

Public and Catholic District School Board Writing Partnerships

Technological Education

Course Profile **Communications Technology**

Grade 12
Workplace Preparation
TGJ4E

• *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.

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Public Board Communications Technology Grade 12 Profile Writing Team

Lead Board

Simcoe County District School Board
Robert Emptage, Laura Featherstone, Project Managers

Writing Team

Joe Mandarino, Peel District School Board, Writer
Errol Fraser, Peel District School Board, Writer
Lawrence Marler, Peel District School Board, Writer
Joanne Durst, Peel District School Board, Advisor

Catholic Board Communications Technology Grade 12 Profile Writing Team

Lead Board

Toronto Catholic District School Board
Gino Grieco, Project Manager

Writing Team

Joe Tadman, Toronto Catholic District School Board
Gary Hebor, Toronto Catholic District School Board
Terry Nolan, Toronto Catholic District School Board

Course Overview

Communications Technology, TGJ4E, Grade 12, Workplace Preparation

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

Prerequisite: Communications Technology, Grade 11, Workplace Preparation

Course Description

This course examines the key elements in the areas of electronic, live, recorded, or graphic communications systems. Students will develop safe workplace habits and business management skills and use a variety of materials, tools, and equipment to assemble, maintain, operate, and repair communications systems. They will also research the entry requirements for training programs available on graduation, such as apprenticeships, and will develop the employability and technical skills required for entry into the workplace.

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 use 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.

This course introduces students to concepts of the workplace integrated with the social teachings of the church. It is a fundamental belief that work, in all its facets, is more than a job. It is a calling, a vocation, where the human person can use his/her talents and gifts in the context of society, and thereby promote social responsibility and economic participation while affirming the principles of social justice, solidarity, and the common good. Work, and by extension the work environment, is central to our humanity and integral to who we are as Catholics. We believe that God created humans to be stewards over the bountiful resources of the Earth. Our creativity, work ethic, and problem-solving abilities are gifts given to us from God so that we can perform this stewardship role in a competent, responsible, caring, and loving manner.

Work is a fundamental dimension of human life. It is participation in God's work. The value of work, therefore, is not based on its end result but on whether it supports human dignity. It is in this context that the responsibilities of organizing and operating a venture are examined. Students integrate their faith with the planning of this venture. Issues such as the selection of an ethical business or venture, fair treatment of customers and clients, the dignity of the employee, the value of work, and sharing of profits with society are all examined. Students are encouraged to make ethical decisions and act morally and justly.

Course Notes

This course is divided into four units: Establishing a Communications Technology Enterprise; Creating a Graphic Corporate Identity; Digital Video Promotions; and Developing a Dynamic Online Presence. The projects and processes are designed to equip students with the knowledge and skills required to meet the expectations of employers, apprenticeship, or other training programs.

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 course introduces students to a wide variety of equipment and technologies. This course also allows teachers to focus on the transmission of images that reflect Christian values. It is expected that all student work contains positive images of race, gender, and religion. Stereotypes, acts of violence, sexual themes, or use of profanity in student work are unacceptable.

Workplace preparation courses are designed to equip students with the knowledge and skills they need to meet the expectations of employers should they plan to enter the workplace directly after graduation. “Workplace preparation courses emphasize the development of generic employment skills, as well as independent research and learning skills. Workplace preparation courses in particular should also promote and stress the importance of lifelong learning” (*Ontario Secondary Schools, Grades 9 to 12, Program And Diploma Requirements, 1999. p. 17*). Students investigate the entrepreneurial and management roles in a business or operation incorporating communications technology and assess their own potential for such roles. The employability skills required for success in the workplace are also dealt with. Workplace preparation courses also meet the requirements for admission to certain apprenticeship or other training programs. This course provides opportunities for students to identify the career possibilities and apprenticeships or other training programs available in the communications sector, and assess their aptitude for such programs. Students in Ontario secondary schools have the opportunity to apply what they learn in their courses through participation in various planned learning activities outside the classroom. Such learning activities increase students’ awareness of educational and career opportunities and provide them with first-hand experience. This practical experience helps them make decisions about possible future careers and make a successful transition from secondary school to the workplace or to an apprenticeship program.

Apprenticeship Opportunities in Ontario

Apprenticeship is hands-on training for people who enjoy learning by doing. The training provides access to well-paying jobs that demand a high level of skills, judgement, and creativity. Apprentices are paid while gaining work experience, and their wages increase with their level of skills

Apprenticeship is a method of training in which employers train workers to become skilled tradespeople through on-the-job training and classroom instruction. Apprenticeship training programs are available for many skilled trades in Ontario.

The Ontario Youth Apprenticeship Program (OYAP) opens the door to apprenticeship in a wide range of exciting careers. If you are entering Grade 11 and are at least 16 years old, you can work towards a career in a skilled trade as a registered apprentice, and eventually a certified skilled worker or journeyman, while you complete your Ontario Secondary School Diploma. Eligible students should contact their guidance counsellor, technical director, or local apprenticeship office.

For more information –<http://www.edu.gov.on.ca/eng/training/apprenticeship/skills/splash.html>

Health and safety issues are emphasised throughout the course. Students develop an understanding of the importance of health and safety as it relates to physical and personal well-being. Students investigate the Occupational Health and Safety Act (OHSA) and identify its implications for the school communications facility and for the communications sector workplace. They also understand the need to assume responsibility for their own safety and the safety of others.

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

Units: Titles and Times

* Unit 1	Establishing a Communications Technology Enterprise	20 hours
Unit 2	Creating a Graphic Corporate Identity	30 hours
Unit 3	Digital Video Promotions	30 hours
* Unit 4	Developing a Dynamic Online Presence	30 hours

* These units are fully developed in this Course Profile.

Unit Overviews

Unit 1: Establishing a Communications Technology Enterprise

Time: 20 hours

Unit Description

In this unit, students investigate the functions and operations of businesses in communications technology through the development of a business plan for their own student-run venture. They study operating and start-up procedures, such as marketing and product research. This unit emphasizes the importance of verbal and written communications skills, and provides an opportunity to practise the personal presentation skills necessary to gain employment and to successfully develop a career in the communications industry. Students conduct research into apprenticeships or other training programs available in the communications sector, and assess their aptitude for such programs. They investigate the Occupational Health and Safety Act (OHSA) and identify its implications for the school communications facility and for their chosen career. Issues such as choosing an ethical business or venture, fair treatment of customers and clients, the dignity of the employee, the value of work, and sharing of profits with society, are all examined. Students are encouraged to make ethical decisions and act morally and justly.

Unit Overview Chart

Activity	Learning Expectations	Assessment Categories	Focus
1.1 Exploring the Functions and Operations of a Communications Business	TFV.02, TF1.01, SP1.01, SP1.02, SP1.04, ICV.01, ICV.02, ICV.03, ICV.04, ICV.05, IC1.01, IC1.02, IC1.03, IC2.02, IC2.07, IC3.01, IC3.02 CGE: 1d; 2b; 3b, c, d; 4a, g; 5b; 7i	Thinking/Inquiry Knowledge/ Understanding	Awareness of types of business venture and relevant environmental impacts, safety, and legislation
1.2 Identifying the Market	TFV.01, TFV.02, SP1.01, SP1.02, SP1.03, SP1.06, SP4.01 CGE: 1d; 2a, b, c; 4b	Thinking/Inquiry Knowledge/ Understanding Communication Application	Using marketing strategies to determine need within the school for communications products and services such as newsletters, webpages, and A/V repair
1.3 Personal Communication	SPV.01, SPV.05, SP1.05, ICV.06, IC3.03 CGE: 2a, b, c; 3c; 4b, f; 5b	Thinking/Inquiry Knowledge/ Understanding Communication Application	Developing a workplace presence – speaking, listening, body language, and written communication skills

Activity	Learning Expectations	Assessment Categories	Focus
1.4 Multimedia Presentation: “Selling Your Company”	TFV.04, SPV.01, SPV.05, SP1.01, SP1.02, SP1.03, SP1.04, SP1.05, SP1.06, SP1.08, SP4.01, SP4.02, ICV.04, ICV.05, ICV.06, IC3.01, IC3.02, IC3.03 CGE: 1d; 2a, b, c; 3d; 4b, e, f; 5b, d, h; 7b, i, j	Thinking/Inquiry Knowledge/ Understanding Communication Application	Presenting an individualized business plan for a communications technology company

Unit 2: Creating a Graphic Corporate Identity

Time: 30 hours

Unit Description

In this unit, students apply design processes and principles of design to develop a graphic corporate identity for their selected communications venture. Students select and use the appropriate software to create a series of graphical projects that address the identity needs of their selected business. They develop their design and problem-solving skills and increase their knowledge of graphic design and its associated technologies. Students are encouraged to reflect on attitudes and values founded on Catholic social teaching and act to promote social responsibility in their final communicated messages throughout each activity.

Unit Overview Chart

Activity	Learning Expectations	Assessment Categories	Focus
2.1 Precedent Study - “The Complete Package”	TFV.04, TF1.01, TF2.01, TF2.03, SP3.02, ICV.01, IC1.01 CGE: 2b, e; 3c, d, e; 4g; 5b; 7b	Thinking/ Inquiry Knowledge/ Understanding	Students research the promotional graphics used by existing Communications Technology enterprises
2.2 Business Stationary/ Poster Design	TFV.01, TF1.02, TF2.01, TF2.03, TF3.01, TF3.02, SPV.03, SP2.01, SP2.02, SP2.03, SP2.04, SP2.05, SP2.06, SP2.08, SP2.09, SP4.03, IC2.01, IC2.03 CGE: 2b, e; 3c, d, e; 4g; 5b, g; 7b, i, j	Thinking/ Inquiry Knowledge/ Understanding Communication Application	Students, using graphic design software, develop business stationary (logo, business card, etc.) and a poster for their business venture
2.3 Other Options	TFV.01, TF1.02, TF2.01, TF2.03, SPV.03, SP2.01, SP2.02, SP2.03, SP2.04, SP2.05, SP2.06, SP2.08, SP2.09, SP4.03, IC2.01, IC2.03 CGE: 2b, e; 3c, d, e; 4g; 5b, g; 7b, i, j	Thinking/ Inquiry Knowledge/ Understanding Communication Application	Students continue the graphic design process looking at other possible options for promoting a corporate identity (brochures, pins, packaging, mouse pads.)
2.4 The Complete Package	TF1.01, SPV.05, SP2.07, SP4.01 CGE: 2a, b, c, d, e; 3b, c, d, e; 4a, b, c, e, f; 5a, e, f, g; 7b, i, j	Communication Application	Students present their developed “Corporate Identity”

Unit 3: Digital Video Promotions

Time: 30 hours

Unit Description

This unit introduces students to the current filming and editing style trends found in television advertisements. Students select a style and develop a digital video advertisement for their company. Students review and build the processes involved with digital video production. Students review fundamental digital concepts, basic equipment functions, and their interface with computer technology. Critical evaluation and problem solving help students make decisions in light of gospel values with an informed moral conscience.

Unit Overview Chart

Activity	Learning Expectations	Assessment Categories	Focus
3.1 Precedent Study – Video Style Trends	TFV.04, TF1.01, TF2.01, TF2.03, SP3.02, ICV.01, IC1.01 CGE: 2b, e; 3c, d, e; 4g; 5b; 7b	Thinking/Inquiry Knowledge/ Understanding Communication Application	Students research and investigate the video style trends
3.2 Pre-Production	TFV.01, TFV.02, TF1.02, TF2.01, TF2.02, TF3.01, SPV.01, SPV.05, SP1.05, SP1.06, SP1.07, SP2.03, SP2.07, SP4.02, SP4.03 CGE: 2b, c, e; 3b, c, e; 4a, e, f; 5a, e, g; 7b, j	Thinking/Inquiry Knowledge/ Understanding Communication Application	Students develop story lines, storyboards, scripts and production schedules for project
3.3 Production	TFV.01, TFV.02, TF1.02, SPV.01, SPV.02, SPV.03, SPV.04, SP1.05, SP2.01, SP2.02, SP2.03, SP2.04, SP2.05, SP2.06, SP2.08, SP2.09, SP3.01, IC2.01, IC2.03, IC2.04, IC2.05, IC2.07 CGE: 2b, c, e; 3b, c, e; 4a, e, f; 5a, e, g; 7b, j	Knowledge/ Understanding Communication Application	Students produce their promotional video
3.4 Post Production	TFV.01, TFV.04, SPV.01, SPV.02, SPV.03, SP2.05, SP2.09, SP4.01 CGE: 1d; 2c, e; 3b, c, d, e; 4b, c, d, f, g; 5a, c, f, g; 7b, e, j	Thinking/Inquiry Knowledge/ Understanding Communication Application	Video editing and the presentation of the final product

Unit 4: Developing a Dynamic Online Presence

Time: 30 hours

Unit Description

This unit gives students a deeper understanding of the uses and advantages of the Internet as a communication tool. Students create a multi-page web design that not only showcases their venture but also has real usefulness to the company, employees, clients, and potential clients. Emphasis is placed on creating a webpage that pushes the limits of a website as a multimedia experience. The web designs are uploaded, then updated, and maintained as an ongoing process of management. Throughout this unit, students are encouraged to become effective communicators who use and integrate the Catholic faith tradition, in the critical analysis of the arts, media, technology and information systems to enhance the quality of life. Students present all information and ideas clearly and honestly with sensitivity to others.

Unit Overview Chart

Activity	Learning Expectations	Assessment Categories	Focus
4.1 Surfing For Exemplar Websites	TFV.04, TF1.01, TF2.01, TF2.03, SP3.02, ICV.01, IC1.01 CGE: 1d; 2a, b, e; 3c, f; 5b	Thinking/Inquiry Knowledge/ Understanding Communication Application	Students research and investigate existing communications technology enterprise websites
4.2 Making a Splash – Animated Logo	TFV.01, TF1.02, TF2.01, TF2.03, TF3.02, SPV.02, SPV.04, SPV.05, SP1.01, SP2.05, SP3.01, SP4.02 CGE: 2b; 3c; 4f; 5e,g; 7b	Knowledge/ Understanding Communication Application	Students create an animated logo as a key element for their splash page
4.3 Virtual Reality (VR) on the Web	TF2.01, TF3.02, SPV.01, SPV.02, SPV.03, SP1.05, SP1.06, SP2.01, SP2.04, SP2.05, SP2.08, SP2.09, SP3.01, SP4.02, IC2.01 CGE: 2b, 3c, 4f, 5a.g; 7b	Knowledge/ Understanding Communication Application	Students create a Virtual Reality (VR) panorama or VR object for their webpage
4.4 Audio on the Web	TFV.01, TFV.03, TF3.02, SPV.01, SPV.02, SPV.03, SPV.04, SP1.05, SP2.01, SP2.04, SP2.09, SP3.01 CGE: 1d, 2b,e; 3c, d; 4f, 5e,g; 7a,b	Knowledge/ Understanding Communication Application	Students use a variety of audio techniques to enhance their webpage
4.5 Website Assembly and Navigation	SPV.01, SPV.02, SPV.03, SP2.01, SP2.03, SP2.04, SP2.05, SP2.06, SP2.08, SP2.09, SP3.01, SP4.02, SP4.03, IC2.01 CGE: 2c, e; 3c; 4f; 5e, g	Thinking/Inquiry Knowledge/ Understanding Communication Application	Using web-design software students plan and construct a website for their company
4.6 Maintaining the Site	TFV.02, TFV.03, TF2.01, SPV.04, SP2.02, SP2.08, SP3.02, SP4.01 CGE: 2c; 3d, f; 4b, d; 5g; 7b, f, g	Thinking/Inquiry Knowledge/ Understanding Communication Application	Students develop plans for updating and maintaining an active website.

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 and learning styles 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.

Career education can be most effectively delivered by the integration of topics throughout the course. Students are also given the opportunity to research apprenticeships or other training programs available in the communications sector, and assess their aptitude for such programs. Unit 1 provides the base for the start of career investigation. Students explore management and marketing techniques found in the communications technology workplace. Through the formulation of a company linked to the communications sector, students are exposed to a variety of potential careers as each student presents a venture plan. The remaining units provide further opportunity for students to focus on career options and provide further insights into the skills required for a variety of related fields. A number of teaching/learning strategies allow for career orientation, e.g., job shadowing, computer research, field trips, and guest speakers. Classroom teachers should work closely with guidance or career counsellors to co-ordinate the planning of career study.

Throughout this course, the teaching strategies employed should vary to allow students to apply their knowledge in a number of different situations. These strategies fall into the following four different categories:

<p>Teacher-centred Strategies Teacher-centred strategies are those in which the teacher directs the learning. Examples include teacher-led reviews, worksheets, and note taking.</p>	<p>Learner-centred Strategies Learner-centred strategies, which are activity-based, provide students with opportunities to apply what they have learned. Examples include text referencing, group discussions, note making, case studies, and computer simulations.</p>
<p>Self-directed Strategies Self-directed strategies may be used to promote independence and self-reliance. Examples include sharing information with others, creating displays, and electronic media research.</p>	<p>Community-based Strategies Community-based strategies integrate the local community into the classroom. Examples include job shadowing, computer research, field trips, career panels, and guest speakers.</p>

Assessment & Evaluation of Student Achievement

Teachers should employ a variety of assessment techniques throughout the course, make appropriate adjustments to teaching/learning strategies, and accommodate exceptional students. Student input in the assessment process should be welcomed and valued. Some strategies, which are consistent with the assessment techniques referred to in the activities, are presented below.

- Share the rubrics for culminating activities at the beginning of the unit, so expectations and criteria are clear for students and can be used to support the learning in all unit activities.
- Develop rubrics with students, or involve them in translating them into student language.
- Emphasize the language of assessment and evaluation in your discussions with students.
- Provide exemplars demonstrating achievement at different levels for students.
- Use the results of diagnostic and formative assessment to modify the delivery of the unit.
- Provide different opportunities to assess the achievement of the expectations.
- Provide opportunities for self- and peer assessment to be used as formative assessment to support and improve student learning.
- Provide opportunities for students to repeat assignments until they can demonstrate their mastery.
- Develop tests that provide opportunities to demonstrate all categories on the Achievement Chart as much as possible and demonstrate achievement at all levels.
- Give practice tests as an opportunity for formative assessment.

- Use assessment tools that are appropriate for the expectations being addressed and which relate to the categories on the Achievement Chart.
- Provide prompt feedback so students can use it to improve their learning.
- Design a variety of assessment tasks to address different learning styles.
- Provide choice in activities/assessments tasks to accommodate the diverse needs of the learners in the classroom.
- Provide opportunities for students to track their own progress.

Assessment/Evaluation Types and Strategies

Type	Examples	
Paper-and-Pencil	Ongoing quizzes	Final evaluation (tests and final exam)
Performance	Assigned exercises	Skills demonstrations
	Checklists	Worksheets
	Log/journal entries	Presentation/exhibitions
	Finished product	Portfolios
Personal Communication	Conferencing	Student-teacher
	Teacher-group	Instructional questions and answers
	Assessment	Daily log/journal
	Ongoing verbal feedback	Critique

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.

How Assessment Strategies Are Used to Determine Final Course Mark

Assessment instruments are designed to provide information about student achievement. Assessment instruments may be used in more than one achievement category.

Seventy per cent of the grade is based on assessment and evaluation conducted throughout the course. Thirty per cent of the grade is based on a final evaluation in the form of an examination, a cumulative project, performance, essay, and/or other method of evaluation.

Learning skills, effort, punctuality, and recorded absences are reported separately and are not considered in the determination of the percentage grade.

Accommodations

Teachers using this Course Profile should be acquainted with the Individual Education Plans (IEPs) of exceptional students in order to make the necessary accommodations for individual students. 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 address learning styles.

Note: The electronic *Ontario Curriculum Unit Planner* and the *Special Education Companion* are excellent resources when developing accommodations for students.

The following are some suggested strategies based on different exceptionalities that could be applied throughout the various activities:

<p>Reading Read questions and instructions first.</p> <ul style="list-style-type: none"> • Adjust reading requirements. • Provide varied opportunities for peer/group reading. • Pre-teach concepts/vocabulary. • Provide advance organizers to structure reading content, e.g., outlines, subtitles, main ideas, supporting detail. <p>Reading</p> <ul style="list-style-type: none"> • Provide opportunities for alternate methods of information sharing, e.g., videos, and visuals. 	<p>Math</p> <ul style="list-style-type: none"> • Check work after each example. • Relate problems to real life. • Modify complexity of examples. • Break into smaller steps • Review daily. • Teach and encourage use of diagrams. • Teach use of calculator. • Use hands-on manipulatives. <p>Math</p> <ul style="list-style-type: none"> • Adjust number of problems. • Provide samples for the students to work from. 	<p>Memory</p> <ul style="list-style-type: none"> • Teach students to verbalize concepts. • Check that daily assignments are recorded in planner. • Include strategies to assist recall. • Ensure students write things down. • Provide lists and/or flowcharts. • Give visual clues. <p>Memory</p> <ul style="list-style-type: none"> • Give demonstrations. • Teach Mnemonics. • Allow student to tape lessons for more intensive review at a later time.
<p>Oral Language</p> <ul style="list-style-type: none"> • Provide non-threatening environments. • Do not ask the students to respond to questions without forewarning. • Use cooperative learning. • Encourage the student to ask for clarification. • Use visual aids consistently to support oral message. • Use electronic medium. • Permit small groups. 	<p>Motivation Difficulties</p> <ul style="list-style-type: none"> • Provide a variety of types of assignments. • Set realistic goals and expectations. • Avoid public confrontation. • Provide praise and positive feedback. • Be flexible with timelines. • Conference on one-to-one basis. • Maintain contact with home. • Provide timely feedback. 	<p>Written Language</p> <ul style="list-style-type: none"> • Vary assignments. • Give explicit instructions. • Extend timelines. • Provide a print copy of board notes, if necessary, e.g., photocopy, peer notes on NCR paper. • Allow point-form notes. • Use peer editing. • Teach use of spell check. • Use of assistive devices as outlined in the IEP.

<p>Attention Difficulties</p> <ul style="list-style-type: none"> • Provide a variety of activities and teaching techniques. • Give blocks of information and vary the activities frequently. • Use cooperative learning. • Ask students to repeat instructions to you. • Provide immediate feedback. • Move around room. • Use visuals. • Seat students in area of room to minimize distractions. 	<p>Enrichment</p> <ul style="list-style-type: none"> • Work with an outside communications sector business organizations. • Provide enriched material.
<p>ESL</p> <ul style="list-style-type: none"> • Encourage use of first language English dictionaries for assignments and assessment. • Pair written instructions with verbal instructions. • Allow extra time for reading or writing assignments. • English-speaking students can help their ESL classmates by repeating, rephrasing, and writing words down. • Bilingual peer tutors, if available, can be helpful, or use classroom groups to facilitate clarification in native language. • Give recognition to partners for undertaking responsibilities with students with special needs. • Avoid “all ESL” groupings. • Encourage ESL students to use their own language to explain terms in their private notes if it helps them remember. • Provide students with a summary sheet that can be used at the end of each class (with teacher assistance) to list main terms or concepts that were the focus of the lesson • Make overheads of handouts on which teacher highlights important terms, explains words, and clarifies instructions, etc. while students do the same on their copy. 	

Resources

Units in this Course Profile make reference to the use of specific texts, magazines, films, videos, and websites. Teachers need to consult their board policies regarding the use of any copyrighted materials. Before reproducing materials for student use from printed publications, teachers need to ensure that their board has a Cancopy licence and that its licence covers the resources they wish to use. Before screening videos/films with their students, teachers need to ensure that their board/school has obtained the appropriate public performance videocassette licence from the authorized distributor, e.g., Audio Cine Films Inc. Teachers are reminded that much of the material on the Internet is protected by copyright. The copyright is usually owned by the person or organization that created the work. Reproduction of any work or substantial part of any work on the Internet is not allowed without the permission of the owner.

Specific resources are listed at the end of each activity.

General 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.

Creating Catholic Curriculum: A Resource for Catholic Teachers. Eastern Ontario Catholic Curriculum Cooperative, 2001.

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.
Bennett, B., C. Rolheiser-Bennett, and L. Stevahn. *Cooperative Learning Where Heart Meets Mind.* Toronto: Educational Connections, 1991. ISBN 0-4444-555-6
Gibbs, Jeanne. *Tribes: A Process for Social Development and Cooperative Learning.* Santa Rosa: 1996. ISBN 0-932762-08-5
Harper, M., K. O'Connor, and M. Simpson. *Quality Assessment: Fitting The Pieces Together.* Toronto: OSSTF Educational Services Committee, 1999. ISBN 0-920930-47-6
Schurr, Sandra. *Authentic Assessment From A to Z.* Columbus, Ohio: National Middle School Association, 1999. ISBN 1-56090-61-6
Trafford, Larry. *Educating the Soul: Writing Curriculum for Catholic Secondary Schools.* Toronto: Institute for Catholic Education, 1998. ISBN 0-9699178-5-6

Websites

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

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.

The Institute for Catholic Education – <http://www.tcdsb.on.ca/ice/>
The Institute for Catholic Education is dedicated to working with, bringing together, and assisting all those who share responsibility for English Catholic education in their efforts to promote and maintain Catholic schools animated by the Gospel and reflecting the tenets of the Catholic faith.

Media Awareness Network – <http://www.media-awareness.ca/>
Practical support for teaching media in the classroom with links to other sites.

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.

Ontario Council of Technology Education – www.octe.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 online 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 12 Communications Technology, Workplace Preparation is designated as a Technological Education, Part A, Broad-Based Technology Course. 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 when they plan to enter the workplace directly after graduation or the requirements for admission to apprenticeship or other training programs when they plan to participate in these programs. (See *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. Schools are also required to adopt measures to provide a safe environment for learning, free from harassment of all types, violence, and expressions of hate. 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. For more information, teachers should consult Section 7.13 Anti-discrimination Education of the OSS document.

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.

School-work transition programs include both in-school and work-based experiences, including job shadowing, work experience, cooperative education, and in-depth skills training, and require the involvement of employers in their development and delivery. The job shadowing, work experience, and cooperative education portions of school-work transition programs must be implemented in accordance with the policies and procedures of the Ministry of Education *Cooperative Education and Other Forms of Experiential Learning, Policies and Procedures for Ontario Secondary Schools, 2000, Section 1.6*.

Coded Expectations, Communications Technology, Grade 12, Workplace Preparation, TGJ4E

Theory and Foundation

Overall Expectations

- TFV.01** · apply the design process to develop solutions, products, processes, or services in response to challenges or problems in electronic, live, recorded, or graphic communications;
- TFV.02** · identify the processes, concepts, materials, and components used in the development of a product or service;
- TFV.03** · analyse and describe the effects of modifications on communications systems;
- TFV.04** · demonstrate an in-depth understanding of industry standards and regulations related to electronic, live, recorded, or graphic 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 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** – identify and describe current processes, methods of operation, materials, equipment, tools (including computers and peripherals), and components used to meet client needs;
- TF2.02** – identify and describe necessary resources and scheduling requirements for the phases of production, including pre- production and post-production;
- TF2.03** – demonstrate an understanding of industry-standard electronic, live, recorded, or graphic communications systems;
- TF2.04** – explain how microwaves, lasers, and fibre optics are used in communications systems.

Standards

- TF3.01** – define the terminology and symbols used in the areas of electronic, live, recorded, or graphic communications;
- TF3.02** – explain the conventions, formats, and specifications of industry-standard communications systems.

Skills and Processes

Overall Expectations

- SPV.01 · work as an effective member of a team;
- SPV.02 · set up, and function well in, an effective communications technology enterprise;
- SPV.03 · use current technology and a variety of communications-related processes to create products that meet specifications determined by a client's needs;
- SPV.04 · develop and maintain systems that adhere to industry standards, and develop the means required to document activities using industry-standard formats;
- SPV.05 · use language skills and artistic concepts effectively and apply scientific principles to develop solutions to communications problems.

Specific Expectations

Organizational Skills

- SP1.01 – explain the activities associated with research and development: discovering a need, developing a product, and establishing specifications for improvement;
- SP1.02 – describe the activities associated with marketing: identifying the potential market, promoting the product, selling and distributing the product;
- SP1.03 – explain the activities associated with industrial relations: recruiting, selecting, and training the work force;
- SP1.04 – describe how a company conducts its financial affairs (how it raises and controls its money);
- SP1.05 – demonstrate communication, conflict resolution, time management, and goal-setting skills, as well as the ability to accept responsibility and to delegate tasks when appropriate;
- SP1.06 – plan with team members to establish the order of operations; the availability of tools, parts, and equipment; scheduling requirements; and other information required to plan and prepare for the production process;
- SP1.07 – document the production process using industry-standard formats (e.g., storyboards, schematics, flow charts);
- SP1.08 – prepare a business plan for a venture related to communications technology.

Production Skills

- SP2.01 – set up and maintain a current electronic, live, recorded, or graphic communications system;
- SP2.02 – troubleshoot and repair communications systems;
- SP2.03 – identify, select, and use the most appropriate equipment and processes when developing a solution to a communications problem;
- SP2.04 – design and produce a variety of communications projects that meet the demands of specific customers or markets;
- SP2.05 – apply design principles and elements to produce effective solutions in communications technology projects;
- SP2.06 – apply current production skills safely and effectively in the development of a product or service;
- SP2.07 – prepare documents for communications projects, including cost estimates and bidding procedures, lists of materials and labour costs, and work orders and specifications;
- SP2.08 – prepare, interpret, and follow work-related processes when maintaining communication components and systems;
- SP2.09 – solve practical production problems in a variety of simulated workplace situations.

Documentation and Standards

SP3.01 – produce, read, and interpret technical and artistic drawings, reports, instructions, scripts, manuals, on-line documentation, and specifications related to complex communications technology projects;

SP3.02 – document and communicate the results of the design process, of diagnostic analysis, and of troubleshooting for various communications technology projects.

Interdisciplinary Applications

SP4.01 – use language effectively in presentations related to communications projects;

SP4.02 – apply artistic and aesthetic principles to designs related to communications projects;

SP4.03 – apply appropriate scientific principles (e.g., those related to light, colour, magnetism, electricity) in the design and production of communications technology systems.

Impact and Consequences

Overall Expectations

ICV.01 · evaluate negative environmental impacts of specific products and processes and recommend alternative methods and materials to reduce these impacts;

ICV.02 · develop and conduct safety audits and inspections of the school communications technology facility and implement a plan to address any deficiencies;

ICV.03 · describe the Occupational Health and Safety Act (OHSA) and identify its implications for the school communications facility and for the workplace;

ICV.04 · identify the career opportunities and apprenticeships or other training programs available in the communications sector, and assess their aptitude for such opportunities;

ICV.05 · describe the entrepreneurial and management roles in a business or operation incorporating communications technology and assess their own potential for such roles;

ICV.06 · demonstrate the employability skills required for success in the workplace.

Specific Expectations

Impacts

IC1.01 – evaluate any negative impacts on the environment of processes used in communications technology and substitute environmentally friendly alternatives;

IC1.02 – recommend an effective process for collecting and recycling materials and fluids;

IC1.03 – handle waste products effectively and be prepared to implement an emergency action plan in the event of a minor spill.

Safety and Legislation

IC2.01 – use safe work practices in the communications program;

IC2.02 – develop comprehensive safety checklists for equipment and operations;

IC2.03 – use all required protective clothing and gear, and assume ergonomically correct body positions and movements (e.g., when keyboarding);

IC2.04 – demonstrate good housekeeping practices in the work environment by cleaning up spills and leaks, keeping areas clean and clear of obstructions, and organizing equipment to minimize the chance of an accident;

IC2.05 – recognize and explain the electrical hazards present when using electrical equipment;

IC2.06 – recognize and explain the hazards of exposure to electromagnetic radiation;

IC2.07 – identify and adhere to those aspects of the Occupational Health and Safety Act (OHSA) and the Workplace Hazardous Materials Information System (WHMIS) that relate to procedures and operations used in the school communications technology facility.

Education, Training, and Career Opportunities

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

IC3.02 – identify the training required for careers in the communications sector;

IC3.03 – describe the employability skills identified by the Conference Board of Canada.

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: Establishing a Communications Technology Enterprise

Time: 20 hours

Unit Description

In this unit, students investigate the functions and operations of businesses in communications technology through the development of a business plan for their own student-run venture. They study operating and start-up procedures, such as marketing and product research. This unit emphasizes the importance of verbal and written communications skills, and provides an opportunity to practise the personal presentation skills necessary to gain employment and to successfully develop a career in the communications industry. Students conduct research into apprenticeships or other training programs available in the communications sector, and assess their aptitude for such programs. They investigate the Occupational Health and Safety Act (OHSA) and identify its implications for the school communications facility and for their chosen career.

Unit Synopsis Chart

Activity	Learning Expectations	Assessment Categories	Focus
1.1 Exploring the Function and Operations of a Communications Business	TFV.02, TF1.01, SP1.01, SP1.02, SP4.01, ICV.01, ICV.02, ICV.03, ICV.04, ICV.05, IC1.01, IC1.02, IC1.03, IC2.02, IC2.07, IC3.01, IC3.02	Thinking/Inquiry Knowledge/ Understanding	Awareness of types of business ventures and relevant environmental impacts, safety, and legislation
1.2 Identifying the Market	TFV.01, TFV.02, SPV.05, SP1.01, SP1.02, SP1.03, SP1.04, SP1.05, SP1.06, SP4.02	Thinking/Inquiry Knowledge/ Understanding Communication Application	Using marketing strategies to determine need within the school for communications, products, and services such as newsletters, webpages, and A/V repair
1.3 Personal Communication	SPV.01, SPV.05, SP1.05, ICV.06, IC3.03	Thinking/Inquiry Knowledge/ Understanding Communication Application	Developing a workplace presence – speaking, listening, body language, and written communication skills
1.4 Multimedia Presentation: “Selling Your Company”	TFV.04, SPV.01, SPV.05, SP1.01, SP1.02, SP1.03, SP1.04, SP1.05, SP1.06, SP1.08, SP4.01, SP4.02, ICV.04, ICV.05, ICV.06, IC3.01, IC3.02, IC3.03	Thinking/Inquiry Knowledge/ Understanding Communication Application	Presenting an individualized business plan for a communications technology company

Activity 1.1: Exploring the Function and Operations of a Communications Business

Time: 4 hours

Description

Students begin the process of developing their own communication technology venture by examining how companies are organized, how they function, and the types of employment opportunities within various enterprises. From their research and understanding, students develop a business plan for a communications business operating from the school's communications technology facility. They research the training required to work within the communication sector, and assess their aptitude for available school and apprenticeship programs. The relevance of the Occupational Health and Safety Act (OHSA) is also discussed.

Strand(s) & Learning Expectations

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

Overall Expectations

TFV.02 - identify the processes, concepts, materials, and components used in the development of a product or service;

ICV.01 - evaluate negative environmental impacts of specific products and processes and recommend alternative methods and materials to reduce these impacts;

ICV.02 - develop and conduct safety audits and inspections of the school communications technology facility and implement a plan to address any deficiencies;

ICV.03 - describe the Occupational Health and Safety Act (OHSA) and identify its implications for the school communications facility and for the workplace;

ICV.04 - identify the career opportunities and apprenticeships or other training programs available in the communications sector, and assess their aptitude for such opportunities;

ICV.05 - describe the entrepreneurial and management roles in a business or operation incorporating communications technology and assess their own potential for such roles.

Specific Expectations

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

SP1.01 - explain the activities associated with research and development: discovering a need, developing a product, and establishing specifications for improvement;

SP1.02 - describe the activities associated with marketing: identifying the potential market, promoting the product, selling and distributing the product;

SP1.04 - describe how a company conducts its financial affairs (how it raises and controls its money);

IC1.01 - evaluate any negative impacts on the environment of processes used in communications technology and substitute environmentally friendly alternatives;

IC2.02 - develop comprehensive safety checklists for equipment and operations;

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

IC3.02 - identify the training required for careers in the communications sector;

IC2.07 - identify and adhere to those aspects of the Occupational Health and Safety Act (OHSA) and the Workplace Hazardous Materials Information System (WHMIS) that relate to procedures and operations used in the school communications technology facility.

Prior Knowledge & Skills

- Familiarity with the operation of a computer and the ability to save, import, export, and create files
- Internet research skills and the ability to download information from the Internet

Planning Notes

- 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.
- Cross-curricular connections include Business, Co-op, and Career Studies (Guidance).
- The teacher collects exemplary student work to illustrate successful completion of the assigned tasks.
- The teacher addresses safety/censorship on the Internet at the start of the course by implementing their board's policies on appropriate student use and access to Internet services.
- Ideally the teacher coordinates with business and co-op teachers to develop instructional tools that describe and illustrate the variety of business structures possible within the field of communications technology. For example, the teacher can organize case studies of businesses ranging in size from basement operations to multinational organizations, and have students report to the class on their findings.
- The teacher describes workplace culture with respect to employee behaviour and responsibilities.
- The teacher investigates teaching/learning strategies that allow for career links, e.g., job shadowing, career and education research, field trips, and guest speakers. Teachers 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 regarding starting and maintaining a company.
- The teacher provides students with access to the Occupational Health and Safety Act (OHSA) and Workplace Hazardous Materials Information System Legislation (WHMIS).
- The teacher provides students with a list of equipment that might be required in their company venture plan.
- The teacher provides word lists, glossaries, definition of terms, and visuals where available.

Teaching/Learning Strategies

1. The teacher introduces the goals and objectives of the unit and initiates a discussion on the variety of products and services that make up the communications industry.
2. Students brainstorm ideas about what is required to start up a company.
3. The teacher discusses with students the variety of social issues, impacts and consequences that must also be considered when starting a company.
4. Students explore the function and structure of a variety of communication technology businesses.
5. Students find partners (if desired) and brainstorm the types of authentic goods and services that can be offered using the school communications technology facility.
6. Students examine the Occupational Health and Safety Act (OHSA) and Workplace Hazardous Materials Information System Legislation (WHMIS) for articles related to the goods and services identified.
7. Students use available research facilities to attach job descriptions to the products/services that can be offered using school facilities, and to prepare a summary of the training paths related to the jobs.
8. Students write a simple declaration of purpose and intent for their business, describing the goods and services they intend to offer.

Assessment & Evaluation of Student Achievement

Task/Product	Tool	Purpose	Achievement Chart Categories
Written summary and oral presentation of case study - e.g., local electronic repair shop	Rubric	Formative	Knowledge/Understanding Thinking/Inquiry Communication
List of possible goods and services; identification of OHSA and WHMIS issues	Checklist	Formative	Thinking/Inquiry
Statement of purpose and intent	Checklist	Formative	Knowledge/Understanding Thinking/Inquiry

Accommodations

- The teacher should be acquainted with Individual Education Plans (IEPs) for exceptional students in order to make the necessary accommodations for individuals.
- Provide peer tutoring for those students who may need extra help.
- Provide flexible timelines for those who require them.
- Provide students with opportunities for enrichment.

Resources

General

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

Samples of student exemplars

Operating Instructions and Manufacturer's Equipment manuals

Computer Software user guides and tutorial exercises

Various samples of activity project work

The school library/resource centre

Print

Berrisford, Nigel. *How to Start a Small Business for Canadians*. Toronto: Coles Publishing, 2000. ISBN 0-7740-0592-0

Easto, Larry. *The Complete Small Business Guide for Canadians*. Toronto: Prentice Hall Canada, 2000. ISBN 0-13-090078-8

Fattal, Tony. *Managing a Successful Business in Canada*. Toronto: Self Counsel Press, 2001. ISBN 1-55180-322-4

Gallander, Benjamin. *The Canadian Small Business Survival Guide: How to Start & Operate Your Own Successful Business*. USA: Trade Paperback, 1999. ISBN 0888820941

Jensen, Marlene. *Everything Business Planning Book*. USA: Adams Media Corp, 2001. ISBN 1-58062-491-X

Kew, Hollee. *Barefoot in the Grass: A Fresh Approach to Starting a Small Business in Canada*. Toronto: Kudo Publishing, 2000. ISBN 0968481906

Live Safe! Work Smart! Health and Safety Resources for Ontario Secondary School Teachers. Queen's Printer for Ontario, 2000. ISBN 0-7794-0226-X. Ministry of Labour Publications Department, phone: 1-416-326-7731

Occupational Health and Safety Act, January 2001. Queen's Printer for Ontario, 2001. ISBN 0779404270.

A Guide to the Occupational Health and Safety Act, November 2000. Queen's Printer for Ontario, 2000. ISBN 0779404289

Tyson, Eric. *Starting & Running a Small Business for Dummies.* USA: IDG Books Worldwide. 1998. ISBN 0764550942

Sullivan, Robert *The Small Business Start-Up Guide: Practical Advice on Starting & Operating a Small Business.* USA: Information International, 1998. ISBN 1882480058

Workplace Hazardous Materials Information System (WHMIS): Guide to the Legislation, May 1989 (Reprinted February 2001). Queen's Printer for Ontario, 2001. ISBN 0772956545

Websites

Business Gateway Canada – <http://businessgateway.ca/>

Government of Canada site for Information on starting a company in Canada.

Business Advisory Services – <http://strategis.ic.gc.ca/SSG/mi01532e.html>

Government of Canada site for business planning and feasibility to ensure efficient and profitable start-up and operation for all levels of business.

Business Development Bank of Canada – <http://www.bdc.ca/bdc/home/>

Information on starting a company in Canada.

Canadian Center for Occupational Health and Safety (CCOHS) – <http://www.ccohs.ca>

Canada's National Center for Occupational Health and Safety Information.

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

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

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

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

Education Safety Association of Ontario (ESAO) – <http://www.esao.on.ca>

The ESAO's mandate is to support prevention and reduction of workplace injuries in the broad education sector in Ontario.

Entrepreneurship – <http://www.edu.gov.on.ca/eng/career/entrepre.html>

Government of Ontario site for information on Entrepreneurship. Links to many other good sources.

Government of Ontario – Business – <http://www.gov.on.ca/MBS/english/government/business.html>

Government of Ontario site for information on starting a company in Ontario.

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.

More Business – <http://www.morebusiness.com/>

Tips and tricks to starting and maintaining venture project.

Ontario Ministry of Labour (MOL) – <http://www.gov.on.ca/LAB/ohs/ohse.html>

Source of occupational health and safety, employment rights and responsibilities and other workplace information.

Small Business Administration – <http://www.sba.gov/starting/>

Tips on starting a venture plan.

Small Business Canada – <http://sbinfoCanada.about.com>

Helpful resources for starting a small business.

Small Business Development Center – <http://www.bizcoach.org/start.htm>

A site to answer questions about a small business.

Workplace Safety and Insurance Board (WSIB) – <http://www.wsib.on.ca>
Formerly the Workers' Compensation Board oversees Ontario's workplace safety education and training systems.
Young Entrepreneurs – http://www.2.ontario-canada.com/English/business/yes/young_entrepreneurs.htm
Government of Ontario site for information on the Young Entrepreneurs program.

Activity 2: Identifying the Market

Time: 5 hours

Description

Students define the scope and viability of their communications business by conducting research within the school to identify potential markets for their products and/or services. Students prepare and distribute a questionnaire that includes a checklist of the products and services they will offer within the school. The identity and scope of the proposed business is formalized by the preparation of a Venture Plan.

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 challenges or problems in electronic, live, recorded, or graphic communications;

TFV.02 - identify the processes, concepts, materials, and components used in the development of a product or service.

Specific Expectations

SP1.01 - explain the activities associated with research and development: discovering a need, developing a product, and establishing specifications for improvement;

SP1.02 - describe the activities associated with marketing: identifying the potential market, promoting the product, selling and distributing the product;

SP1.05 - demonstrate communication, conflict resolution, time management, and goal-setting skills, as well as the ability to accept responsibility and to delegate tasks when appropriate;

SP1.06 - plan with team members to establish the order of operations; the availability of tools, parts, and equipment; scheduling requirements; and other information required to plan and prepare for the production process;

SP4.01 - use language effectively in presentations related to communications projects.

Prior Knowledge & Skills

- Familiarity with the operation of a computer and ability to save, import, export, and create files
- Internet research skills and the ability to download information from the Internet
- Understanding of the following concepts and processes acquired in Grade 11, Communications Technology, TGJ3E – Workplace Preparation:
 - the principles of design
 - the proper and safe use of audio/video equipment
 - a basic understanding of the correct use of both the multimedia and presentation software as well as the related equipment

Planning Notes

- 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.
- The teacher collects and distributes examples of effective questionnaires and Venture Plans.
- The teacher prepares a list of the possible products and services that can be offered within the school, and makes preliminary contact with clients (custodial and office staff, for example).
- The teacher informs school administration and affected colleagues about the activity.

Teaching/Learning Strategies

1. The teacher describes the stages and objectives of the activity.
2. Students use their statement of intent (Activity 1) and preliminary list of possible products/services to create a final checklist. This should be completed with the students' own interests and strengths in mind.
3. Students consult with the teacher in order to prepare and distribute an effective questionnaire. The teacher should be prepared with ideas and information about possible clients.
4. Using the information gathered from their marketing research, students prepare their Venture Plan in the prescribed form.
5. Students and the teacher review the questionnaire; students incorporate necessary revisions.
6. Students determine how and when they will collect the questionnaire from their participants.
7. Students distribute the questionnaire, discussing how and when the questionnaire will be returned.

Note: The teacher instructs students to accept “no comment” as a valid answer to any question, and to respect that people may choose not to respond at all.

Assessment & Evaluation of Student Achievement

Task/Product	Tool	Purpose	Achievement Chart Categories
Questionnaire and evidence of its distribution and collection	Checklist	Formative	Communication Application
Completed Venture Plan	Rubric (Appendix 1.2.2)	Summative	Knowledge/Understanding Thinking/Inquiry Communication Application

Accommodations

- Provision of alternative assignment topics and choice of assignment formats where possible.
- Offer peer tutoring to students.
- Provide provision of more detailed notes or instructions.
- Reinforce written instructions with verbal instructions.

Resources

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

Samples of student exemplars

Operating Instructions and Manufacturer's Equipment manuals

Computer Software user guides and tutorial exercises

Various samples of activity project work

The school library/resource centre

Print

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

Foote, Cameron. *The Business Side of Creativity*. USA: W.W. Norton, 2000. ISBN 0393-73009-3

Green, Chuck. *Design It Yourself: Logos, Letterheads, & Business Cards*. USA: Rockport Publishers, 2001. ISBN 1-56496-768-9

Green, Chuck. *The Desktop Publisher's Idea Book, 2nd Edition*. USA: Random House, 2000. ISBN 0679-78006-8

Hitchcock, Peter. *Videography: The Guide to Making Videos*. Toronto: Peter Hitchcock Productions Inc. and TV Ontario, 1992. ISBN 0-9696-2610-X

Hone, Rick and Liz Flynn. *Video in Focus: A Guide to Viewing and Producing Video*. Toronto: Globe/Modern Curriculum Press, 1992. ISBN 0-8899-6344-4

Hone, Rick and Liz Flynn. *Video in Focus: A Guide to Viewing and Producing Video, Teacher's Guide*. Toronto: Globe/Modern Curriculum Press, 1992. ISBN 0-8899-6281-2

Porozny, George. *Desktop Publishing: Design Basics and Applications*. Toronto: Copp Clark Pitman Ltd., 1993. ISBN 0-7730-5218-6

Street, Rita. *Computer Animation: A Whole New World*. USA: Rockport Publishers, 1998. ISBN 0-1564-9377-2

Swann, Alan. *How to Understand and Use Design and Layout*. Cincinnati, Ohio: North Light Books, 1999. ISBN 0-8913-4358-X

Williams, Robin. *The Non-Designer's Design Book*. USA: Peachpit Press, 1995. ISBN: 1-56609159-4

Woodward, Cheryl. *Starting and Running a Successful Newsletter or Magazine*. USA: Nolo Press, 1998. ISBN 0-8733-7461-4

Zettl, Herbert. *Video Basics*. Toronto: Nelson Canada, 1995. ISBN 0-5342-4786-5

Zettl, Herbert. *Video Basics Workbook*. Toronto: Nelson Canada, 1995. ISBN 0-5342-4787-X

Non-print Materials

Elements and Principles of Design, Tony Couch, Crystal Video Productions. September, 1990. VHS Tape. Run Time: 43 minutes. ASIN 0924509058

Websites

The Design & Publishing Center – <http://www.graphic-design.com/>

A site for design, typography, graphics, illustration, writing, printing, publishing, advertising, signs, displays, and information for graphic communicators.

Graphic Designers Paradise – <http://desktoppublishing.com/design.html>

Source of design information with links to other Graphic design sites.

Idea Book – <http://www.ideabook.com/>

Step-by-step design ideas, sources, and production tips.

Activity 3: Personal Communication Skills

Time: 4 hours

Description

Students explore and then practise the basic communications skills necessary to gain employment and to successfully develop a career in the communications sector. Using video equipment to record role-playing activities and practical interviewing exercises, students gain insight into the acceptable communication practices found in a business environment. Students are encouraged to become effective communicators in the workplace.

Strand(s) & Learning Expectations

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

Overall Expectations

SPV.01 - work as an effective member of a team;

SPV.05 - use language skills and artistic concepts effectively and apply scientific principles to develop solutions to communications problems;

ICV.06 - demonstrate the employability skills required for success in the workplace.

Specific Expectations

IC3.03 - describe the employability skills identified by the Conference Board of Canada.

Prior Knowledge & Skills

- Familiarity with the operation of a computer and ability to save, import, export, and create files
- Internet research skills and the ability to download information from the Internet
- Understanding of the proper and safe use of audio/video equipment

Planning Notes

- It is expected that all student work contain positive images of race, gender, and religion. Stereotypes, acts of violence, sexual themes, or the use of profanity in their work is not acceptable.
- Cross-curricular connections include Business, Co-op, Career Studies (Guidance), etc.
- The teacher develops a list of acceptable methods used in industry for the areas of speaking, listening, writing, and body language.
- The teacher organizes the required audio/video equipment for videotaping the mock interviews.
- The teacher plans a review of the proper and safe use of audio/video equipment.

Teaching/Learning Strategies

1. The teacher describes the stages and objectives of the activity, beginning with a discussion of communication skills in the workplace.
2. The teacher describes the purposes of a job interview and outlines the strategies and behaviours conducive to a successful interview, e.g., proper dress, body language, and methods of response.
3. The teacher prepares students for the mock interview by providing a number of possible questions (Appendix 1.3.1).
4. Students complete mock interview role-playing exercises:
 - The teacher reviews correct camera set-up with the students before videotaping of the interview begins.
 - Working in groups of three, students complete the mock interview exercises. Each student has an opportunity to play the role of the interviewer, the person being interviewed, and cameraperson.
5. Taped interviews are reviewed and critiqued by the class and teacher.
6. Students complete the Personal Communications Skills Rating Scale (Appendix 1.3.2).

Assessment & Evaluation of Student Achievement

Task/Product	Tool	Purpose	Achievement Chart Categories
Performance during interview	Rubric	Summative	Communication
Performance in secondary roles: interviewer, camera-person	Personal Communications Skills Rating Scale (Appendix 1.3.2)	Summative Formative	Knowledge/Understanding Thinking/Inquiry Application Communication

Accommodations

- Provide peer tutoring for those students who may need the extra help.
- Allow flexible timelines for those who require them.
- Provide students with opportunities for enrichment purposes.

Resources

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

Samples of student exemplars

Operating Instructions and Manufacturer's Equipment manuals

Computer Software user guides and tutorial exercises

Various samples of activity project work

The school library/resource centre

Print

Dancyger, Ken. *The Technique of Film and Video Editing: Theory & Practice*, 2nd Edition. USA: Focal Press, 1997. ISBN 0240802551

Gottesman, Deb. *The Interview Rehearsal Book*. USA: Berkley Publisher Group, 1999. ISBN 0-42516686-4

Hitchcock, Peter. *Videography: The Guide to Making Videos*. Toronto: Peter Hitchcock Productions Inc. and TV Ontario, 1992. ISBN 0-9696-2610-X

Hone, Rick and Liz Flynn. *Video in Focus: A Guide to Viewing and Producing Video*. Toronto: Globe/Modern Curriculum Press, 1992. ISBN 0-8899-6344-4

Hone, Rick and Liz Flynn. *Video in Focus: A Guide to Viewing and Producing Video, Teacher's Guide*. Toronto: Globe/Modern Curriculum Press, 1992. ISBN 0-8899-6281-2

Jack, Keith. *Video Demystified*, 3rd Edition. USA: Lih Technology Pub, 2001. ISBN 1-87870756-6

Still, Del J. *High Impact Hiring: How to Interview and Select Outstanding Employees*. USA: Management Development Systems, 2001. ISBN 0-96546598-5

Utz, Peter. *Today's Video, Equipment, Setup and Production*. USA: Prentice-Hall, 1992. ISBN 0-13925033-6

Zettl, Herbert. *Video Basics*. Toronto: Nelson Canada, 1995. ISBN 0-5342-4786-5

Zettl, Herbert. *Video Basics Workbook*. Toronto: Nelson Canada, 1995. ISBN 0-5342-4787-X

Non-print Materials

No-Brainers - The Career Combo (Resumes & Cover Letters, Interviewing), No-Brainers et al, Cerebellum Corp. December 7, 1999. VHS Tape. Run Time: 90 minutes. ASIN 6305216339

Websites

Career Gateway – <http://www.edu.gov.on.ca/eng/career/jsearch.html>

Ministry of Education site for career information and job search skills (résumés, interviews, etc.).

Job Searching – <http://jobsearch.about.com/msubinterv.htm>

Tips and techniques for successful interviewing.

Videomaker Magazine – <http://www.videomaker.com>

A source of video/editing online articles, links to user groups, and equipment information.

Videonics Systems – <http://www.videonics.com>

Articles on video/editing, links to user groups, industry information, and equipment information.

Activity 4: Multimedia Presentation: “Selling Your Company”

Time: 7 hours

Description

Students create a multimedia presentation of their completed Venture Plan. Using their knowledge of multimedia development tools and techniques, students prepare a class presentation based on the choices and information gathered in the previous activities. Students are required to include a variety of media in their presentation (video, audio, animated graphics, photography).

Strand(s) & Learning Expectations

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

Overall Expectations

TFV.04 - demonstrate an in-depth understanding of industry standards and regulations related to electronic, live, recorded, or graphic communications technology;

SPV.05 - use language skills and artistic concepts effectively and apply scientific principles to develop solutions to communications problems;

ICV.04 - identify the career opportunities and apprenticeships or other training programs available in the communications sector, and assess their aptitude for such opportunities;

ICV.05 - describe the entrepreneurial and management roles in a business or operation incorporating communications technology and assess their own potential for such roles;

ICV.06 - demonstrate the employability skills required for success in the workplace.

Specific Expectations

SP1.01 - explain the activities associated with research and development: discovering a need, developing a product, and establishing specifications for improvement;

SP1.02 - describe the activities associated with marketing: identifying the potential market, promoting the product, selling and distributing the product;

SP1.03 - explain the activities associated with industrial relations: recruiting, selecting, and training the work force;

SP1.04 - describe how a company conducts its financial affairs (how it raises and controls its money);

SP1.05 - demonstrate communication, conflict resolution, time management, and goal-setting skills, as well as the ability to accept responsibility and to delegate tasks when appropriate;

SP1.08 - prepare a business plan for a venture related to communications technology;

SP4.01 - use language effectively in presentations related to communications projects;

SP4.02 - apply artistic and aesthetic principles to designs related to communications projects;

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

IC3.02 - identify the training required for careers in the communications sector;

IC3.03 - describe the employability skills identified by the Conference Board of Canada.

Prior Knowledge & Skills

- Understanding of the correct use of multimedia and presentation software as well as the related equipment used with such software
- Understanding of the principles of design
- Understanding of the various formats and file types used in the multimedia presentation

Planning Notes

- The teacher prepares the equipment and materials needed to review aspects of multimedia content development and authoring techniques.
- The teacher prepares a presentation schedule to be handed out at the beginning of the assignment.
- The teacher provides students with some exemplary multimedia projects.

Teaching/Learning Strategies

1. The teacher describes the stages and objectives of the activity, stressing the need to exercise time management.
2. The teacher describes the different purposes of the Venture Plan and its presentation, e.g., the presentation is designed to introduce the Plan's concept, summarize its main features, generate interest and optimism in the audience.
3. The teacher describes how different media can be used to create impact in the presentation, e.g., the use of animated text to provide emphasis and visual interest.
4. The teacher describes how completed forms can be used in the presentation to give the impression of competence and professionalism (see sample form Appendix 1.4.1).
5. The teacher reviews authoring techniques related to software to be used, e.g., how to move between scenes in *Flash*.
6. Students prepare and submit a storyboard plan of their presentation.
7. Students prepare the presentation and necessary handout materials.
8. The teacher monitors completion of the feedback forms, reviewing them and adding his/her own comments before giving them to the presenting team.

Assessment & Evaluation of Student Achievement

Task/Product	Tools	Purpose	Achievement Chart Categories
Presentation plan in the form of a storyboard	Checklist	Formative	Thinking/Inquiry Application Communication
Presentation of Venture Plan	Rubric (Appendix 1.4.2)	Summative* Formative	Knowledge/Understanding Thinking/Inquiry Communication Application

* For summative evaluation each student's work must be assessed separately.

Accommodations

- Modify the presentation format for students who require an alternate mode of presentation.
- Provide peer tutoring for those students who may need the extra help.
- Provide more detailed notes or instructions.
- Reinforce all written instructions with verbal instructions.

Resources

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

Samples of student exemplars

Operating Instructions and Manufacturer's Equipment manuals

Computer Software user guides and tutorial exercises

Various samples of activity project work

The school library/resource centre

Print

Azarmas, Reza. *Powerful Multimedia Presentations: Interactive Video Production*. USA: Wadsworth Publishing Company, 1995. ISBN 0-53425416-0

Cohen, Sandy and Robin Williams. *Non-Designer's Scan & Print Book*. USA: Peachpit Press, 1999. ISBN 0-20135394-6

D.K. Essential Computers. *Essential Computers: Multimedia - Advanced Presentations*. USA: Dorling Kindersley, 2000. ISBN 0-78946851-4

Graham, Lisa. *Principles of Interactive Design*. USA: Delmar Publishers, 1999. ISBN 0-82738557-9

Halverson, Margo. *DesignSense for Presentations*. USA: Proximity Learning, 1999. ISBN 0967873606

Iuppa, Nicholas. *Designing Interactive Digital Media*. USA: Focal Press, 1998. ISBN 0-24080287-X

Lehman, Carol M. *Creating Dynamic Multimedia Presentations Using Microsoft PowerPoint*. USA: Course Technology, 1999. ISBN 0-32402537-8

Mayer, Richard. *Multimedia Learning*. USA: Cambridge University Press, 2000. ISBN 0-52178749-1

Miller, Michael. *PowerPoint 2000: I Didn't Know You Could Do That...* USA: Sybex, 2000. ISBN 0-78212787-8

Strauss, Roy. *Managing Multimedia Projects*. USA: Focal Press, 1999. ISBN 0-24080244-6

Vaughan, Tay. *Multimedia: Making It Work*. USA: McGraw-Hill Professional Publishing, 2001. ISBN 0-07219095-7

Williams, Robin and John Tollett. *Robin Williams Design Workshop*. USA: Peachpit Press, 2000. ISBN 0-20170088-3

Non-print Materials

Learn PowerPoint 2000, Goldhil Home Media. August 2, 2000. VHS Tape. Run Time: 60 minutes. ASIN B00004XMUR

Websites

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

A graphic training program that teaches presentation design techniques.

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

Site contains information and tips to produce presentations.

Presenters University – <http://www.presentersuniversity.com/>

Site contains information and tips to produce presentations. Links to other sites.

Appendix 1.2.1

Venture Plan Template

1. *Introduction Letter:* This briefly states why you are submitting/creating your plan and highlights important information for the receiver.
2. *Cover Page:* This will set the stage for the reader. Include an attention-getting cover page. Consider using your company logo and/or a picture of your product or service. This page should include the following: Your name, Company name, Address, Telephone number, Date, and may include, Fax number, E-mail address, Website, Company logo, Picture of product or service in action.
3. *Table of Contents.* This table should clearly outline the core sections and subsections of your venture plan.
4. *Executive Summary:* This is the most important part of the business plan. You should grab the attention of your reader and clearly state what your venture is about and why it will be successful. It should include your business concept, how you will differentiate your product or service from your competitors, legal structure, progress to date of the company's financial performance, and salaries for employees.
5. *Management Organization:* It should include possible jobs titles, a copy of your employee résumés, explain the functions of yourself and all others involved in the venture, any unfilled positions in the company.
6. *Professional Services:* Who are the key outside advisors to your venture (e.g., accountants, lawyers, bankers, etc.)?
7. *Target Market Section:* Include the size of the market for your product or service, your possible competition and a comparison of service, price and quality.
8. *Services/Products:* What makes your product/service unique; describe the benefits and features of your venture. Walk through the process of creating your product or delivering your services, and show your understanding of the process of producing your product or delivering your service.
9. *Pricing Strategy:* How you will price your product or service, establish a reasonable base price that will enable you to make a fair profit as compared to the competition.
10. *Sales/Distribution Plan:* Should include how you will sell your product/service, how you will distribute your product/service, your return policy, warranties, and support.
11. *Advertising and Promotions Plan:* How you will communicate your venture/service, advertising, public relations, brochures, business card, website, etc.

Appendix 1.2.2

Assessment Rubric for Venture Plan

Categories/Criteria	Level 1 (50-59%)	Level 2 (60-69%)	Level 3 (70-79%)	Level 4 (80-100%)
Knowledge/ Understanding Demonstrates knowledge of potential market and viable goods and services	- demonstrates limited knowledge of goods and services to be offered and market potential	- demonstrates some knowledge of goods and services to be offered and market potential	- demonstrates considerable knowledge of goods and services to be offered and market potential	- demonstrates extensive knowledge of goods and services to be offered and market potential
Thinking/Inquiry Identifies strengths, assets, and potential weaknesses of venture	- identifies strengths, assets, and potential weaknesses in a limited way	- identifies strengths, assets, and potential weaknesses to some extent	- identifies strengths, assets, and potential weaknesses to a considerable extent	- identifies all or almost all strengths, assets, and potential weaknesses
Communication Venture plan communicates intent in clear, accurate, and persuasive language	- venture plan communicates intent with limited effectiveness	- venture plan communicates intent with some effectiveness	- venture plan communicates intent with considerable effectiveness	- venture plan communicates intent with a high degree of effectiveness
Application Applies prescribed structure and process in Venture plan development	- applies prescribed structure and process in a limited way	- applies prescribed structure and process to a limited extent	- applies prescribed structure and process to a considerable extent	- applies prescribed structure and process thoroughly

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

Appendix 1.3.1

Interview Questions

1) *Getting Acquainted*

- Tell me about yourself.
- Have you had a leadership opportunity at school, in the community, or at a job? Describe your responsibilities?

2) *Previous Work Experience*

- How did you get along with your co-workers?
- Did you have a good attendance record at your job?
- What do you think your employer would say about your work?
- What characteristics would you like to see in a supervisor?
- Describe a time when you experienced pressure on a job. How did you handle it?
- What have you done that illustrates your initiative and willingness to work?

3) *Education*

- Which course did you like best in school? Why?
- What future education plans do you have?

4) *Suitability and Work Style*

- Why do you feel you should be our choice for this position?
- Why did you choose to apply for this job? Is this a career that you would like to follow in the future?
- What kind of working environment do you prefer? Why?
- What time management skills do you have?

5) *Personality and Human Relations*

- What is your best strength? Weakness?
- What 4 words describe you best?
- Describe what kind of people you might like to work with?

Appendix 1.3.2

Communication Skills Rating Scale

Student _____ Interviewed by: _____

Criteria	Limited	Satisfactory	Good	Excellent
First Impression				
Dress				
Posture				
Manners				
Response to questions clear/accurate				
Communication Skills				
Knowledge				
Alertness				
Attitude				
Enthusiasm				
Sense of Responsibility				
Ability to conclude interview in a friendly and polite manner				
Applicant's interest at the end of interview				
Overall impression				

Comments:

Appendix 1.4.1

Sample Form – Work Order Request Sheet

1) Work Required: _____

2) Staff Contact: _____

3) Work Order Date: _____
Date Work Required: _____

4) Graphics or Video Projects:

Flyer: _____

Newsletter: _____

Ticket: _____

Presentation Setup: _____

Class: _____ Period: _____ Time: _____

Video Taping: _____

Class: _____ Period: _____ Time: _____

5) Computer Software/Hardware Services: *(Describe briefly the nature of your request)*

6) Specific Instructions: *(Specify any special instructions you have about any of the above requests)*

Please return the bottom portion to the Communications Technology Department upon completion of the Work Order.

Project Evaluation

Topic	Excellent	Good	Satisfactory	Needs Improvement
Service Received				
Adherence to Instructions				
Product Quality				
Overall Experience				

Other Comments:

Appendix 1.4.2

Multimedia Presentation Rubric

Categories/Criteria	Level 1 (50-59%)	Level 2 (60-69%)	Level 3 (70-79%)	Level 4 (80-100%)
Knowledge/Understanding Demonstrates knowledge of multimedia tools and resources	- demonstrates limited knowledge of multimedia tools and resources	- demonstrates some knowledge of multimedia tools and resources	- demonstrates considerable knowledge of multimedia tools and resources	- demonstrates extensive knowledge of multimedia tools and resources
Thinking/Inquiry Uses storyboard to plan an effective presentation	- plans with limited regard for clarity of message	- plans with some regard for clarity of message	- plans with considerable regard for clarity of message	- plans with a high level of regard for clarity of message
Communication Uses oral language to communicate a clear message Uses written language to communicate a clear message	- uses oral language with limited effectiveness - uses written language with limited effectiveness	- uses oral language with some effectiveness - uses written language with some effectiveness	- uses oral language with considerable effectiveness - uses written language with considerable effectiveness	- uses oral language with a high degree of effectiveness - uses written language with a high degree of effectiveness
Application Prepares a variety of multimedia content	- prepares limited variety of content	- prepares some variety of content	- prepares considerable variety of content	- prepares extensive variety of content

Note: A student whose achievement is below Level 1 (50-59%) has not met the expectations for this assignment or activity.

Unit 4: Developing a Dynamic Online Presence

Time: 30 hours

Unit Description

This unit gives students an understanding of the uses and advantages of the Internet as a communication tool. Students create a multi-page web design that not only showcases their venture but also has real usefulness to the company, employees, clients, and potential clients. Emphasis is placed on creating a webpage that pushes the limits of a website as a multimedia experience. The web designs are uploaded, then updated and maintained as an ongoing process of management. Throughout this unit, students are encouraged to become effective communicators who use and integrate the Catholic faith tradition, in the critical analysis of the arts, media, technology, and information systems to enhance the quality of life. Students present all information and ideas clearly and honestly with sensitivity to others.

Unit Synopsis Chart

Activity	Time	Learning Expectations	Assessment Categories	Focus
4.1 Surfing For Exemplar Websites	3 hours	TFV.04, TF1.01, TF2.01, TF2.03, SP3.02, ICV.01, IC1.01 CGE: 1d; 2a, b, e; 3c, f; 5b	Thinking/Inquiry Knowledge/ Understanding Communication Application	Students research and investigate existing communications technology enterprise websites.
4.2 Making a Splash – Animated Logo	5 hours	TFV.01, TF1.02, TF2.01, TF2.03, TF3.02, SPV.02, SPV.04, SPV.05, SP1.01, SP2.05, SP3.01, SP4.02, CGE: 2b; 3c; 4f; 5e,g; 7b	Knowledge/ Understanding Communication Application	Students create an animated logo as a key element for their splash page.
4.3 Virtual Reality on the Web	4 hours	TF2.01, TF3.02, SPV.01, SPV.02, SPV.03, SP1.05, SP1.06, SP2.01, SP2.04, SP2.05, SP2.08, SP2.09, SP3.01, SP4.02, IC2.01 CGE: 2b, 3c, 4f, 5a,g; 7b	Knowledge/ Understanding Communication Application	Students create a VR panorama or VR object for their webpage.
4.4 Audio on the Web	4 hours	TFV.01, TFV.03, TF3.02, SPV.01, SPV.02, SPV.03, SPV.04, SP1.05, SP2.01, SP2.04, SP2.09, SP3.01 CGE: 1d, 2b,e; 3c, d; 4f, 5e,g; 7a,b	Knowledge/ Understanding Communication Application	Students use a variety of audio techniques to enhance their webpage.
4.5 Website Assembly and Navigation	10 hours	SPV.01, SPV.02, SPV.03, SP2.01, SP2.03, SP2.04, SP2.05, SP2.06, SP2.08, SP2.09, SP3.01, SP4.02, SP4.03, IC2.01 CGE: 2c, e; 3c; 4f; 5e, g; 7b	Thinking/Inquiry Knowledge/ Understanding Communication Application	Using web-design software students plan and construct a website for their company.
4.6 Maintaining the Site	4 hours	TFV.02, TFV.03, TF2.01, SPV.04, SP2.02, SP2.08, SP3.02, SP4.01 CGE: 2c; 3d, f; 4b, d; 5g; 7b, f, g	Thinking/Inquiry Knowledge/ Understanding Communication Application	Students develop plans for updating and maintaining an active website.

Activity 4.1: Surfing for Exemplary Websites

Time: 3 hours

Description

Students use a variety of search engines and apply tips and tricks including basic Boolean operators to limit their search for existing communications technology enterprise websites. They select what they believe to be an excellent website and discuss the merits of the site and how it might be improved. Students rate their chosen website using a criteria list provided by the teacher. Topics for rating include: graphic layout and adherence to the principles of design, use of animated graphics or digital video, usefulness of informational content to a variety of end users, degree of interactivity, time efficiency and ease of use. Throughout this activity, students are encouraged to become effective communicators who use and integrate the Catholic faith tradition, in the critical analysis of the arts, media, technology, and information systems, to enhance the quality of life.

Strand(s) & Learning Expectations

Ontario Catholic School Graduate Expectations

CGE1d - develops attitudes and values founded on Catholic social teaching and acts to promote social responsibility, human solidarity, and the common good;

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

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

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;

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

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;

CGE5b - thinks critically about the meaning and purpose of work.

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

Overall Expectations

TFV.04 - demonstrate an in-depth understanding of industry standards and regulations related to electronic, live, recorded, or graphic communications technology;

ICV.01 - evaluate negative environmental impacts of specific products and processes and recommend alternative methods and materials to reduce these impacts.

Specific Expectations

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

TF2.01 - identify and describe current processes, methods of operation, materials, equipment, tools (including computers and peripherals), and components used to meet client needs;

TF2.03 - demonstrate an understanding of industry-standard electronic, live, recorded, or graphic communications systems;

SP3.02 - document and communicate the results of the design process, of diagnostic analysis, and of troubleshooting for various communications technology projects;

IC1.01 - evaluate any negative impacts on the environment of processes used in communications technology and substitute environmentally friendly alternatives.

Prior Knowledge & Skills

- Basic computer literacy skills
- Understanding of the basics of web designing and web design software
- Understanding of the principles of design and how they may be applied to the project

Planning Notes

- 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 are to observe copyright laws and use copyrighted materials correctly and ethically.
- The teacher implements board policies on appropriate use and access to Internet services.
- Students are expected to keep a daily log sheet recording brief notes of their accomplishments and outlining any future needs that this activity requires.
- The teacher creates overhead/handout/online resource with a list of points to look for in a good business webpage.
- The teacher provides a tutorial handout/online tutorial that demonstrate the basics of web searching. (Appendix 4.1.1)
- The teacher researches sites to be used as exemplars.
- The teacher provides the opportunity for students to focus on specific career options and provides 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. Where possible the teacher arranges for appropriate speakers whose careers are related to the Web Design 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 reviews Boolean web searching techniques with the assistance of Appendix 4.1.1.
- The teacher sets up a computer projection system, connects to the World Wide Web and shows the class exemplary sites and provides a format for making a good site.
- Students conduct an Internet search to select what they believe to be an excellent website.
 - Each student takes the class to the chosen website and discusses why he or she thinks the site is good.
 - This will lead to a discussion of content, use of design principles and the use of animated graphics and digital video, usefulness of informational content to a variety of end users, degree of interactivity, time efficiency, ease of use and industry standards in web design.
- Students rate their selected sites using the web evaluation sheet provided by the teacher. (Appendix 4.1.2)
- The teacher encourages attitudes and values founded on Catholic social teachings, which promote social responsibility, human solidarity, and the common good.
- Throughout this activity, 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.

Assessment & Evaluation of Student Achievement

- Diagnostic assessment of each student's use of research skills
- Personal communication by teacher-student conferencing
- Summative assessment of website selection and completion of the Web Evaluation Sheet (Appendix 4.1.2)

Accommodations

- The teacher should be acquainted with Individual Education Plans (IEPs) and students' unique learning characteristics in order to make the necessary accommodations for individuals.
- Exceptional students may be given appropriate timelines for completion.
- Provide peer tutoring for students who need extra assistance.
- Allow student-to-student discussion and teacher-to-student conferencing throughout the project.
- Provide peer tutors to assist students when handling equipment.
- For enrichment, students may present their analysis with the use of a presentation software or video that could include animated text and audio as a means to communicate the analysis.

Resources

General

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

Samples of student exemplars

Operating Instructions and Manufacturer's Equipment manuals

Computer Software user guides and tutorial exercises

Various samples of activity project work

The school library/resource centre

Print

Basch, Rena. *Researching Online for Dummies*. USA: IDG Books, 1998. ISBN 0-7645-0382-0.

Cadenhead, Rogers. *How To Use the Internet*. Indiana USA: Sams Publishing, 2001. ISBN 0-672-32215-3

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

Holden, Nancy and Lubka Willie. *KISS Guide to the Internet*. New York, USA: Dorling Kindersley, 2000. ISBN 0-7894-5980-9

Krebs, Gary. Fastread. *Internet*. USA: Adams Media Corp, 2001. ISBN 1-58062-511-8.

Nielson, Jakob, and Marie Tahir. *Homepage Usability: 50 Web Sites Deconstructed*. USA: New Riders Publishing, 2001. ISBN 0-73571102-X

Snell, Ned. *Teach Yourself the Internet In 24 Hours*. USA: Sams Publishing, 2000 ISBN 0-672-31966-7

Treleaven, Philip. *The E-Business Start-up Guide*: USA: Kogan Page, 2000. ISBN 0-74943145-8

Magazines

Yahoo! Internet Life. Publisher: Ziff-Davis Publishing Company.

Wired Magazine. Publisher: Conde Nast Publications Inc.

Websites

Canadian Film and Television Production Association – <http://www.cftpa.ca/>

Links to member sites for samples.

Fixing Your Websites – <http://www.fixingyourwebsite.com/>

A good source of web design information and links to other sources.

How Stuff Works – <http://www.howstuffworks.com/>

Information on the workings of the Internet, websites, etc.

Internet Explorer Home Page – <http://www.microsoft.com/windows/ie/default.asp>

Using Internet Explorer.

Netscape Navigator Tutorial:

The Browser – <http://www.cs.trinity.edu/~thicks/Communicator/Navigator1/>

Tutorials for Netscape Navigator.

The Professional Photographers of Canada (PPOC) – <http://www.ppoc.ca/>
Links to member sites for samples.

Society of Graphic Designers of Canada – <http://www.gdc.net/>
Links to member sites for samples.

University at Albany Library – <http://library.albany.edu/internet/>
Internet Tutorials.

Zen and the art of the Internet – http://www.cs.indiana.edu/docproject/zen/zen-1.0_toc.html
A Beginners Guide to the Internet.

Activity 4.2: “Making a Splash” – Animated Logo

Time: 5 hours

Description

Using web animation software, students create an animated logo for their splash page. Students import their previously created logo from Unit 2 or recreate a new logo using the software’s illustration tools. Animation concepts such as frame rate, key frames, tweened animation and frame-by-frame animation is reviewed. Vector images are compared with bitmap images with respect to the suitability of various file formats for the web, file size, image quality, and speed of downloading. The final animated logo is moved, scaled, and rotated to become a captivating element in the student’s web design. Students are encouraged to achieve excellence, originality, and integrity in their work and to support these qualities in the work of others.

Strand(s) & Learning Expectations

Ontario Catholic School Graduate Expectations

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

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

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.

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 challenges or problems in electronic, live, recorded, or graphic communications;

SPV.02 - set up, and function well in, an effective communications technology enterprise;

SPV.04 - develop and maintain systems that adhere to industry standards, and develop the means required to document activities using industry-standard formats;

SPV.05 - use language skills and artistic concepts effectively and apply scientific principles to develop solutions to communications problems.

Specific Expectations

SP1.01 - explain the activities associated with research and development: discovering a need, developing a product, and establishing specifications for improvement;

SP3.01 - produce, read, and interpret technical and artistic drawings, reports, instructions, scripts, manuals, online documentation, and specifications related to complex communications technology projects;

SP4.02 - apply artistic and aesthetic principles to designs related to communications projects;
TF1.02 - apply the following steps of the design process to solve a variety of communications technology challenges or problems;
TF2.01 - identify and describe current processes, methods of operation, materials, equipment, tools (including computers and peripherals), and components used to meet client needs;
TF2.03 - demonstrate an understanding of industry-standard electronic, live, recorded, or graphic communications systems;
TF3.02 - explain the conventions, formats, and specifications of industry-standard communications systems;
SP2.05 - apply design principles and elements to produce effective solutions in communications technology projects.

Prior Knowledge & Skills

- Basic computer literacy skills
- Basic animation concepts
- Understanding of desktop-publishing software
- Understanding of the principles of design and how they may be applied to the project

Planning Notes

- 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 are to observe copyright laws and use copyrighted materials correctly and ethically.
- The teacher implements their board's policies on appropriate use and access to Internet services.
- Students are expected to keep a daily log sheet recording brief notes of their accomplishments each day and outlining any future needs that this activity requires.
- The teacher provides overhead/handout/online resource for using web animation software.
- The teacher should choose a variety of websites that reflect the use of animated graphics.
- The teacher collects exemplary works of previous students.

Teaching/Learning Strategies

- The teacher creates a step-by-step tutorial, handout/online tutorial that demonstrates how to create frame-by-frame animations and tweened animations with the specific animation software.
 - Students work through the tutorial, guided by the teacher.
 - This is a good opportunity to review file formats and bitmap (pixel-based) images in relation to vector (math-based) graphics with respect to file size and image quality.
 - The teacher could have a series of similar images in a variety of formats, resolutions, colour limitations, and anti-aliasing that demonstrate how to reduce file size while optimizing quality necessary for the web.
- Students develop their own animations using their logo from Unit 2 or developing a new version.
 - If the student's original logo is a bitmap image it would be advisable to recreate the logo with - vector images. As another alternative, some web animation software has a trace bitmap function that will convert the image to a vector file format.
- Students present their completed animations to the class.
- Throughout this activity, 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.

Assessment & Evaluation of Student Achievement

- Diagnostic assessment of student's research skills, log/journal, and portfolio
- Diagnostic and Formative assessment by teacher-student conferencing
- Summative assessment of finished project (animated logo)
- Summative assessment of the concepts and techniques utilized in this activity

Accommodations

- Provide a pre-designed template for the presentation.
- For enrichment students can:
 - animate their logo to follow a complex guide path;
 - animate a symbol of their logo;
 - create a morphing, animated logo;
 - create three-dimensional animated logos.

Resources

General

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

Samples of student exemplars

Operating Instructions and Manufacturer's Equipment manuals

Computer Software user guides and tutorial exercises

Various samples of activity project work

The school library/resource centre

Print

Hillman, Curtis. *Flash Web Design – The Art of Motion Graphics*. Indianapolis, USA: New Riders, 2001. ISBN 0-7357-1098-8

Holbschlag, Molly. *Adobe Live Motion in 24 Hours*. Indianapolis, USA: Sams, 2001. ISBN 0-672-31916-0

Lentz, J. W., J. Lowery, and R. Reinhardt. *Dreamweaver and Flash Bible*. USA: Hungry Minds, 2001. ISBN 0-7645-4864-6

Lourekas, Peter and Elaine Weinmann. *Live Motion for Windows and Macintosh*. USA: Peachpit Press, 2000. ISBN 0-201-70473-0

Sahlin, Doug. *Flash 5 – Virtual Classroom*. Toronto, Canada: Mcgraw Hill, 2001. ISBN 0-07-213115-2

Schrand, Richard. *Live Motion – Visual Jump Start*. San Francisco, USA: Sybex, 2001. ISBN 0-7821-2848-3

Sullivan, Joe. *Flash 5 – Ten Minute Guide*. Indianapolis, USA: Que, 2001. ISBN 0-7897-2673-4

Non-print Materials

Projects in Flash 5: Volume I - Foundations of Animation & Interactivity, Jonathan Schnapp. February, 2001. VHS Tape. Running Time: 107 minutes. ASIN 0970868340

Understanding Motion Graphics, Victor Borna. March 1, 2000. VHS Tape. Run Time: 90 minutes. ASIN 0615114687

Websites

Adobe Systems Inc. – <http://www.adobe.com/>
Information and tutorials on Adobe Software.

Best Flash Animations – <http://www.bestflashanimationsite.com/>
Tutorials and articles on Flash animations with links to other sites.

Computer Arts – <http://www.computerarts.co.uk/tutorials/>

A source for animation tutorials, tips and tricks with good links to other sites.

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

Tutorials on Macromedia Flash.

Web Developer – <http://www.webdeveloper.com/design/>

Web design tips and tutorials

Webmonkey – <http://www.webmonkey.com>

Tutorials, tips, and articles on authoring, multimedia, design, Hypen Text Markup Language (HTML) and Java Script.

Activity 4.3: Virtual Reality on the Web

Time: 4 hours

Description

In this activity students have the choice of creating a virtual reality panorama movie or a virtual reality object movie that they will add to their website. (Panorama movies create the illusion that you are standing in the centre of a continuous 360-degree space that rotates when you drag the pointer around the movie. An object movie creates the illusion that you are rotating an object when you drag the pointer around the movie.) Students are responsible for the set up, maintenance, and safe use of all studio equipment. They take a series of digital photographs and “stitch” them together using a virtual reality software program. The images are appropriately blended and compressed to create an exciting multimedia addition to the website. Student must apply effective communication, problem-solving, and time-management skills necessary to share studio resources.

Strand(s) & Learning Expectations

Ontario Catholic School Graduate Expectations

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

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

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.

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

Overall Expectations

SPV.01 - work as an effective member of a team;

SPV.02 - set up, and function well in, an effective communications technology enterprise;

SPV.03 - use current technology and a variety of communications-related processes to create products that meet specifications determined by a client’s needs.

Specific Expectations

TF2.01 - identify and describe current processes, methods of operation, materials, equipment, tools (including computers and peripherals), and components used to meet client needs;

TF3.02 - explain the conventions, formats, and specifications of industry-standard communications systems;

SP1.05 - demonstrate communication, conflict resolution, time management, and goal-setting skills, as well as the ability to accept responsibility and to delegate tasks when appropriate;

SP1.06 - plan with team members to establish the order of operations; the availability of tools, parts, and equipment; scheduling requirements; and other information required to plan and prepare for the production process;

SP2.01 - set up and maintain a current electronic, live, recorded, or graphic communications system;

SP2.04 - design and produce a variety of communications projects that meet the demands of specific customers or markets;

SP2.05 - apply design principles and elements to produce effective solutions in communications technology projects;

SP2.08 - prepare, interpret, and follow work-related processes when maintaining communication components and systems;

SP2.09 - solve practical production problems in a variety of simulated workplace situations;

SP3.01 - produce, read, and interpret technical and artistic drawings, reports, instructions, scripts, manuals, online documentation, and specifications related to complex communications technology projects;

SP4.02 - apply artistic and aesthetic principles to designs related to communications projects;

IC2.01 - use safe work practices in the communications program.

Prior Knowledge & Skills

- Basic computer literacy skills
- Basic understanding of how to use a digital camera and how to import the digital images to the computer, acquired in Grade 11 Communications Technology TGJ3E – Workplace Preparation
- Understanding of the principles of design and how they may be applied to the project.

Planning Notes

- 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 are to observe copyright laws and use copyrighted materials correctly and ethically.
- The teacher implements board policies on appropriate use and access to Internet services.
- Students are expected to keep a daily log sheet recording brief notes of their accomplishments and outlining any future needs that this activity requires.
- The teacher provides overhead/handout/online resource for using a virtual reality (VR) software.
- The teacher may need to etch out a series of marks on a standard tripod head that denotes degrees of rotation if they do not already exist. This will be used for obtaining images when creating VR panoramas.
- The teacher may need to set up a series of identifiable floor marking or tape marks that denotes degrees of rotation with a centre point. This will be used for obtaining images for creating VR objects.
- The teacher may need to create an object rotation platform like a “Lazy Susan” complete with marks that denote degrees of rotation with a centre point. This is another alternative for obtaining images for creating VR objects.
- Since the set up for taking the digital images may be the most time consuming part of this activity, the teacher may wish to run Activity 4.2 and Activity 4.3 simultaneously to allow for a more efficient use of class time.
- The teacher collects a variety of websites that reflect the use of virtual reality movies.
- The teacher collects exemplary works of previous students.

Teaching/Learning Strategies

- The teacher introduces the project and initiates a discussion on what students think is meant by virtual reality.
 - Students are shown samples of exemplary virtual reality (VR) projects.
- Students decide whether to create an object or panorama movie. Objects can include the company's product/prototype, equipment, or a company member. Panoramas can include the company's studio/office or a circle of the company's members, products, or equipment.
- The teacher provides a step-by-step tutorial handout/online tutorial that demonstrates how to create VR movies with the specific VR software that the school is using.
 - The teacher leads the class through a step-by-step procedure of creating a VR panorama and - then VR object movie.
- The teacher reviews correct camera and equipment set-up with the students.
- The students develop their own VR projects.
- Students present their completed virtual reality movies to the class.
- Throughout this activity, 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.

Assessment & Evaluation of Student Achievement

- Diagnostic assessment of student's log/journal, and portfolio
- Summative assessment of finished project (Virtual Reality Movie)
- Summative assessment of the concepts and techniques utilized in this activity

Accommodations

- For enrichment students can create:
 - "hot spots" in their VR movie that link to other panorama or object movies;
 - a VR panorama walk through of the school or a part of the school such as the technology department;
 - a VR object movie of the school mascot;
 - an object rotation platform.

Resources

General

Teacher-developed resources including handouts, worksheets, and activity sheets
Samples of student exemplars
Operating Instructions and Manufacturer's Equipment manuals
Computer Software user guides and tutorial exercises
Various samples of activity project work
The school library/resource centre

Print

Letteiri, Robert and Judith Stern. *QuickTime for Macintosh and Windows*. USA: Peachpit Press, 2001. ISBN 0-201-74145-8

Rheingold, Howard. *Virtual Reality*. USA: Touchstone Books, 1998. ISBN 0671778978

Vince, John. *Essential Virtual Reality Fast: How to Understand the Techniques and Potential of Virtual Reality*. USA: Springer Verlag, 1999. ISBN 1852330120

Sherman, William and Alan Craig. *Working with Virtual Reality*. USA: Morgan Kaufmann Publishers, 2002. ISBN 1-55860353-0

Non-print Materials

Using Web TV and the Internet, Eric Gagnon. June 1, 1999. VHS Tape. Run Time: 145 minutes. ASIN 1884640257

Websites

Adobe Software – <http://www.adobe.com/products/atmosphere/>
VR program tutorials and information.

Apple Computer – <http://www.apple.com/quicktime/qtvr/>
VR program tutorials, examples, and information.

Out Side the Lines – <http://www.outsidethelines.com/EZQTVR.html>
VR program tutorials, examples, and information on how to create VRs without purchasing expensive equipment. Links to other VR sites.

QuickTime Virtual Reality – <http://www.qtvr-movie.com/>
QuickTime Virtual Reality examples.

International QuickTime VR Association – <http://www.iqtvra.org/>
QuickTime VR tutorials, examples and general news.

The VR Toolbox – <http://www.vrtoolbox.com/>
VR program tutorials, examples, and information.

Activity 4.4: Audio on the Web

Time: 4 hours

Description

Students design a series of sound effects for linking buttons and an audio introduction for their splash page that incorporates music and vocals. Students are exposed to a number of ways of sampling sound including downloading audio from the Internet, using a line-in and built in microphones, CD and DVD capture, and using software programs to create simple original scores and sound effects. Students select appropriate methods for creating/sampling audio and selecting sample rates, compression options, and file formats. Students are invited to discuss Christian values and how they relate to the ethics of sampling, downloading MP3s, and the subject matter of popular music.

Strand(s) & Learning Expectations

Ontario Catholic School Graduate Expectations

CGE1d - develops attitudes and values founded on Catholic social teaching and acts to promote social responsibility, human solidarity, and the common good;

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

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;

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

CGE3d - makes decisions in light of gospel values with an informed moral conscience;

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;

CGE7a - acts morally and legally as a person formed in Catholic traditions;

CGE7b - accepts accountability for one's own actions.

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 challenges or problems in electronic, live, recorded, or graphic communications;

TFV.03 - analyse and describe the effects of modifications on communications systems;

SPV.01 - work as an effective member of a team;

SPV.02 - set up, and function well in, an effective communications technology enterprise;

SPV.03 - use current technology and a variety of communications-related processes to create products that meet specifications determined by a client's needs.

SPV.04 - develop and maintain systems that adhere to industry standards, and develop the means required to document activities using industry-standard formats;

Specific Expectations

TF3.02 - explain the conventions, formats, and specifications of industry-standard communications systems;

SP1.05 - demonstrate communication, conflict resolution, time management, and goal-setting skills, as well as the ability to accept responsibility and to delegate tasks when appropriate;

SP2.01 - set up and maintain a current electronic, live, recorded, or graphic communications system;

SP2.04 - design and produce a variety of communications projects that meet the demands of specific customers or markets;

SP2.09 - solve practical production problems in a variety of simulated workplace situations;

SP3.01 - produce, read, and interpret technical and artistic drawings, reports, instructions, scripts, manuals, online documentation, and specifications related to complex communications technology projects.

Prior Knowledge & Skills

- Basic computer literacy skills
- Basic understanding of the proper and safe use of audio equipment acquired in Grade 11 Communications Technology TGJ3E – Workplace Preparation
- Basic understanding of the digital audio techniques acquired in Grade 11 Communications Technology TGJ3E - Workplace Preparation

Planning Notes

- 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 are to observe copyright laws and use copyrighted materials correctly and ethically.
- The teacher implements board policies on appropriate use and access to Internet services.
- Students are expected to keep a daily log recording brief notes of their accomplishments and outlining any future needs that this activity requires.
- The teacher provides overhead/handout/online resource for using audio software.
- The teacher should know ahead of time a variety of websites that reflect the use of audio.
- The teacher collects exemplary works by previous students.

Teaching/Learning Strategies

- Most web animation, web authoring, and video editing software packages have the ability to create and edit simple audio beats or compositions. This is not a music composition class. There are more sophisticated music software products on the market but they are not necessary for such a simple audio application.
- The teacher introduces the project and initiates a discussion about digital audio format.
- The teacher creates a series of step-by-step tutorial handouts or online tutorials that demonstrates:
 - how to create and save an original composition with the specific software;
 - the procedure for importing prerecorded audio from various sources.
- The students work through these tutorials with the teacher providing assistance when required.
- The following procedures should be included in the tutorial activities:
 - downloading audio files from the net, extracting audio from a compact disc (CD) or digital video device (DVD), recording from an internal or external microphone, digitizing other sources such as audio tape or long playing record (LP), importing files from a portable MP3 player, and using stock software sound effects;
 - reviewing file formats and sample rates with respect to sound quality and file size;
 - collecting a series of similar sounds in a variety of formats and sample rates that demonstrate how to reduce file size while optimizing quality necessary for the web.
- This is a good opportunity to invite students into a discussion on the ethics of sampling/appropriating music versus stealing, by considering Christian values and how they relate to the subject matter of popular music, and the ethics of downloading music from the Internet.
- Students develop their own audio sound effects and audio scores.
- Throughout this activity, 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.

Assessment & Evaluation of Student Achievement

- Diagnostic assessment of student's research skills, log/journal, software use, and portfolio
- Personal communication by teacher-student conferencing
- Summative assessment of finished project (button sound effects and splash page original audio score)
- Summative assessment of the concepts and techniques utilized in this activity

Accommodations

- For enrichment students can create audio files to enhance the school webpage

Resources

General

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

Samples of student exemplars

Operating Instructions and Manufacturer's Equipment manuals

Computer Software user guides and tutorial exercises

Various samples of activity project work

The school library/resource centre

Print

Albanese, Steve and Colin MacQueen. *Digital Audio Dictionary* (Book & CD edition). USA: Prompt Publications, 2000. ISBN 0-79061201-1

Broida, Rick and Dave Johnson. *MP3's and Digital Music*. Toronto, Canada: Osborne, 2002. ISBN 0-07219413-8

Beggs, J., D. Thede, and R. Koman. *Designing Web Audio*. USA: O'Reilly & Associates, 2001. ISBN 1-56592353-7

Coulter, Doug. *Digital Audio Processing*. USA: CMP Books, 2000. ISBN 0-87930566-5

Hedtke, John V. *MP3 and the Digital Music Revolution*. USA: Top Floor Pub, 1999. ISBN 0-96610324-6

Kim, James and Kris Kosach. *Digital Audio for the Desktop*. Indianapolis, USA: Que, 2001. ISBN 0-78972713-7.

Lindley, Craig A. *Digital Audio with Java* (Book & CD edition). USA: Prentice Hall, 1999. ISBN 0-13087676-3

Mosher, Mike. *Creating Web Graphics, Audio and Video Interactive Workbook*. USA: Prentice Hall PTR, 2001. ISBN 0-13086590-7

Pohlmann, Ken C. *Principles of Digital Audio*, 4th ed. USA: McGraw-Hill Professional Publishing, 2000. ISBN 0-07134819-0

Simpson, Ron. *Cutting Edge Web Audio*. USA: Prentice Hall PTR, 1999. ISBN 0-13080753-2

Solari, Stephen J. *Digital Video and Audio Compression*. USA: McGraw-Hill Professional Publishing, 1997. ISBN 0-07059538-0

Websites

Audio Engineering Society – <http://www.aes.org>

Source of audio information, industry standards, and links to other audio-related sites.

Audio Media On-Line – <http://www.audiomedia.com>

Articles, digital audio/video information, and links to other audio-related sites.

Berklee Press – <http://www.berklee.com>

Music sources, online articles and lessons. Links to other audio-related sites.

Canadian Musician – <http://www.canadianmusician.com>

Information on the Canadian music industry. Links to other audio-related sources.

Digital DIY – <http://www.symbiosis-music.com>

Information on digital recording equipment, MIDI instruments, sound effects units, editing, and CD mastering. Links to other related sources.

Electronic Music Interactive – <http://nmc.uoregon.edu/emi>

Information on the nature of sound, synthesis, and MIDI. Links to other audio-related sites.

MIDI-site – <http://www.midisites.com>

A search engine for MIDI sources and files on the Internet. Links to other audio-related sites.

Music and Audio Connection – <http://www.musicandaudio.com>

Information on education, artists, associations, music, and audio professionals. Links to other audio-related sources.

Reelworld – <http://www.reelworld-online.com>

Film music and related topics of interests for anyone interested in music for pictures. Links to other Audio sites.

Shareware Music Machine – <http://www.hitsquad.com/smm>

Audio shareware, freeware, and demos of MIDI sequencers, audio editors, and samples. Links to other audio-related sites.

Sounds Online – <http://www.soundsonline.com>

Free sounds as well as sample CDs and sound libraries. Links to other audio-related sites.

Activity 4.5: Website Assembly and Navigation

Time: 10 hours

Description

Using web-design software students construct a website for their communications venture. Students create a multi-page web design that utilizes a variety of linking techniques and concepts including internal/local/page links, external/remote/URL links, e-mail links, anchors, graphic links, image maps, radio buttons, frames, roll-overs, and forms. The site incorporates text, graphics, audio, virtual reality, animated logo, and digital video that they have created in previous activities and units. Students present their website to the class using the topics described in Activity 4.1 as a framework for discussion. The focus of this presentation is to convince the class that the site will successfully work as a marketing tool to attract new clients and as a tool to serve the needs of existing clients. The class integrates the Catholic faith tradition, in the critical analysis of the web design as an information system that will enhance the quality of life.

Strand(s) & Learning Expectations

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, and technology and information systems to enhance the quality of life;

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

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.

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

Overall Expectations

SPV.01 - work as an effective member of a team;

SPV.02 - set up, and function well in, an effective communications technology enterprise;

SPV.03 - use current technology and a variety of communications-related processes to create products that meet specifications determined by a client's needs.

Specific Expectations

SP2.01 - set up and maintain a current electronic, live, recorded, or graphic communications system;

SP2.03 - identify, select, and use the most appropriate equipment and processes when developing a solution to a communications problem;

SP2.04 - design and produce a variety of communications projects that meet the demands of specific customers or markets;

SP2.05 - apply design principles and elements to produce effective solutions in communications technology projects;

SP2.06 - apply current production skills safely and effectively in the development of a product or service;
SP2.08 - prepare, interpret, and follow work-related processes when maintaining communication components and systems;
SP2.09 - solve practical production problems in a variety of simulated workplace situations;
SP3.01 - produce, read, and interpret technical and artistic drawings, reports, instructions, scripts, manuals, online documentation, and specifications related to complex communications technology projects;
SP4.02 - apply artistic and aesthetic principles to designs related to communications projects;
SP4.03 - apply appropriate scientific principles (e.g., those related to light, colour, magnetism, electricity) in the design and production of communications technology systems;
IC2.01 - use safe work practices in the communications program.

Prior Knowledge & Skills

- Understanding the basics of colour theory and web safe colours
- Understanding of the basics of web designing and web design software
- Understanding of desktop-publishing software
- Understanding of composing and capturing still images
- Understanding of capturing and editing digital video
- Understanding of the principles of design and how they may be applied to the project
- Web browser skills/inquiry skills

Planning Notes

- 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 are to observe copyright laws and use copyrighted materials correctly and ethically.
- The teacher implements board policies on appropriate use and access to Internet services.
- Students are expected to keep a daily log sheet recording brief notes of their accomplishments and outlining any future needs that this activity requires.
- The teacher creates overhead/handout/online resource with the basics of Web Authoring and Design (HTML).
- The teacher creates tutorial handout/online tutorial that demonstrates:
 - the basics of the web authoring tools and methods for incorporating audio and motion graphics;
 - the techniques for interactivity such as the creation of online forms, guest books, surveys, quotes, and e-mail links to a web master.
- The teacher collects exemplary works of previous students to illustrate some of the techniques that have been used to develop a successful website.

Teaching/Learning Strategies

- The teacher introduces the project and stresses the importance of planning procedures for any production including a website.
- The teacher uses an existing website as an example and maps out a flowchart diagram on the board. At this time students are introduced to the appropriate graphic standards for flowcharting and laying out a webpage.
- The teacher hands out a page of flowchart/layout samples that reflect different styles of webpages.
- Students sketch a flowchart/blocking diagram that reflects the linking relationships of their website.
- Students create thumbnail sketches of each page of their multi-page website detailing the relative sizes of design elements and including notes where necessary.

-
- The teacher uses a projection system to:
 - review the basics of the web authoring tool and methods for incorporating audio, graphics and digital video;
 - demonstrate new techniques for interactivity, such as the creation of online forms, guest books, surveys, quotes, and email links to a web master.
 - Students work through teacher-designed exercises to familiarize themselves with these new processes.
 - The teacher provides students with a handout summarizing the features and steps of the software.
 - The teacher reviews audio, video, graphic, animation, compression and streaming software packages and the use of studio equipment.
 - Students keep a work log and portfolio throughout the development process and conference with the teacher to brainstorm suggestions for improving their site.
 - Students present their webpage to the class.
 - The teacher encourages attitudes and values founded on Catholic social teachings, which promote social responsibility, human solidarity, and the common good.
 - Throughout this activity, 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.

Assessment & Evaluation of Student Achievement

- Personal communication by teacher-student conferencing
- Formative assessment of checklists
- Formative assessment of worksheets
- Summative assessment of finished project (website sketch, computer-generated flowchart, individual page thumbnail sketches)
- Summative assessment of finished project (website)
- Summative assessment of the concepts and techniques utilized in this activity

Accommodations

- For enrichment, students may:
 - create a flowchart that reflects the school's existing website or create one that reflects a new or redesigned website;
 - scan their thumbnail sketches and insert them into an enlarged flowchart/blocking diagram and print out an oversized integrated planning document that can be used as a teaching resource;
 - use this technology to develop an entrepreneurial business for the community, for another subject area, or for the school;
 - design the framework for the school webpage if one does not exist or redesign/upgrade/update the existing school webpage;
 - design/program simple web applications that will perform tasks such as sorting survey information or calculate pricing quotes;
 - design a master home/splash page that organizes and provides links to the classes individual sites.

Resources

General

Teacher-developed resources including handouts, worksheets, and activity sheets
Samples of student exemplars
Operating Instructions and Manufacturer's Equipment manuals
Computer Software user guides and tutorial exercises
Various samples of activity project work
The school library/resource centre

Print

Aaland, Mikkel. *Photoshop for the Web*. USA: O'Reilly & Associates, 1999. ISBN 1565926412
Brisbin, Shelly. *Adobe Go Live 5*. California, USA: Peachpit Press, 2001. ISBN 0-201-70841-8
Cloninger, Kurt. *Fresh Styles for Web Designers*. Indiana USA: New Rider, 2001. ISBN 0-7357-1074-0
Dennis, Jones and Neil Randal. *Using FrontPage 2002*. USA: Que Corp, 2001. ISBN 07897-2512-6
Guidice, Maria and Anita Dennis. *Web Design Essentials*. USA: Peachpit Press, 2000. ISBN 0-201-70011-5
Hatfield, Bill. *ASP.net for Dummies*. USA: Hungry Minds, 2001. ISBN 0-7645-0866-0
Hyman, Michael. *Dynamic Html for Dummies*, 2nd ed. Toronto: Harper Collins Canada, 1998. ISBN 0-7645-0467-3
Kentie, Peter. *Web design Tools and Techniques*, 2nd Edition. USA: Peachpit Press, 2001. ISBN 0-201-71712-3
Lentz, J. W., J. Lowery, and R. Reinhardt. *Dreamweaver and Flash Bible*. USA: Hungry Minds, 2001. ISBN 0-7645-4864-6
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
Merritt, Susan and Jack Davis. *The Web Design Wow! Book*. USA: Peachpit Press, 1998. ISBN 0-201-88678-2
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
Williams, Robin and John Tollett. *The Non-Designer's Web Book*. USA: Peachpit Press, 2000. ISBN 0201710382
Williams, Robin. *Web Design Workshop*. USA: Peachpit Press, USA: 2001. ISBN 0-201-74867-3

Non-print Materials

No-Brainers on Creating Web Pages, No-Brainers et al, Cerebellum Corp. September 7, 1999. VHS Tape. Run Time: 52 minutes. ASIN 6305216223
Photoshop for the Web, David Biedny. March 24, 2000. VHS Tape. Run Time: 120 minutes. ASIN B00004SV2X

Websites

Apple Webpage Construction Site – <http://ali.apple.com/als/wpcs/>
Apple education site with web design tutorials and links to other sites.
Adobe Systems Incorporated – <http://www.adobe.com/>
Adobe software tutorials and links to other web design sites.

CNET Builder.com – <http://builder.cnet.com/webbuilding/0-3883-8-4892140-1.html>
Web Graphics 101, a series of web design tutorials.

Dream Ink – <http://www.dreamink.com/>
A web design site with tutorials, resources and links to other websites.

Elated – <http://www.elated.com/> – A website with tutorials, resources and links to other websites.

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

Macromedia – <http://www.macromedia.com/> – Tutorials on Macromedia web design software

Web Design – <http://www.design.ru/ttt/> – Brief tutorials on webpage design, layout and web graphics.

Web Developer – <http://www.webdeveloper.com/design/> – Web design tips and tutorials.

Website Tips – <http://www.websitetips.com/>
Provides HTML tutorials, graphics tutorials, articles, tips, information and resources.

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

Web Worker – <http://www.webworker.com> – Tips on starting an E-commerce website.

Activity 4.6: Maintaining the Site

Time: 4 hours

Description

This activity reinforces the concept that the Internet is a forum for two-way communication and that an effective website is not a stagnant end product. Students upload their web design and develop plans for updating and maintaining an active website. Other students in the class act as potential clients and attempt to get service through the websites. Response times and appropriateness of responses are documented and discussed. Students are reminded that they are responsible citizens who must respect and affirm the diversity and interdependence of the world's peoples and cultures and who must understand the history, cultural heritage, and pluralism of today's contemporary society.

Strand(s) & Learning Expectations

Ontario Catholic School Graduate Expectations

CGE2c - presents information and ideas clearly and honestly and with sensitivity to others;
CGE3d - makes decisions in light of gospel values with an informed moral conscience;
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;
CGE4b - demonstrates flexibility and adaptability;
CGE4d - responds to, manages, and constructively influences change in a discerning manner;
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;
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.

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

Overall Expectations

TFV.02 - identify the processes, concepts, materials, and components used in the development of a product or service;

TFV.03 - analyse and describe the effects of modifications on communications systems;

SPV.04 - develop and maintain systems that adhere to industry standards, and develop the means required to document activities using industry-standard formats.

Specific Expectations

TF2.01 - identify and describe current processes, methods of operation, materials, equipment, tools (including computers and peripherals), and components used to meet client needs;

SP2.02 - troubleshoot and repair communications systems;

SP2.08 - prepare, interpret, and follow work-related processes when maintaining communication components and systems;

SP3.02 - document and communicate the results of the design process, of diagnostic analysis, and of troubleshooting for various communications technology projects;

SP4.01 - use language effectively in presentations related to communications projects.

Prior Knowledge & Skills

- Basic computer literacy skills
- Understanding of the basics of web designing and web design software
- Understanding of the principles of design and how they may be applied to the project
- Web browser skills/inquiry skills
- Cooperative skills
- Organizational skills

Planning Notes

- 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 are to observe copyright laws and use copyrighted materials correctly and ethically.
- The teacher implements board policies on appropriate use and access to Internet services.
- Students are expected to keep a daily log recording brief notes of their accomplishments and outlining any future needs that this activity requires.
- The teacher creates overhead/handout/online resource summarizing the steps for uploading the websites. If security of school or school board computer network is an issue it is suggested that:
 - the teacher can be present to oversee the process and to key in passwords wherever necessary;
 - the creation of mini-networks for the posting of student created web sites within the communications facility may also be done as enrichment exercise;
 - students can also burn a copy of the web-design on a CD and upload it at home.
- The teacher locates professional websites that track the process and purpose of updating a particular website.
- The teacher provides 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. Where possible, arrange for appropriate speakers whose careers are related to the Web Design 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 reviews the methods for how and where to upload the student's websites.
(**Note:** there are a number of free providers that will allow the class to upload their website as a link to their home site.)
- The teacher provides students with a handout summarizing the steps for uploading the websites.
- Students upload their site.
- The teacher leads a class discussion on the importance of the website as a dynamic forum for interaction and the need to maintain/update the site. The class brainstorms a list of scenarios that would require the site to be updated.
- Students update their websites following requests/cues by the teacher role playing as a variety of possible end users. Such requests/cues/scenarios could include the following:
 - customer requests a quote for a customized product or service;
 - CEO orders a ten per cent increase in posted product or service costs;
 - designer wishes her latest product/service to be added to the website;
 - sales manager wants the home/splash page to be redesigned to include greater graphic content to give the site a fresh look and to attract new customers.
- Students use a work log and portfolio throughout the development process and conference with teacher to brainstorm suggestions for improving their site.
- The teacher encourages attitudes and values founded on Catholic social teachings, which promote social responsibility, human solidarity, and the common good.
- Throughout this activity, 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.

Assessment & Evaluation of Student Achievement

- Personal communication through teacher-student conferencing
- Performance assessment of finished project
- Summative assessment of the concepts and techniques utilized in this activity
- Paper-and-pencil unit test
- Unit test

Accommodations

- For enrichment, students may:
 - design/program simple web applications that will perform tasks such as sorting survey information or calculate pricing quotes;
 - redesign a master home/splash page that organizes and provides links to individual class sites.

Resources

General

Teacher-developed resources including handouts, worksheets, and activity sheets
Samples of student exemplars
Operating Instructions and Manufacturer's Equipment manuals
Computer Software user guides and tutorial exercises
Various samples of activity project work
The school library/resource centre

Print

Andres, Clay. *Web Architecture Studio Secrets*. USA: IDG books Worldwide. 1999. ISBN 0-76453246-4

Boiko, Bob. *Content Management Bible*. USA: Hungry Minds, Inc., 2001. ISBN 0-76454862-X

Burdman, Jessica. *Collaborative Web Development: Strategies and Best Practices for Web Teams*. USA: Addison-Wesley Pub Co, 1999. ISBN 0-20143331-1

Das, Sumi and Tom Merritt. *How to Build a Web Site*. USA: Que Corp, 2000. ISBN 0-78972666-1

Goto, Kelly and Emily Cutler. *Web Redesign/Workflow That Works*. Indiana USA: New Rider, 2001. ISBN 0-73571062-7

Nakano, Russell. *Web Content Management*. USA: Addison-Wesley Publishing, 2001. ISBN 0-20165782-1

Nielson, Jakob. *Designing Web Usability: The Practice of Simplicity*. USA: New Riders Publishing, 1999. ISBN 1-56205810-X

Schwartz, Evan. *Webonomics: Nine Essential Principles for Growing Your Business on the World Wide Web*. USA: Broadway Books, 1998. ISBN 0-55306172-0

Siegal, David. *Secrets of Successful Web Sites: Project Management on the World Wide Web*. USA: Hayden Books, 1998. ISBN 1-56830382-3

Spainhour, Stephen and Robert Eckstein. *Webmaster in a Nutshell*, 2nd Edition. USA: O'Reilly & Associates, 1999. ISBN 1-56592325-1

Websites

Ahref.com – <http://www.ahref.com/>

ahref.com is a “community space for web developers,” a site devoted to the professional needs of the web development community. A source for web development and maintenance information with links to other good sites.

Go To Media – <http://www.gotomedia.com/iceland/usability/intro/intro1.html>

A tutorial on website usability testing.

In Stone – <http://instone.org/keith/howtotest/introduction.html>

Usability testing on a website – an introduction to the basic concepts.

Usable Web – <http://www.usableweb.com/>

A collection of links about information architecture, human factors, user interface issues, and usable design specific to the World Wide Web.

Appendix 4.1.1

Boolean Searching on the Internet

A Primer in Boolean Logic

The Internet is a vast computer database. As such, its contents must be searched according to the rules of computer database searching. Much database searching is based on the principles of Boolean logic. Boolean logic refers to the logical relationship among search terms, and is named for the British mathematician George Boole.

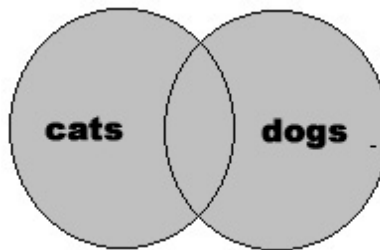
On Internet search engines, the options to construct logical relationships among search terms extend beyond the traditional practice of Boolean searching. This will be covered in the section below, Boolean Searching on the Internet.

Boolean logic consists of three logical operators:

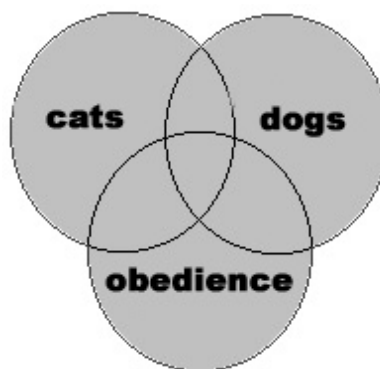
- **OR**
- **AND**
- **NOT**

We will use the key words “Cats,” “Dogs,” and “Obedience” to demonstrate the number of hits we get in response to the use of the above three logical operators. The grey shaded area represents the sites that will be retrieved by the search engine.

- **OR** (retrieves sites from all key words and expands the search)



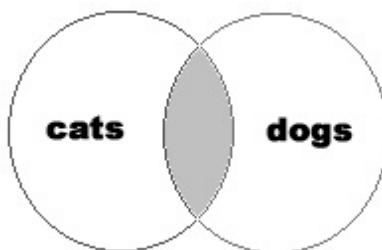
Search for “cats OR dogs”



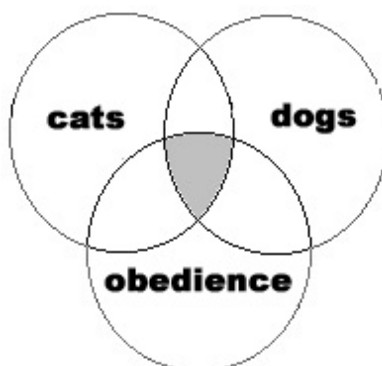
Search for “cats’ OR “dogs” and “obedience”

Appendix 4.1.1 (Continued)

- **AND** (only retrieves sites where all key words are present together and restricts the search)

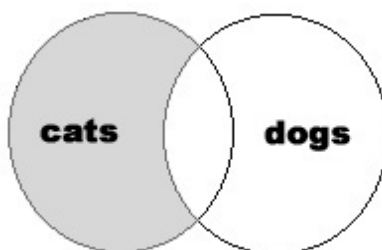


Search for "cats" AND "dogs"



Search for "cats" AND "dogs" and "obedience"

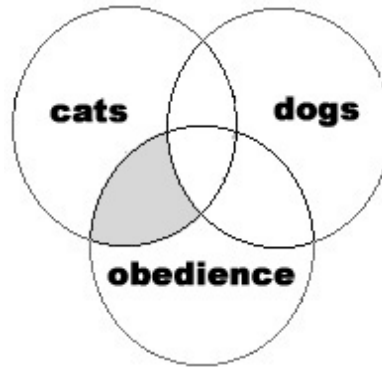
-
- **NOT** (only retrieves sites where one key word is present without the second key word and restricts the search. Some search engines require you to type AND NOT together rather than just NOT)



Search for "cats" NOT "dogs"

Appendix 4.1.1 (Continued)

- Combination searches can customize search using multiple operators



Search for “cats” NOT “dogs” AND “obedience”

-
- **NEAR** is another lesser used operator that determines the closeness of terms within a source document. Each search engines sets different parameters for NEAR – it could be ten words or twenty words.
-

Implied Boolean Logic With Keyword Searching

Keyword searching refers to a search type in which you enter terms representing the concepts you wish to retrieve. Boolean operators are not used.

Implied Boolean logic refers to a search in which symbols are used to represent Boolean logical operators. In this type of search on the Internet, the absence of a symbol is also significant, as the space between keywords defaults to either OR logic or AND logic.

+ symbol usually reflects AND Boolean logic

- symbol usually reflects NOT Boolean logic and

no symbol usually reflects OR Boolean logic

Implied Boolean logic has become so common in Web searching that it may be considered a de facto standard.

Implied Boolean Logic With User Fill-in Templates

Many search engines offer a search template which allows the user to choose the Boolean operator from a menu. Often the logical operator is expressed with substitute language such as “Any of these words” (OR), “All of these words” (AND), and “Must not contain the words” (NOT).

Read the Specific Directions of Each Search Engine

Every search service has tips and tricks and detailed information for their site. For instance some services will provide different results when you use capital initial letters on key search terms. Some need quotation marks to specify words that must be next to each other and some use brackets and parenthesis.

Appendix 4.1.1 (Continued)

Where to Search – a Selected List

Feature	Search Engine
Boolean operators	AltaVista Advanced Search C4 Dogpile Excite HotBot HotBot SuperSearch Ixquick Metasearch Northern Light ProFusion WebCrawler
Full Boolean logic with parentheses, e.g., behavior and (cats or dogs)	AltaVista Advanced Search C4 Excite HotBot HotBot SuperSearch Ixquick Metasearch MSN Search Advanced Search Northern Light
Implied Boolean +/-	Most search engines offer this option
Boolean logic by template terminology	AllTheWeb Search Advanced Search AOL.COM Search Options Fossick HotBot SuperSearch Lycos Pro MSN Search Advanced Search SavvySearch Snoopa

Appendix 4.1.2

Webpage Evaluation Sheet

(Circle the appropriate mark to the right of the topic.)

Content

/20 marks

- | | | | | | |
|---|---|---|---|---|---|
| 1. Body copy is brief, clearly written, and to the point. | 1 | 2 | 3 | 4 | 5 |
| 2. Complete with title, introductory “hook” and subject headings. | 1 | 2 | 3 | 4 | 5 |
| 3. Language appropriate for target audience. | 1 | 2 | 3 | 4 | 5 |
| 4. Grammar and spelling | 1 | 2 | 3 | 4 | 5 |

Graphics and Layout

/20 marks

- | | | | | | |
|--|---|---|---|---|---|
| 1. Adherence to the Principles of Design (balance, rhythm, contrast, emphasis, variety, unity) | 1 | 2 | 3 | 4 | 5 |
| 2. Use of Different Media (animated graphics, video, audio, VR, etc.) | 1 | 2 | 3 | 4 | 5 |
| 3. Efficient Download Time (adequate graphic file size, options for resolution) | 1 | 2 | 3 | 4 | 5 |
| 4. Usefulness of Graphics/Media (Do they add to the experience or simply bog down the site?) | 1 | 2 | 3 | 4 | 5 |

Navigational Design

/20 marks

- | | | | | | |
|---|---|---|---|---|---|
| 1. Ease of use. Simple to find information. | 1 | 2 | 3 | 4 | 5 |
| 2. Degree of interactivity (e-mail links, forms, games, place for posting messages, etc.) | 1 | 2 | 3 | 4 | 5 |
| 3. Variety of linking techniques – internal and external. | 1 | 2 | 3 | 4 | 5 |
| 4. Consistency of design and placement of linking types (e.g., Blue text links, similar buttons that return reader to the top of the page, frames, text on buttons when necessary, etc.). | 1 | 2 | 3 | 4 | 5 |

/ 60 marks total