correct use of all equipment, software, and basic techniques and options that the equipment and software provides.
 - Students are now at the editing/authoring stage, which includes constructing, collecting, and editing all raw materials (text, photos, sound, and video) to be used in the project. Using these materials and desktop video or presentation/multimedia software, students can create multimedia projects based on their storyboard guide.
 - The teacher discusses the output options available for the completed work and students decide on the format best suited to their needs (traditional print to video and other means of electronic distribution – CDs/Internet).
 - The teacher allows opportunities for students to practise their presentations.
 - Students present their career topic to the class.
 - Teachers facilitate the presentations and the marking with a rubric (Appendix 4.2b) and involve students in a related class discussion upon completion of each presentation (time permitting).

Assessment & Evaluation of Student Achievement

Diagnostic assessment:

- completion of personal interests and skills inventories (see Resources).

Formative assessment:

- roving conferences throughout each unit to discuss research progress with all students;
- career research checklists;
- personal interest and skills inventories and self-assessment exercises at the completion of the course (see Resources).

Summative assessment:

- career-based research paper;
- completed career presentation that combines teacher and student feedback using a class-created rubric or Appendix 4.2b;
- student portfolios.

Accommodations

- Teachers should be acquainted with Individual Education Plans (IEPs) and their unique learning characteristics in order to make the necessary accommodations.
- Portfolios should be individualized to reflect accommodations made throughout all units.
- Students may work in pairs when they complete the forms.
- Allow more time for students to fill out their forms.
- Modify the presentation format for students who require an alternate mode of presentation.
- Peer tutors assist students with special needs when handling equipment.
- Students with special needs can be given appropriate timelines for completion.
- Peer tutoring is given to those students who need extra help.

Resources

General

Teacher-developed resources including handouts, worksheets, and activity sheets

College, university, and private institution course calendars

Government publications such as Horizons (available in the Student Services/Guidance Departments – many are moving to electronic versions)

School Student Services/Guidance Departments

The school Library/Resource Centre

Student exemplars

Software tutorials and manuals

CD-ROMs

Career Cruising. Licensed by the Ministry of Education from Anaca Technologies.

Choices 2000. Licensed by the Ministry of Education. Information Systems Management, 1998.

Books

Fleck, Tim, et al. *HyperStudio for Terrified Teachers*. Huntington Beach, CA: Teacher Created Materials, Inc., 1997. ISBN 1-5569-0180-7

Ministry of Education and Training. *And Finally I Did Get a Job*. Ontario: Queen's Printer for Ontario, 1998.

Ministry of Education and Training. *The Edge*. Ontario: Queen's Printer for Ontario, 1998.

Misener, J. and S. Kearns. *Expanding Your Horizons*. Toronto: McGraw-Hill Ryerson Limited, 1993. ISBN 0-0755-1392-7

Misener, J. and S. Butler. *Exploring Your Horizons*. Toronto: McGraw-Hill Ryerson Limited, 1998. ISBN 0-0755-2864-9

Rathbone, Andy. *Multimedia & CD-ROMs for Dummies*. Foster City, CA: IDG Books Worldwide, Inc., 1997. ISBN 1-5688-4225-2

Szeto, Gong, et al. *Designing Interactive Websites*. USA: Hayden Books, 1997. ISBN 1-5683-0311-4

Technical Learning Resources Editorial Staff. *Get Going with PowerPoint 97 for Windows*. New York: Technical Learning Resources Inc., 1997. ISBN 1-8873-9117-7

Wilhelm, Jeffery, et al. *Hyperlearning: Where Projects, Inquiry, and Technology Meet*. USA: Stenhouse Publishing, 1998. ISBN 1-5711-0054-7

Wolfgram, Douglas E. *Creating Multimedia Presentations*. USA: Que Corporation, 1994. ISBN 1-5652-9667-2

Websites

Career Explorer — <http://cdn.cx.bridges.com/explorer/student.htm>

This website has self-assessments, interest inventories, a resume writing template, and career and postsecondary information.

Career Gateway — <http://www.edu.gov.on.ca/eng/career/>

This site provides a starting point for the exploration of many on-line career and employment options. It provides links to many career-based sites.

Human Resources Development Canada (HRDC) — <http://www.hrdc-drhc.gc.ca/>

This is the national site and home page. Numerous career options as well as links to related sites.

Examples include: Work/Jobs, a listing of job and learning opportunities, work searches, etc. Learning Opportunities, including self-assessment links (Career Match Up, Career Directions, Job Futures, *The Edge* – Youth Magazine), learning and training programs, and financial assistance programs.

Job Find 2000 — <http://www.jobfind2000.com>

Youth employment information

MazeMaster (Human Resources Development Canada) — <http://www.mazemaster.com>

This site offers a wide variety of access points to employment opportunities.

Ontario College Application Centre — <http://www.ocas.on.ca/ocas/>

Information on College applications

Ontario Universities Application Centre — <http://www.ouac.on.ca/osca/>

Information on University applications

The Edge — <http://www.hrdc-drhc.gc.ca/career-carriere/edge/home.shtml>

On-line youth magazine with career information. Job Trek game is a good source for choosing a career.

Excellent links to youth-related career sites.

SchoolNet — <http://www.schoolnet.ca>

A lengthy list of websites related to the Internet and the teaching of Technology.

TV Ontario (uChoose Program) — <http://www.uchoose.tv.o.org> or <http://www2.tv.o.org/uchoose/eduprog/>

A site to help you choose the right college or university program. Complete listing of colleges and universities with links to related sites and program, admission, and housing information.

WebMonkey — <http://www.webmonkey.com>

An interactive site that provides tutorials, tips, and articles on authoring, multimedia, design, e-business, programming, backend, and jobs.

Young Canada Works — <http://www.pch.gc.ca>

Youth employment information

Youth Resource Network of Canada — http://www.youth.gc.ca/jobopps/summer_e.shtml

Youth employment information

Activity 3: Co-curricular Activities Web Design

Time: 600 minutes

Description

This unit gives students the opportunity to further develop their web design skills. In small groups, students choose a school co-curricular activity and create a multi-page, multimedia web design that utilizes a variety of linking techniques. Emphasis is placed on design principles, timing, and needs analysis of the end user. The web designs are uploaded as links to the school web page. Students present all information and ideas clearly and honestly with sensitivity to others.

Strand(s) & Learning Expectations

Strand(s): Theory and Foundation, Skills and Processes, Impact and Consequences

Overall Expectations

TFV.01 - apply the design process to develop solutions, products, processes, or services in response to simple challenges or problems in electronic, live, recorded, or graphic communications;

TFV.02 - identify the mechanical and electronic characteristics of the components and processes required to produce a product or a service in communications technology;

TFV.03 - demonstrate an understanding of electronic, live, recorded, and graphic communications systems;

SPV.01 - function effectively as individuals and as members of a cooperative team to produce a product or service;

SPV.02 - produce, assemble, connect, and operate current equipment and components to perform specific functions related to communications technology;

ICV.03 - describe the career opportunities available in the communications technology sector immediately on graduation from high school;

ICV.04 - identify the employability skills required to be successful in the workplace.

Specific Expectations

TF1.02 - apply the following steps of the design process to solve a variety of simple communications technology challenges or problems:

- identify what has to be accomplished (the problem);
- gather and record information, and establish a plan of procedures;
- brainstorm a list of as many solutions as possible;
- identify the resources required for each suggested solution, and compare each solution to the design criteria, refining and modifying it as required;
- evaluate the solutions (e.g., by testing, modelling, and documenting results) and choose the best one;
- produce a drawing, model, or prototype of the best solution;
- evaluate the prototype and what is required to produce it;
- communicate the solution, using one or more of the following: final drawings, technical reports, electronic presentations, flow charts, storyboards, mock-ups, prototypes, and so on;
- obtain feedback on the final solution and repeat the design process if necessary to refine or improve the solution;

TF2.01 - explain the processes and components (e.g., photography, desktop publishing, printing, web-page creation) used in current communications technology;

TF2.02 - explain different methods of storing and retrieving information and the advantages of each;

TF2.03 - explain how digitization is used for print, audio, video, recording, and photographic media and in the transfer of data;

TF3.01 - define the terminology used in the areas of electronic, live, recorded, and graphic communications;

SP1.02 - develop the time management and problem-solving skills required to complete projects;

SP2.01 - use appropriate techniques to model and communicate project ideas, materials, and specifications;

SP2.02 - demonstrate the skills required to complete communications technology projects, both independently and in a group;

SP3.03 - use industry-standard guidelines, conventions, and rules for composition and design.

Ontario Catholic School Graduate Expectations

CGE2a - listens actively and critically to understand and learn in light of gospel values;

CGE2b - reads, understands, and uses written materials effectively;

CGE2c - presents information and ideas clearly and honestly and with sensitivity to others;

CGE2e - uses and integrates the Catholic faith tradition, in the critical analysis of the arts, media, technology, and information systems to enhance the quality of life;

CGE3b - creates, adapts, and evaluates new ideas in light of the common good;

CGE3c - thinks reflectively and creatively to evaluate situations and solve problems;

CGE3e - adopts a holistic approach to life by integrating learning from various subject areas and experience;

CGE4b - demonstrates flexibility and adaptability;

CGE4f - applies effective communication, decision-making, problem-solving, time, and resource management skills;

CGE5a - works effectively as an interdependent team member;

CGE5e - respects the rights, responsibilities, and contributions of self and others;

CGE5g - achieves excellence, originality, and integrity in one's own work and supports these qualities in the work of others;

CGE7b - accepts accountability for one's own actions;

CGE7j - contributes to the common good.

Prior Knowledge & Skills

- computer literacy skills
- understanding of composing and capturing still images (Unit 3)
- understanding of capturing and editing digital video (Unit 3)
- understanding of the principles of design and how they may be applied to the project (Unit 1)
- cooperative teamwork and organizational skills

Planning Notes

- Students keep a daily log sheet, recording brief notes of their accomplishments each day and outlining any future needs that this activity requires.
- Create an overhead, handout, or on-line resource on the Basics of Web Authoring and Design (HTML).
- Create an overhead, handout, or on-line resource with a list of all co-curricular activities offered at the school.
- Create a tutorial handout or on-line tutorial that demonstrate the basics of the web-authoring tools and methods for incorporating audio and motion graphics.
- Teacher moderators of individual co-curricular activities should be invited to participate in the process of collecting resources and critiquing student works.
- Provide the opportunity for students to focus on specific career options and provide insights into the skills required for related professions.
- Teaching/learning strategies that allow for career links should be investigated (e.g., job shadowing, career and education research, field trips, and guest speakers). Arrange for appropriate speakers, whose careers are related to the graphical display industry, to share their education and career paths with students. Members of the community may provide students with some insights into career opportunities and issues.

Teaching/Learning Strategies

- The teacher encourages attitudes and values, founded on Catholic social teachings, which promote social responsibility, human solidarity, and the common good.
- The teacher introduces the project by questioning the class on the meaning of “community”. The class discusses types of community and the importance of participation in a community. As the discussion moves to the concept of school as community, students may share their school co-curricular experiences with the class.
- The teacher hands out a list of co-curricular activities offered at the school.
- The teacher shows examples of good web pages, including the school web page, and discusses the importance of design principles, timing, motion graphics, audio, interaction, navigation, and the needs of the end user.
- Students create thumbnail sketches of their multi-page website, charting link relationships.
- Students select partners with common co-curricular interests and research, gather, and create resources needed to highlight their selected co-curricular activity.
- The teacher may use a computer projection system to demonstrate the basics of web-authoring tool and methods for incorporating audio and motion graphics. Students work through teacher-designed exercises designed to familiarize themselves with the process.
- The teacher provides students with a handout summarizing the features and steps of the software.
- On a need-to-know basis, the teacher reviews audio, video, graphic, animation, compression, and streaming software packages and the use of studio equipment.
- Students use a work log and portfolio throughout the development process and conference with the teacher to brainstorm suggestions for improving their site.

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- Students upload their site and link it to the school web page.
 - Teacher moderators of individual co-curricular activities should be invited for final critique sessions. Students are encouraged to conference with teacher moderators and activity participants/team players throughout the design process.

Assessment & Evaluation of Student Achievement

Diagnostic assessment of student's research skills, log/journal, and portfolio:

- personal communication through teacher/student conferencing;
- performance assessment of checklists.

Summative assessment of worksheets:

- personal communication – teacher/student conferencing.

Summative assessment of finished project (website and website with audio/video):

- performance assessment of finished project.

Summative assessment of the concepts and techniques utilized in this activity:

- paper and pencil unit test.

Accommodations

- Teachers should be acquainted with Individual Education Plans (IEPs) and their unique learning characteristics in order to make the necessary accommodations.
- Students with special needs can be given appropriate timelines for completion.
- Peer tutoring is given to those students who need extra help.
- Student-to-student discussion and teacher-to-student conferencing should be given throughout the project.
- Peer tutors assist students with special needs when handling equipment.
- Students use *AutoContent Wizard* to design a presentation.
- For enrichment, students may design the framework for the school web page if one does not exist or redesign/upgrade/update the existing school web page.
- For enrichment, students may design the main co-curricular link/splash page.

Resources

General

Teacher-developed resources including handouts, worksheets, and activity sheets

Student exemplars

Manufacturer's equipment manuals

Software manuals and tutorial exercises

Various samples of activity project work

The school Library/Resource Centre

Books

Aaland, Mikkel. *Photoshop for the Web*. USA: O'Reilly & Associates, 1999. ISBN 1565926412

Andres, Clay. *Web Architecture Studio Secrets*. USA: IDG Books Worldwide, 1999. ISBN 0764532464

Dean, Damon. *FrontPage 2000 for Dummies Quick Reference*. New York: IDG Books Worldwide, 1999. ISBN 0-7645-0499-1

Gray, Daniel. *Looking Good on the Web*. USA: Coriolisopen Press, 1999. ISBN 1576105083

Hyman, Michael. *Dynamic Html for Dummies*, 2nd ed. Toronto: Harper Collins Canada, 1998. ISBN 0-7645-0467-3

Levine-Young, Margaret, John Levine, and Carol Baroudi. *The Internet for Dummies*. New York: IDG Books Worldwide, 1998. ISBN 0-76450-506-8

Maran, Ruth. *Creating Web Pages with HTML: Simplified*. Foster City, CA: IDG Books Worldwide, Inc., 1999. ISBN: 0-7645-6067-0

McCanna, Laurie. *Creating Great Web Graphics*. USA: Henry Holt Company, 1997. ISBN 1558285504

Navarro, Ann. *Effective Web Design*, 2nd Edition. USA: Sybex Inc., 2000. ISBN 0782128491

Taylor, Dave. *Creating Cool Web Pages with HTML*. Foster City, CA: IDG Books Worldwide, Inc., 1995. ISBN 1-5688-4705-X

Weadock, Glenn. *Intranet Publishing for Dummies*. New York: IDG Books Worldwide, 1997. ISBN 0-7645-0222-0

Websites

CNET Builder.com-Web Graphics — <http://www.builder.com/Graphics/Graphics101/?tag=st.cn.sr1.dir>
Tutorials on various technology skills as well as how to create classroom or school web pages.

Apple Web Page Construction Site — <http://ali.apple.com/als/wpcs/>
Tutorials on various technology skills as well as how to create classroom or school web pages.

How Stuff Works — <http://www.howstuffworks.com>
Information on the workings of the Internet, websites, etc.

Learning Space Foundation — <http://www.learningspace.org/tech/tech.html>
Tutorials on various technology skills as well as how to create classroom or school web pages.

SchoolNet — <http://www.schoolnet.ca>
A lengthy list of websites related to the Internet and the teaching of technology.

Web Developer — <http://www.webdeveloper.com/design/>
Tutorials on various technology skills as well as how to create classroom or school web pages.

Webmonkey — <http://www.webmonkey.com>
Tutorials, tips, and articles on authoring, multimedia, design, HTML, and Java Script.

Activity 4: Interactive Portfolio/Resume

Time: 300 minutes

Description

This independent unit allows students to apply their knowledge of multimedia and select appropriate software resources required to create an interactive portfolio/resume. Students are encouraged to include interactivity and a maximum number of media, (video, audio, animated graphics, photography, and text), while maintaining an elegant and sophisticated user interface. Throughout this activity, students reflect upon the need for self-promotion and their role as Christians outside of the school environment.

Strand(s) & Learning Expectations

Strand(s): Theory and Foundation, Skills and Processes, Impact and Consequences

Overall Expectations

TFV.03 - demonstrate an understanding of electronic, live, recorded, and graphic communications systems;

SPV.02 - produce, assemble, connect, and operate current equipment and components to perform specific functions related to communications technology;

SPV.03 - use appropriate equipment and techniques to communicate, describe, and market solutions to communications technology problems;

ICV.04 - identify the employability skills required to be successful in the workplace.

Specific Expectations

- TF2.02 - explain different methods of storing and retrieving information and the advantages of each;
- TF2.03 - explain how digitization is used for print, audio, video, recording, and photographic media and in the transfer of data;
- TF2.09 - explain how different materials and components are converted or assembled to make finished products;
- SP1.01 - demonstrate the interpersonal skills required for effective teamwork;
- SP1.02 - develop the time management and problem-solving skills required to complete projects;
- SP1.03 - accurately document planning and production processes;
- SP1.04 - effectively apply a variety of planning tools (e.g., storyboards, flow charts, schematic diagrams);
- SP1.05 - select and use appropriate software to manage the production process;
- SP1.06 - use time management schemes to ensure that their productions meet client deadlines;
- SP2.01 - use appropriate techniques to model and communicate project ideas, materials, and specifications;
- SP2.02 - demonstrate the skills required to complete communications technology projects, both independently and in a group;
- SP3.01 - use a variety of methods to document the planning and production processes;
- SP3.03 - use industry-standard guidelines, conventions, and rules for composition and design;
- SP4.02 - use appropriate language in reports and presentations;
- IC3.01 - identify career opportunities in the communications sector;
- IC3.02 - describe the prerequisites for employment in communications sector careers and assess their own aptitude for such careers;
- IC3.03 - identify the employability skills that employers seek in potential employees;
- IC3.04 - explain the importance of lifelong learning for individuals in the communications technology sector.

Ontario Catholic School Graduate Expectations

- CGE2b - reads, understands, and uses written materials effectively;
- CGE2c - presents information and ideas clearly and honestly and with sensitivity to others;
- CGE2e - uses and integrates the Catholic faith tradition, in the critical analysis of the arts, media, and technology and information systems to enhance the quality of life;
- CGE3b - creates, adapts, and evaluates new ideas in light of the common good;
- CGE3c - thinks reflectively and creatively to evaluate situations and solve problems;
- CGE3e - adopts a holistic approach to life by integrating learning from various subject areas and experience;
- CGE4a - demonstrates a confident and positive sense of self and respect for the dignity and welfare of others;
- CGE4b - demonstrates flexibility and adaptability;
- CGE4e - sets appropriate goals and priorities in school, work, and personal life;
- CGE4f - applies effective communication, decision-making, problem-solving, time, and resource management skills;
- CGE5a - works effectively as an interdependent team member;
- CGE5g - achieves excellence, originality, and integrity in one's own work and supports these qualities in the work of others;
- CGE7b - accepts accountability for one's own actions;
- CGE7j - contributes to the common good.

Prior Knowledge & Skills

- familiarity with the operation of a computer
- basic understanding of presentation techniques
- use of media equipment for presentations

Planning Notes

- Assemble materials required for demonstrating how a portfolio and/or a resume should be assembled. Consult with the Student Services/Guidance Department on how to prepare a resume.
- Students should collect exemplars that they have done or items that are a permanent record of an accomplishment.

Teaching/Learning Strategies

- The teacher encourages attitudes and values, founded on Catholic social teachings, which promote social responsibility, human solidarity and the common good.
- Students should be made aware of items that should be included in their resume/portfolio.
- The teacher shows the different formats for resume writing and how they may be adapted to an interactive format.
- The teacher demonstrates how to take the students' accomplishments and convert them to an electronic medium; they can then be used in an interactive presentation or a web display.
- Students should understand the various file types (e.g., tiff, gif, jpeg, bitmap, pict, targa, wav, midi, mp3, etc.) and how they may be used in the interactive presentation.
- The teacher demonstrates the process of scanning, storing, and converting files.
- The teacher provides samples of past work. Exemplar work, added to the portfolio, demonstrates particular skills that students possess. Students collect exemplars from all their work for inclusion in their portfolio as they progress through the course.
- Students participate in class discussion of the presentation material
- The teacher should list some of the things that a student might include in their portfolio:
 - certificates and report cards;
 - badges, letters of recommendation, and certificates;
 - photographs, video or audio tapes, written reports, articles, and letters.
- Students present their interactive portfolio/resume to the class.

Assessment & Evaluation of Student Achievement

Formative assessment:

- roving conferences throughout each unit to discuss research progress with all students.

Summative assessment:

- Students are evaluated on their ability to present their information in a clear and organized manner.
- Student Portfolios are examined for content and organization.

Accommodations

- Teachers should be acquainted with Individual Education Plans (IEPs) and their unique learning characteristics in order to make the necessary accommodations.
- Portfolios should be individualized to reflect accommodations.
- Allow more time for students to collect and assemble their materials.

Resources

Teacher-developed resources including handouts, worksheets and activity sheets

College, university and private institution course calendars

School Guidance/Student Services Departments

The school Library/Resource Centre

Student exemplars

Books

Benford, Tom. *Introducing Desktop Video*. NY: MIS Press, 1995. ISBN 1-55828-415-X

Campbell, Judith, Kelly Hoey, and Anne Clifton. *Careers 10*. Toronto: Pearson Education Canada Inc., 2000. ISBN 0-13-031505-2

Greenberg, Adele and Seth Greenberg. *Digital Images, A Practical Guide*. USA: Osbourne McGraw-Hill, 1995. ISBN 0-07-882113-4

Misener, Judi and Susan Butler. *Horizons 2000*. Toronto: McGraw-Hill Ltd., 2000. ISBN 0-07-087411-5

Misener, Judi and S. Kearns. *Expanding Your Horizons*. Toronto: McGraw-Hill Ltd., 2000.

ISBN 0-07-088843-9

Plue, Leo, Warren Palmer, and Cheryl Karakokkinos. *Careers Today and Tomorrow*. Toronto: Irwin Publishing Ltd., 2000. ISBN 0-7725-2852-7

Magazines

Digital Imaging. New York: Cygnus Publishing.

Digital Video. USA: Miller Freeman Publications.

New Media.pro. Toronto: Southam Inc.

DigitalFoto. USA, CA: Image Media Inc.

Camcorder & ComputerVideo. USA, CA: Miller Magazines Inc.

PCMagazine. New York: PcMagazine Inc.

Websites

Canadian Careers — <http://www.CanadianCareers.com>

Career education, information, and resume writing. Links to other related sites.

Jobstar — <http://jobstar.org/index.htm>

Resume writing and career guides. Links to other related sites.

eResumes and Resources — <http://www.eresumes.com/gallery.html>

Portfolio and resume writing information. Links to other related sites.

Job Searching: Canada — <http://jobsearchcanada.about.com/>

Portfolio and resume writing information. Links to other related sites.

Appendix 4.1

Community Service Presentation Checklist

| Categories | Needs Improvement | Fair | Good | Excellent |
|-----------------------------------|-------------------|------|------|-----------|
| Content | | | | |
| Research/storyboard | | | | |
| Spelling/grammar | | | | |
| Technical design | | | | |
| Graphics | | | | |
| Animation | | | | |
| Digital images | | | | |
| Audio | | | | |
| Design/creativity | | | | |
| Effectiveness of the presentation | | | | |

Suggestions for improvement:

Appendix 4.2a

Guidelines for Collecting Career Information

- Students are reminded that this process must be ongoing throughout the course. Research is checked for completion at the end of each unit.
- Use a variety of resources to investigate the careers related to the Communications Technology field in each of the activities studied.
- Use traditional sources (print material) and electronic sources (Internet/CD-ROMs) in your research.
- Each unit should have its own section of Careers Research.
- Place your research in your Student Manual.
- If storing your research electronically, make note of its location and filename for teacher access.

The following is a guide to use when collecting your research information. The teacher has both a paper copy for you to duplicate and an electronic version that you can add to on the computer.

Student Name: _____

Unit #: _____ Unit Title: _____

1. Name of Career being investigated:
2. Description of Job:
3. Personal Qualities/Skills required for the job:
4. Working Conditions:
5. Educational Training/Requirements:
6. Income (to start and potential income):
7. Future Outlook for Career Field:

Please list the source of your research:

Appendix 4.2b

Career Rubric

| Criteria | Level 1 (50-59%) | Level 2 (60-69%) | Level 3 (70-79%) | Level 4 (80-100%) |
|---|---|--|--|---|
| Knowledge/ Understanding ICV.03 | - demonstrates limited ability to identify technology-based careers | - demonstrates some ability to identify technology-based careers | - demonstrates considerable ability to identify technology-based careers | - demonstrates exceptional ability to identify technology-based careers |
| ICV.03 | - demonstrates limited ability to describe educational requirements of selected careers | - demonstrates some ability to describe educational requirements of selected careers | - demonstrates considerable ability to describe educational requirements of selected careers | - demonstrates exceptional ability to describe educational requirements of selected careers |
| TFV.04 | - describes few technological activities supported by communications technology | - describes some technological activities supported by communications technology | - describes many technological activities supported by communications technology | - describes a thorough list of technological activities supported by communications technology |
| Thinking/Inquiry TFV.04 | - demonstrates limited ability to investigate methods of communicating ideas | - demonstrates some ability to investigate methods of communicating ideas | - demonstrates considerable ability to investigate methods of communicating ideas | - demonstrates exceptional ability to investigate methods of communicating ideas |
| Communication ICV.03 | - demonstrates limited ability to share information using media tools and a variety of technologies | - demonstrates some ability to share information using media tools and a variety of technologies | - demonstrates considerable ability to share information using media tools and a variety of technologies | - demonstrates exceptional ability to share information using media tools and a variety of technologies |

| | | | | |
|------------------------------|--|---|---|--|
| Application IC3.03 | - demonstrates limited understanding of how technology affects selected careers | - demonstrates some understanding of how technology affects selected careers | - demonstrates considerable understanding of how technology affects selected careers | - demonstrates thorough understanding of how technology affects selected careers |
| OCSGD CGE5b | - demonstrates limited ability to think critically about the meaning and purpose of work | - demonstrates some ability to think critically about the meaning and purpose of work | - demonstrates considerable ability to think critically about the meaning and purpose of work | - demonstrates exceptional ability to think critically about the meaning and purpose of work |
| OCSGD CGE2c | - demonstrates limited ability to present ideas clearly and honestly | - demonstrates some ability to present ideas clearly and honestly | - demonstrates considerable ability to present ideas clearly and honestly | - demonstrates exceptional ability to present ideas clearly and honestly |

Note: A student whose achievement is below level 1 (50%) has not met the expectations for this assignment or activity.