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REVISED

The Ontario Curriculum
Grades 9 and 10

Technological Education

reach every student

Ontario

Communications Technology, Grade 10

Open — TGJ2O

This course introduces students to communications technology from a media perspective. Students will work in the areas of TV/video and movie production, radio and audio production, print and graphic communications, photography, and interactive new media and animation. Student projects may include computer-based activities such as creating videos, editing photos, working with audio, cartooning, developing animations, and designing web pages. Students will also develop an awareness of environmental and societal issues related to communications technology, and will explore secondary and post-secondary education and training pathways and career opportunities in the various communications technology fields.

Prerequisite: None

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 or services;

A2. demonstrate an understanding of technical terminology, basic scientific concepts, and mathematical concepts used in communications technology and apply them to the creation of media products;

A3. demonstrate an understanding of and apply the interpersonal and communication skills necessary to work effectively in a team setting.

SPECIFIC EXPECTATIONS

A1. Core Concepts, Techniques, and Skills

By the end of this course, students will:

A1.1 describe the elements of the universal communications model *(e.g., message, sender, mode of transmission, receiver)*;

A1.2 demonstrate an understanding of design elements *(e.g., line, form, colour, texture, space)* and principles *(e.g., balance, rhythm, proportion, contrast, flow)*;

A1.3 demonstrate an understanding of production processes and workflows *(e.g., subject/location selection, lighting set-up, shooting, digital imaging, and digital editing in audio/video and photography; layout, pre-press, presswork, and binding in publishing; site design, page layout, content development, and testing in web design)*;

A1.4 identify different types of communications technology devices and their components *(e.g., cameras and accessories, lighting equipment, audio and video recorders, audio mixers, scanners, printing equipment)*, and explain how they are used to produce communications products and services;

A1.5 identify different types of communications software used to create communications technology products and services *(e.g., software for photo, audio, and video editing, animation, page layout, web page creation, and computer graphics)* and describe how they are used.

A2. Technical Terminology and Scientific and Mathematical Concepts

By the end of this course, students will:

A2.1 demonstrate an understanding of communications technology terms, and use them correctly in oral and written communication *(e.g., composition, contrast, scene, typography, layout, storyboard, clip, fade, dissolve, levels, layers, SFX, filters, timeline, site map, navigation)*;

A2.2 demonstrate an understanding of basic scientific concepts that relate to processes and technologies used in communications technology *(e.g., optical principles related to use of cameras and lighting, electronic concepts related to sound recording, principles of digitization and their application to digital imaging and recording)*;

A2.3 apply mathematical concepts and formulas as required to complete communications technology tasks *(e.g., calculation of lighting ratios and exposures in photography and videography, timing of sequences in audio and video editing, calculation of paper and ink requirements in printing, determination of image resolution requirements for printing versus Internet use, calculation of file size)*.

A3. Teamwork

By the end of this course, students will:

A3.1 explain the value of sharing ideas, information, resources, and expertise when working in a team setting;

A3.2 describe and use techniques that encourage participation by all members of a team *(e.g., brainstorming, group discussion, celebration of others' thoughts or contributions, acceptance of cultural differences)*;

A3.3 describe and use concepts and techniques that facilitate effective collaboration in a team environment *(e.g., cooperative discussion, conflict resolution techniques, motivation techniques, respect for the ideas of others)*.

B. COMMUNICATIONS TECHNOLOGY SKILLS

OVERALL EXPECTATIONS

By the end of this course, students will:

B1. apply project management techniques to the planning and development of communications media products;

B2. apply a design process or other problem-solving processes to meet a range of challenges in communications technology;

B3. create products or productions that demonstrate competence in the application of creative and technical skills.

SPECIFIC EXPECTATIONS

B1. Project Management

By the end of this course, students will:

B1.1 use a variety of planning techniques and tools *(e.g., research, project proposals, production schedules, scripts, blocking, storyboards, site maps, design briefs)* when creating plans for communications technology projects;

B1.2 use appropriate organizational and time-management tools and software applications *(e.g., student planners, journals, electronic organizers, organizing software)* to ensure that project deadlines are met.

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;

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

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 apply creative skills, equipment operating skills, and software skills to create components for a media production *(e.g., text, video footage, voice-overs, graphics, animations for a video promoting a school event)*;

B3.2 apply editing skills to integrate the components into a unified and effective production.

C. TECHNOLOGY, THE ENVIRONMENT, AND SOCIETY

OVERALL EXPECTATIONS

By the end of this course, students will:

C1. describe the impact of communications media technologies and activities on the environment and identify ways of reducing their harmful effects;

C2. demonstrate an understanding of social effects and issues arising from the use of communications media technologies and the importance of representing cultural and social diversity in media productions.

SPECIFIC EXPECTATIONS

C1. Technology and the Environment

By the end of this course, students will:

C1.1 describe the effects of current communications technologies on the environment *(e.g., effects related to paper consumption, energy use, light and sound pollution, disposal of obsolete equipment)*;

C1.2 identify sustainable practices that are currently used or can be used to minimize the impact of communications technologies on the environment *(e.g., recycling of paper, recycling or reuse of electronic components, use of energy-efficient equipment, use of sleep mode when computers are temporarily unused)*.

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 recent changes in communications technology and applications on society and the economy *(e.g., effects arising from the use of devices such as cellular phones, personal digital assistants [PDAs], and portable media players and from the emergence of computer-based social networks, user-generated web content such as wikis and blogs, and easy-to-download music file formats)*;

C2.3 identify emerging communications technologies and describe their potential impact on society and the economy;

C2.4 describe legal concepts and issues relating to communications technology and media production *(e.g., copyright, privacy rights, consent)*;

C2.5 describe social and ethical issues relating to the use of communications technology *(e.g., promotion of hatred, irresponsible use of the Internet, cyberbullying, cultural appropriation)*.

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 in communications technology activities;

D2. identify career opportunities in communications technology and demonstrate an understanding of the skills, work habits, education, and training required for entry into postsecondary programs or employment in these fields.

SPECIFIC EXPECTATIONS

D1. Health and Safety

By the end of this course, students will:

D1.1 describe industry hazards *(e.g., ergonomic hazards, mechanical hazards, temperature hazards, electrical hazards)* and accident prevention methods *(e.g., health and safety audits)*, and identify sources of accident prevention information *(e.g., the Workplace Hazardous Materials Information System [WHMIS], Passport to Safety)*;

D1.2 apply safe work practices when performing communications technology tasks *(e.g., use ergonomically designed equipment, keep work area tidy, avoid eye strain, use moderate volume levels)*.

D2. Career Opportunities

By the end of this course, students will:

D2.1 identify career opportunities in communications technology and describe the qualifications needed for entry into these positions *(e.g., apprenticeship training, college diploma, university degree, workplace experience)*;

D2.2 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)*;

D2.3 demonstrate an understanding of the Essential Skills that are important for success in the communications technology industry, as identified in the Ontario Skills Passport *(e.g., reading text, writing, document use, computer use, oral communication, numeracy, thinking skills)*;

D2.4 demonstrate an understanding of 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)*;

D2.5 develop and/or select pieces of work and other materials that provide evidence of their skills and achievements in communications technology, for inclusion in a portfolio *(e.g., Passport to Safety certificate, skills checklist, photographs, digital media projects)*.