

York Region District School Board - King City Secondary School

Grade 12 Communication Technology

Course Type: University/College Preparation

Course Code: TGJ3M

Credit Value: 1.0 Credit

Prerequisite/co-requisites: TGJ2O - Grade 10 Communications Technology

Ministry Guidelines: The Ontario Curriculum
Grades 11 and 12
Technological Education 2009



Major Resources: www.youtube.com
www.michaelsharris.com
www.google.com

Written: October 2009

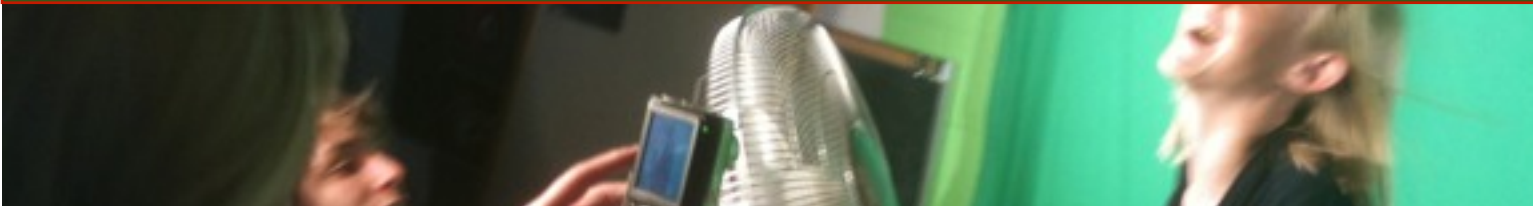
RATIONALE

This course examines communications technology from a media perspective. Students will develop knowledge and skills as they design and produce media projects in the areas of live, recorded, and graphic communications. These areas may include TV, video, and movie production; radio and audio production; print and graphic communications; photography; digital imaging; broadcast journalism; and interactive new media. Students will also develop an awareness of related environmental and societal issues, and will explore college and university programs and career opportunities in the various communications technology fields.

OVERALL EXPECTATIONS

This course is divided into 4 strands as follows:

- Communications Technology Fundamentals
- Communications Technology Skills
- Technology, the Environment, and Society
- Professional Practice and Career Opportunities



The overall and specific expectations for each of the strands of this course are as follows:

A. COMMUNICATIONS TECHNOLOGY FUNDAMENTALS.

OVERALL EXPECTATIONS

By the end of this course, students will:

- A1. demonstrate an understanding of the core concepts, techniques, and skills required to produce a range of communications media products and services;
- A2. demonstrate an understanding of different types of equipment and software and how they are used to perform a range of communications technology operations and tasks;
- A3. demonstrate an understanding of technical terminology, scientific concepts, and mathematical concepts used in communications technology and apply them to the creation of media products;
- A4. demonstrate an understanding of and apply the interpersonal and communication skills necessary to work in a team environment.

SPECIFIC EXPECTATIONS

A1. Core Concepts, Techniques, and Skills

By the end of this course, students will:

- A1.1 demonstrate an understanding of design principles (e.g., balance, rhythm, proportion, contrast, and flow) and elements (e.g., colour, line, space, form, and texture) and their role in creating effective media products (e.g., use of colour in photography, balance in a layout, continuity in an audio or video production, proportion and contrast in typography);
- A1.2 demonstrate an understanding of the concepts (e.g., video and photography composition, appropriate audio levels, audio and video continuity, animation fluidity, balanced layout, basic lighting) and creative techniques (e.g., lighting, image manipulation and editing, composition and framing) required to produce effective media products or services;
- A1.3 identify the components of a communications system (e.g., cameras, lenses, filters, editing software, printer in a photographic system; microphones, connectors, mixers, recorders in an audio system; desktop publishing software and platesetter in a computer-to-plate system) and describe their functions;
- A1.4 identify different types of communications software (e.g., software for photo, audio, and video editing, animation, page layout, web page creation, and computer graphics), and describe how they are used to produce communications technology products and services.

A2. Equipment and Software

By the end of this course, students will:

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A2.1 identify the components and controls of different types of communications devices (e.g., lens, mirror, sensor, command dial, mode selector in a digital SLR; plate cylinder, blanket cylinder, impression cylinder, ink keys in an offset press) and describe their functions;

A2.2 use application software and/or equipment competently to perform a variety of communications tasks (e.g., inputting, manipulating, and outputting sounds and images; embedding and linking graphics in an interactive portable document; posting media on the Internet).

A3. Technical Terminology and Scientific and Mathematical Concepts

By the end of this course, students will:

A3.1 demonstrate an understanding of communications technology terms, and use them correctly in oral and written communication (e.g., kerning, framing, key frame, jump cut, peaking, video switching, audio levels, dissolve, resolution, masking, file management, storyboard);

A3.2 demonstrate a basic understanding of scientific concepts that relate to processes and technologies used in communications technology (e.g., light and colour theory, acoustic theory, persistence of vision, sensor operation);

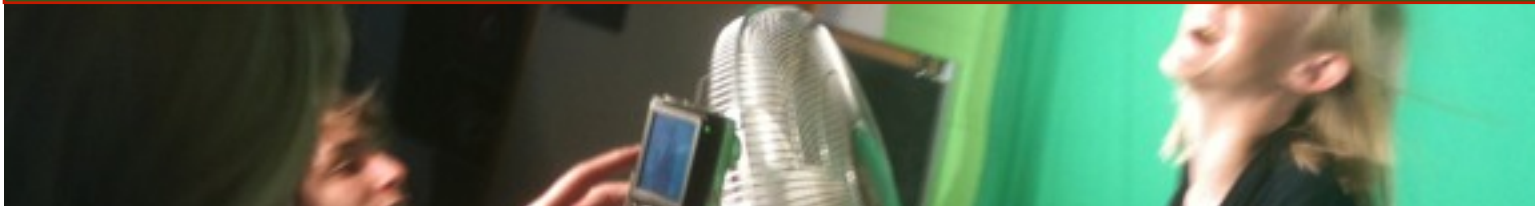
A3.3 use appropriate formulas and calculations to solve problems in pre-production, production, and post-production work (e.g., calculating frame rates, timelines, resolutions, file compression ratios, scaling).

A4. Teamwork

By the end of this course, students will:

A4.1 explain the benefits of listening, encouraging participation, and sharing information, resources, and expertise when working in a team setting;

A4.2 describe and apply concepts and techniques that facilitate effective collaboration in a team environment (e.g., cooperative discussion, conflict resolution techniques, providing opportunities for all to participate, listening, respecting the ideas of others, constructive criticism).



B. COMMUNICATIONS TECHNOLOGY SKILLS

OVERALL EXPECTATIONS

By the end of this course, students will:

- B1. apply project management techniques to develop communications technology products effectively in a team environment;
- B2. apply a design process or other problem-solving processes or strategies to meet a range of challenges in communications technology;
- B3. create productions that demonstrate competence in the application of creative and technical skills and incorporate current standards, processes, formats, and technologies.

SPECIFIC EXPECTATIONS

B1. Project Management

By the end of this course, students will:

- B1.1 describe the roles that are required for effective management of team-based projects (e.g., scheduler, budget controller, secretary/coordinator) and apply coordination techniques (e.g., meeting regularly to review progress and make decisions, forming task groups to deal with special issues);
- B1.2 use a variety of planning techniques and tools (e.g., research, design briefs, task lists, scripts, mock-ups, storyboards, site maps, project-planning software) when creating plans for communications projects;
- B1.3 use appropriate organizational and time-management tools (e.g., student planners, journals, electronic organizers, organizational software) throughout the project to manage resources and ensure that project deadlines are met;
- B1.4 use a variety of techniques (e.g., comparing outcomes to specifications) to evaluate the results of the project management process.

B2. Problem Solving

By the end of this course, students will:

- B2.1 define a problem or challenge precisely and in adequate detail, taking into account relevant contextual or background information;
- B2.2 define project objectives and performance criteria precisely and in adequate detail, and identify constraints such as cost, time, or technology restrictions that will limit design or problem-solving options;

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B2.3 use a variety of information sources and research techniques to help identify possible solutions (e.g., Internet and library searches, checking manuals and other printed materials, consulting experts);

B2.4 use idea-generating techniques such as brainstorming or clarification techniques such as situation analyses to help identify possible solutions;

B2.5 use charts or hand-drawn sketches to organize sequences, clarify relationships, or compare alternatives;

B2.6 evaluate possible solutions to identify those that most effectively meet the objectives and criteria within the existing constraints.

B3. Process and Production Skills

By the end of this course, students will:

B3.1 use appropriate procedures to set up and operate media production equipment (e.g., audio, video, or graphic systems; studio lighting systems; electronic pre-press equipment; printing systems);

B3.2 use appropriate software applications (e.g., computer graphics, photo editing, video editing) to complete a variety of tasks associated with designing communications media;

B3.3 demonstrate an understanding of industry guidelines, conventions, rules, and standards and apply them to the production of communications media products (e.g., standards for legibility, type measurement, and letter spacing in graphic design; video resolution standards [standard versus high definition] and colour standards[NTSC versus ATSC] for TV; colour proofing guidelines for printing; resolution, readability, file size, browser compatibility, and accessibility standards for websites).



C. TECHNOLOGY, THE ENVIRONMENT, AND SOCIETY

OVERALL EXPECTATIONS

By the end of this course, students will:

- C1. describe the impact of current communications media technologies and activities on the environment and identify ways of reducing harmful effects;
- C2. demonstrate an understanding of the social effects of current communications media technologies and the importance of respecting cultural and societal diversity in the production of media projects.

SPECIFIC EXPECTATIONS

C1. Technology and the Environment

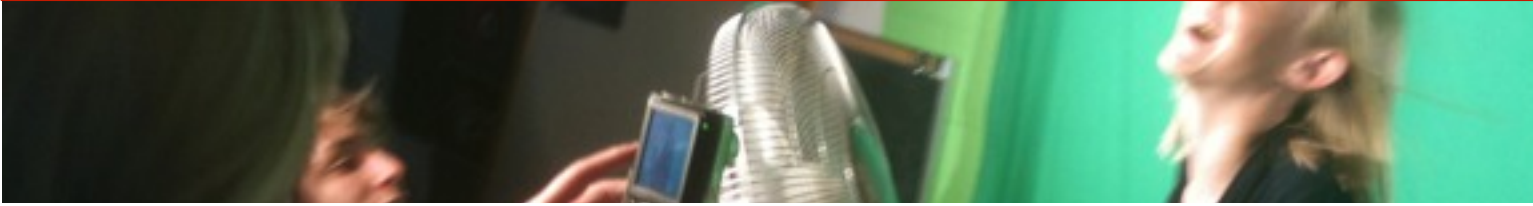
By the end of this course, students will:

- C1.1 describe the impact of current communications media technologies on the environment (e.g., increased energy consumption, disposal of electronic equipment and batteries, noise pollution, electromagnetic interference, RF pollution, chemical and other wastes associated with paper production);
- C1.2 describe environmentally responsible practices that can be used to reduce the impact of communications technologies on the environment (e.g., recycling or finding new uses for obsolete equipment, disposal of batteries as toxic waste, using energy-efficient equipment and turning off equipment that is not being used, recycling of toner cartridges, use of recycled paper).

C2. Technology and Society

By the end of this course, students will:

- C2.1 demonstrate an understanding of social standards and cultural sensitivity and use appropriate and inclusive content, images, and language in communications media productions (e.g., including people from different races, cultures, and backgrounds in media productions; portraying minority groups with respect and sensitivity; avoiding sexism, homophobia, and cultural or racial bias);
- C2.2 describe the effects of current trends in communications technology (e.g., interactivity, on-demand programming, user-generated content, specialty channels such as the Aboriginal Peoples' Television Network) on society and different cultures within society.



D. PROFESSIONAL PRACTICE AND CAREER OPPORTUNITIES

OVERALL EXPECTATIONS

By the end of this course, students will:

- D1. demonstrate an understanding of and apply safe work practices when performing communications technology tasks;
- D2. demonstrate an understanding of and adhere to legal requirements and ethical standards relating to the communications technology industry;
- D3. identify careers in communications technology for which postsecondary education is required or advantageous, and describe college and university programs that prepare students for entry into these occupations.

SPECIFIC EXPECTATIONS

D1. Health and Safety

By the end of this course, students will:

- D1.1 describe industry hazards (e.g., ergonomic hazards, electrical hazards, mechanical hazards), identify sources of hazard information (e.g., Workplace Hazardous Materials Information System [WHMIS], Passport to Safety), and describe methods of preventing accidents (e.g., safety audits, regular retraining in safety procedures);
- D1.2 demonstrate an understanding of and apply safe work practices when performing communications technology tasks (e.g., use of safe procedures for lighting set-up, cable management, computer operation, and ladder use; use of ergonomic equipment and practices).

D2. Professional Standards and Ethics

By the end of this course, students will:

- D2.1 demonstrate an understanding of and adhere to laws applicable to creative content (e.g., laws governing copyright and other creative property rights, domain names, privacy, defamation);
- D2.2 describe privacy and security issues related to the use of communications media technology;
- D2.3 demonstrate an understanding of and adhere to ethical standards relating to the creation of media products (e.g., restrictions on appropriation of content and image manipulation) and to their dissemination (e.g., honesty in advertising).

D3. Career Opportunities

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By the end of this course, students will:

D3.1 describe careers in communications technology for which postsecondary education is required or advantageous, and identify the qualifications required for entry into these occupations;

D3.2 describe university and college programs that prepare students for careers in communications technology, and identify the qualifications required for entry into these programs;

D3.3 identify groups and programs that are available to support students who are interested in pursuing non-traditional career choices in the communications technology industry (e.g., mentoring programs, virtual networking/support groups, specialized postsecondary programs, relevant trade/industry associations);

D3.4 demonstrate an understanding of and apply the Essential Skills that are important for success in the communications technology industry, as identified in the Ontario Skills Passport (e.g., reading text, oral communication, job task planning and organizing, problem solving, finding information);

D3.5 demonstrate an understanding of and apply the work habits that are important for success in the communications technology industry, as identified in the Ontario Skills Passport (e.g., working safely, teamwork, reliability, initiative, customer service, entrepreneurship);

D3.6 maintain an up-to-date portfolio that includes pieces of work and other materials that provide evidence of their skills and achievements in communications technology (e.g., work logs, skills checklist, photographs, digital media, sketches, drawings), and explain why having a current portfolio is important for career development and advancement.

**UNITS OF STUDY**

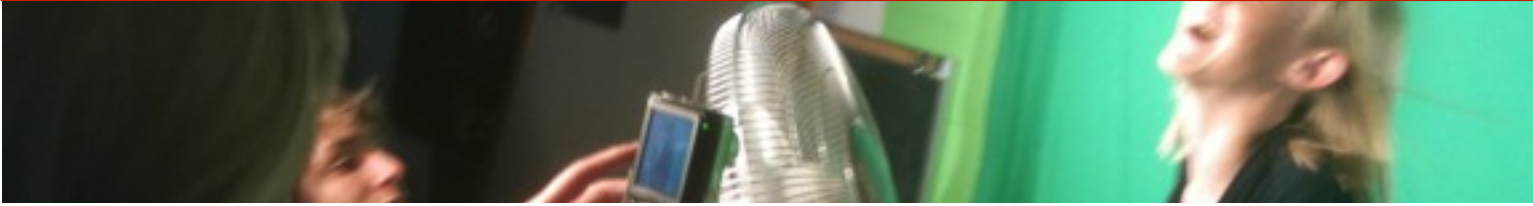
UNIT #	UNIT TITLE	DURATION
1	Getting Started in Web Design & Technology	___ Hrs
2	Graphic Design & Print	___ Hrs
3	Videography	___ Hrs
4	Digital Photography	___ Hrs
5	Animation	___ Hrs

EVALUATION AND REPORTING OF STUDENT ACHIEVEMENT

PERCENTAGE GRADE RANGE	UNIT TITLE	DURATION
80 - 100 %	Level 4	A very high to outstanding level of achievement. Achievement is above the provincial standard.
70 - 79 %	Level 3	A high level of achievement. Achievement is at the provincial standard.
60 - 69 %	Level 2	A moderate level of achievement. Achievement is below, but approaching, the provincial standard.
50 - 59 %	Level 1	A passable level of achievement. Achievement is below the provincial standard.
Below 50 %		Insufficient achievement of curriculum expectations. A credit will not be granted.

Level 3 (70-79%) is the provincial standard. Teachers and parents can be confident that students who are achieving at level 3 are well prepared for work in the next grade or next course.

The final grade for this course will be determined as follows: Seventy per cent of the grade will be based on evaluations conducted throughout the course.



COURSE EVALUATION

RATIONAL

The communications technology program is a dynamic project driven course of study as such the course evaluation will give greatest credit to projects that students complete.

Since students have an opportunity to improve their skills as the course unfolds there will be a higher weighting given to assignments as semester progresses.

FINAL EVALUATION BREAKDOWN

ASSESSMENT CATEGORY	METHODS OF ASSESSMENT	WEIGHT
KNOWLEDGE/UNDERSTANDING	Tests & Quizzes	10%
COMMUNICATIONS	Proofs Dialogue Directory	5%
APPLICATIONS	Projects	65%
FINAL ASSESSMENT	Portfolio	20%

SHORT TESTS

Short tests will be given that will test students on some of the theoretical aspects of this technology.

PROOFS

Proofs that indicate work is past the preproduction stage are often given an evaluation of smaller weighting.

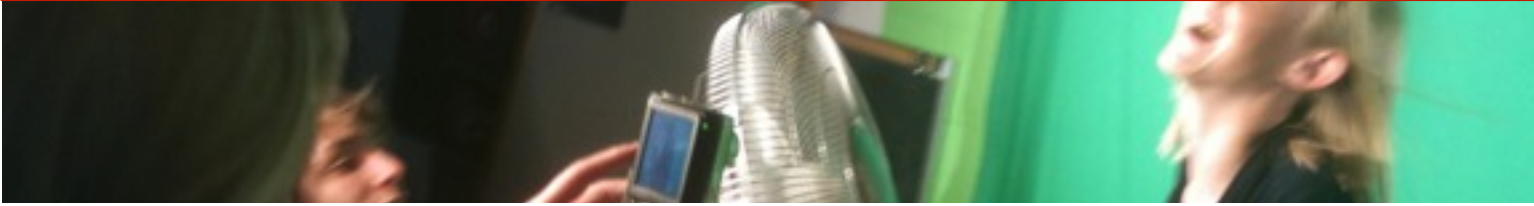
PORTFOLIOS

Portfolios As it is important for students in this field to be able to present their work effectively, a final summative task of creating an electronic portfolio of their work will be undertaken by each student at the end of the semester and will comprise the final evaluation. Students at KCSS are using their online portfolios as part of their resumes when applying to post secondary institutes and are receiving great feedback!

MAJOR TEACHER RESOURCES

www.michaelsharris.com

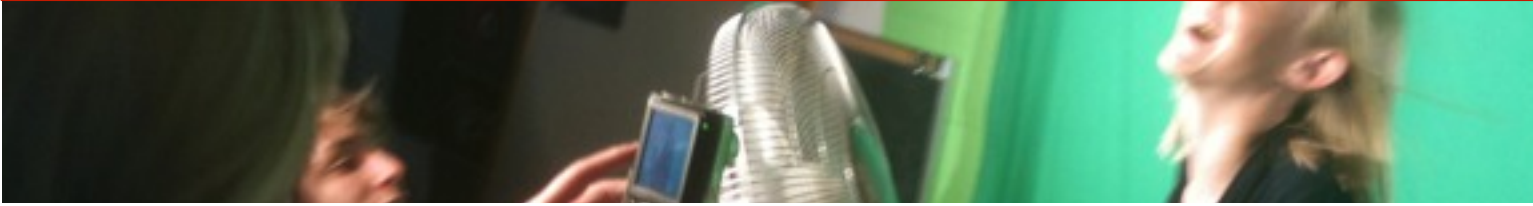
www.youtube.com - www.google.com



DUE DATES

Deadlines are meant to encourage students to make mature decisions about their work ethic and time management - we all lead busy lives and face numerous demands upon our time.

1. If the student has not handed in work by the assigned date, they have missed the opportunity to do so and the mark will be a zero for that assignment.
2. The student may submit their work prior to the due date to have the teacher assess and provide feedback. This provides the opportunity to revise and resubmit work by the due date and in order to improve the student's grade.
3. Assignments are due at the beginning of class on the due date. Absence is not an excuse for late submissions. If the work is done, the student should send it with a friend or relative, or submit it electronically to their teacher.
4. All rough work should be available to the teacher upon request.
5. **Extensions** of due dates are available to the individuals who show a good work ethic in class. If the student is not able to meet a due date it is their responsibility to speak with their teacher, at least one day before the due date, so that an extension can be arranged. There will be no extensions granted the day assignments are due.
6. Late assignments may be graded, or marked only as complete.
7. Assignments submitted after class work has been returned will not be graded.

**UNIT #1****GETTING STARTED IN WEB DESIGN AND TECHNOLOGY**

TIME: ____ Hrs.

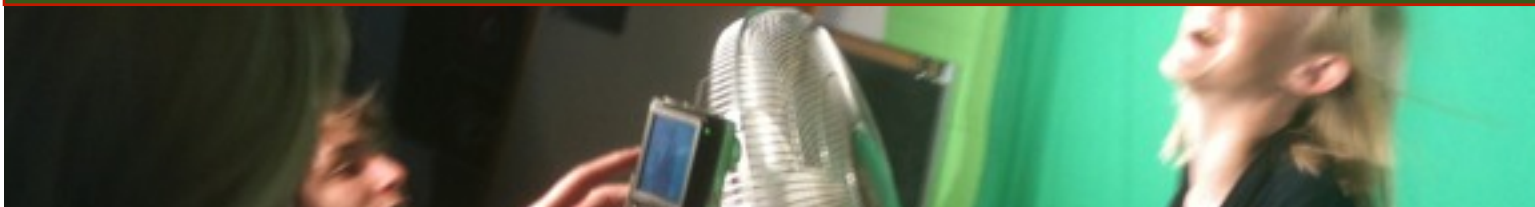
Description: By the end of this unit, students in this intermediate course are expected to understand and imply the technical aspects of creating, and maintaining a website. Students are expected to understand the mechanics behind FTP (File transfer protocol) software and utilize it on a daily basis to maintain and upkeep their website. Proper usage of meta-tags to market their websites, and attract attention via search engines like www.google.com or www.bing.com. They will also learn how to properly. This unit will have a small focus on file types, and proper usage of of them to ensure a fast loading, aesthetically appealing website. They are also expected to understand file structure, types, and organizational methods to keep their websites in proper working order. Students will be constructing a Tech Report that will be utilizing their web design skills. They will demonstrate their ability to create hyperlinks, embed youtube videos, create gradient images, and basic buttons.

Unit	Overall Expectations	Focus	Assessment
Unit 1		Creation of a web domain and hosting account. Setting up your account on an F.T.P. program (such as Dreamweaver) to transfer content to your website. GIF, PNG & JPG file types, and when to use them. Understand basic button functions. Utilize basic planning skills to assure deadlines are met, and proper planning is done.	Application Communication Knowledge/ Understanding Thinking/Inquiry

Formative: Teacher Observation

Summative: Unit Assignment

Hands on performance tasks

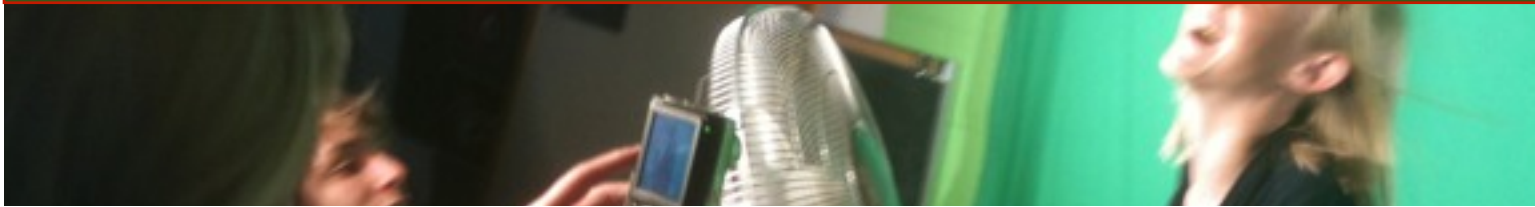
**UNIT #2****GRAPHIC DESIGN AND PRINTING**

TIME: ____ Hrs.

Description: This unit outlines the basic design skills. Focus will be laid on advancing existing photoshop skills, and transitioning students skills from Photoshop Elements to the industry standard Photoshop CS3. This unit consists of 4 projects. Each project will assist students in understanding the many tools that Adobe Photoshop has to offer, and will help them with later units. The first of the projects called “Poetic Vision” where students required to create an image that relates to a song/poem of their choice. This project allows them to use full creative license and experiment with all the tools to achieve their desired design. The next project, a restaurant menu, is print based, and will also be designed in Photoshop CS3. The menu requires the students to apply their newly acquired photoshop skills, and create a professional looking menu for their restaurant. This projects key focus is on branding, and applying design themes. The last 2 projects are the T-Shirt iron on, and button production. Students are asked to create a design, and stay within the production guidelines laid out to ensure that their finished product is easily transferable from the computer screen to the button/fabric medium without image loss.

Unit	Overall Expectations	Focus	Assessment
Unit 2		Pre production planning Migrating Photoshop Elements skills to Adobe PhotoshopCS3 Photoshop CS3 tools. Photoshop filters and effects. Corporate/business branding. Emphasis on layout Production skills.	Application Communication Knowledge/ Understanding Thinking/Inquiry

Formative: Practical Tasks
 Teacher Observation
 Hands on performance tasks
Summative: Unit Assignment

**UNIT #3****VIDEOGRAPHY**

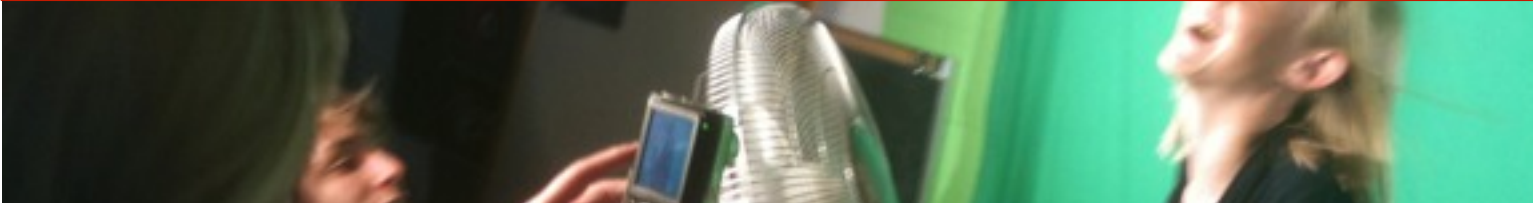
TIME: ____ Hrs.

Description: This unit's focus on videography encompasses a wide spectrum of skill sets. Successful completion of this unit requires the students to produce and submit a 30 second commercial for their restaurant (same restaurant as the one they created a menu for). In order to complete this project, students must first complete the following required tasks. Create a script, practice acting, assure that proper lighting is in effect, record scenes, import clips to Adobe Premiere Elements, edit, and submit.

This video project will ensure that students understand the core concepts of video production.

Unit	Overall Expectations	Focus	Assessment
Unit 3		Video Pre Production Video Recording Media Storage Video Manipulation TV ready format exporting.	Application Communication Knowledge/ Understanding Thinking/Inquiry

Formative: Practical Tasks
 Teacher Observation
 Hands on performance tasks
Summative: Unit Assignment

**UNIT #4****DIGITAL PHOTOGRAPHY**

TIME: ____ Hrs.

Description: This unit focuses on the photography production, and photo manipulation. Students will be using various programs in this unit. All basic editing will be done in Adobe Photoshop CS3. The three projects that students will be expected to complete are the Halloween scene, the Mini Me manipulation, and the Day in the life project.

The “Halloween” project requires students to photograph themselves, and manipulate their image so that they resemble a scary halloween creature. Student use tools like the Liquify, and the Stamp tool, which allows them to distort images into any shape or form allowing for full creativity. This projects scope is to allow students to use full creative license, while exploring the various tools available in Photoshop.

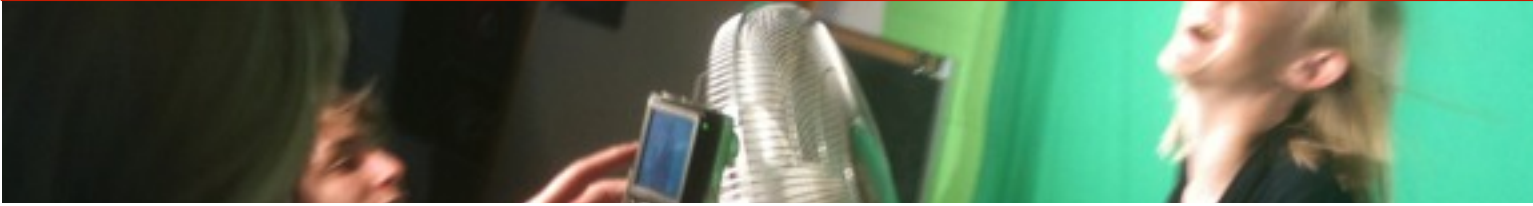
The purpose of the “Mini me” project is to teach students how to superimpose objects into pictures seamlessly, and to make them appear as if they really belong in the picture. For this project, they are required to superimpose themselves into a photograph. i.e. super impose a smaller version of themselves into a bathroom sink, to give the impression that they are showering. Scaling, and photo editing are key parts of this project.

The “A Day in the Life” project requires students to document a special event using a camera, and creating a photographic collage that they will then turn into a banner and place on their website. The point of this project is to teach students how to take important pictures and properly lay them out in a visually appealing manner.

Unit	Overall Expectations	Focus	Assessment
Unit 4		Photo journalism Photo manipulation Super imposing Photographic layout Photo development	Application Communication Knowledge/ Understanding Thinking/Inquiry

Formative: Practical Tasks
 Teacher Observation
 Hands on performance tasks

Summative: Unit Assignment

**UNIT # 5****ANIMATION**

TIME: ___ Hrs.

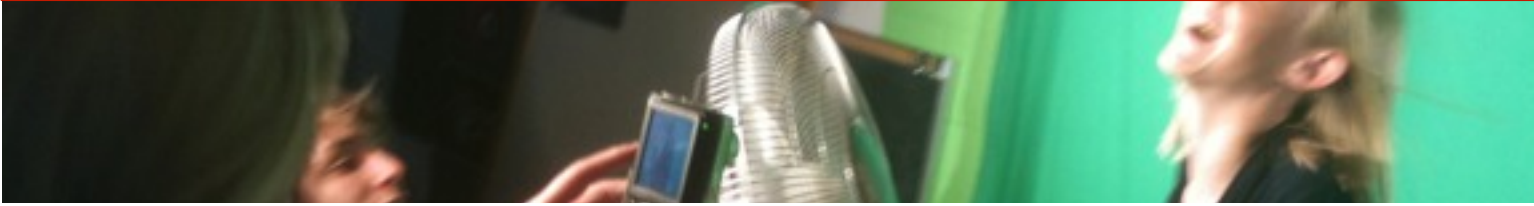
Description: Upon completing this unit, students are expected to understand the basic mechanics of creating an animation. This unit consists of two small projects. The first project is based on a prior project - the halloween portrait - which the students will be animating. This projects requires students to create a 5 frame looping animation. They are both photo-manipulating, and animating the project in Adobe Photoshop CS3. Prior to beginning the project, students are asked to create a small story board so that they can refer to, and plan ahead, in the animation process. Students are then required to export the animation in a proper format, following the guidelines for dimensions, frame rate, number of frames, and export format, and place the image in their web portfolio for evaluation

The other small project consists of animating a banner for a page on their website. The banner elements will be fully designed in Photoshop, and imported into Adobe Flash CS3. The students must follow production guidelines to ensure that the banner will speedily load, and display properly in the website window.

Unit	Overall Expectations	Focus	Assessment
Unit 2		Photo Manipulation Storyboarding File Formats Frame Rates Looping Animations Pre production Post production testing.	Application Communication Knowledge/ Understanding Thinking/Inquiry

Formative: Practical Tasks
 Teacher Observation
 Hands on performance tasks

Summative: Unit Assignment



TEACHING STRATEGIES

- Extensions for completing assignments or assessment tasks
- Modifying the format of the assessment materials
- Providing assistance from the resource department
- Providing a quiet place for student assessment
- Providing the use of word processors and or oral responses
- Allowing students to redo classroom tests or assignments

DIFFERENTIATED INSTRUCTION

- Use small-group instruction to reteach students having difficulty
- Demonstrate ideas of skills in addition to talking about them.
- Use reading partners to support understanding of text or supplementary materials.
- Use videotapes to supplement and support explanations and lectures.
- Use student questions and topics to guide lectures and materials selection.
- Present material in visual, auditory, and kinesthetic modes.
- Teach with whole-to-part and part-to-whole approaches.
- Use tiered activities (activities at different levels of difficulty, but focused on the same key learning goals).
- Use applications, examples, and illustrations from a wide range of intelligences.
- Mask task directions more detailed and specific for some learners and more open for others.
- Use both like-readiness and mixed-readiness work groups.
- Use interest-based work groups and discussion groups.
- Provide small-group discussions at varied levels of complexity and focused on a variety of skills
- Vary the pacing of student work.
- Allow students to specialize in aspects of a topic that they find interesting and to share their findings with others.
- Allow multiple options for how students express learning.
- Encourage students to work together or independently.
- Lead optional, in-class, small-group discussions on various facets of product development.

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- Encourage students to demonstrate key knowledge, understanding and skills in related topics of special interest.

LITERACY

- DEAR 15 minutes each Friday
- Think Literacy Documents:
 - Reading Graphical Text pg. 14
 - Reading Informational Texts (Safety Literacy) pg. 20
 - Writing a Report (Project Management) pg. 40

TECHNOLOGY

- Internet
- Powerpoint presentations/LCD
- Digital Video presentations (Youtube lectures/tutorials)

ACCOMODATIONS

- Providing exceptional students with opportunities to gain the skills and knowledge to make a successfull transition to workplace and/or apprenticeship programs int he community.
- Using special reading resources consistent with student's reading and earning styles;
- Use of video tapes to help students understand material;
- Hands on resources that extend learning
- Collaborative groups
- Work in cooperation with resource teachers
- Independant learning
- In cooperation with parents about study conditions at home/course outlines
- IEP and ELL accommodations as identified.

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CAREER EDUCATION

Ongoing discoveries and innovations coupled with rapidly evolving technologies have resulted in exciting environment in which creativity and innovation thrive, bringing about new career opportunities. Today's employers seek candidates with strong technical skills, critical thinking and problem solving skills, and the ability to work cooperatively in a team, traits that are developed through participation in technological education. Technological education courses enable students to develop problem solving skills, design skills, technological knowledge skills, and the ability to conduct research, present results, and work on projects both independently and in a team environment.

COOPERATIVE EDUCATION AND OTHER FORMS OF EXPERIENTIAL LEARNING

Cooperative education and other forms of experiential learning, such as job shadowing, field trips, and work experience, are central to technological education, enabling students to apply the skills they have developed in the classroom to real life activities in the community and in the world of technological innovation. Cooperative education and other workplace experiences also help to broaden students' knowledge of employment opportunities in a wide range of fields, including industrial, motive power, construction, service, and agricultural trades; engineering; hospitality and tourism; and health care. In addition, students develop their understanding of workplace practices, certifications, and support their students' learning by maintaining links with community based businesses to ensure that students have access to hands on experiences that will reinforce the knowledge and skills gained in school.

Students who choose a technological education course as the related course for two cooperative education credits are able, through this packaged program, to meet the group 1, 2, and 3 compulsory credit requirements for the OSSD.