

The Ontario Curriculum
Grades 9–12

Health and Safety

Scope and Sequence of Expectations

2017

CONTENTS

Preface.....	2
Ontario Curriculum Policy: Common Messages respecting Health and Safety, Safe Behaviours, and Safe Practices	3
The Arts.....	6
Business Studies.....	19
Canadian and World Studies	23
Classical Studies and International Languages.....	31
Computer Studies.....	32
English	34
English as a Second Language and English Literacy Development.....	40
French as a Second Language – Core French, Extended French, French Immersion	41
Guidance and Career Education.....	43
Health and Physical Education	47
Interdisciplinary Studies	54
Mathematics.....	56
Native Languages.....	57
Native Studies	58
Science	59
Social Sciences and Humanities	74
Technological Education.....	87

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PREFACE

As students mature, gain independence, and explore their learning and working environments in ever more complex ways, it is imperative that they gain the knowledge and skills they need to identify and minimize risks to their health and safety.

This scope and sequence document is designed to support such learning by identifying expectations in the various disciplines of the Ontario curriculum that provide opportunities for students to acquire knowledge and skills related to:

- health and safety (with a focus on injury prevention and health protection)
- safe behaviours
- safe practices

The focus in this secondary resource document is on expectations that relate to personal health and safety, safety in school/work environments, and safety in relationships.

In the secondary curriculum, expectations that outline learning specific to these aspects of health and safety are found primarily in the science, technology, and health and physical education curricula and, to a lesser extent, in the curriculum documents for other disciplines as well. In addition, opportunities to make connections to health and safety are apparent in various examples, teacher prompts, and sample issues that accompany expectations; these are also identified in this document.

Some expectations that do not refer explicitly to these aspects of health and safety nevertheless provide an opportunity to address health and safety, safe behaviours, and/or safe practices. In such instances, an explanation and some examples of ways in which educators might capitalize on the opportunity are provided in this document.

The Organization of the Document

The expectations listed in this resource document are taken from the current Ontario curriculum policy documents for Grades 9 to 12 in the following disciplines:

- the arts
- business studies
- Canadian and world studies
- classical studies and international languages
- computer studies
- English
- English as a second language and English literacy development
- French as a second language – Core, Extended, and Immersion French
- guidance and career education
- health and physical education

- interdisciplinary studies
- mathematics
- Native languages
- Native studies
- science
- social sciences and humanities
- technological education

There is a section for each discipline, ordered alphabetically, and the year of publication of the curriculum is given in the heading at the start of the section. Within each section, expectations are presented by subject area within the curriculum document (where applicable), then by course and by strand. Subheadings from the curriculum document are provided as needed for clarity.

Expectations are cited in the way in which they appear in curriculum documents. For example, the overall and specific expectations from more recently revised documents are identified using the numbering system that is used in the particular document (e.g., “1”, “1.1”, “1.2”, or “A1.”, “A1.1”, “A1.2”). Expectations from older documents are identified as follows:

- for overall expectations
- for specific expectations

As noted earlier, examples, teacher prompts, sample issues, and sample questions are included only where they have a direct connection to health and safety, safe behaviours, or safe practices. Where portions of the text of an expectation (or of its examples and additional elements) do not pertain specifically to health and safety, they are omitted, and an ellipsis (...) is used to indicate the omission. The expectations and examples provided are meant to illustrate opportunities for learning about health and safety and are not intended to be a comprehensive list of all opportunities related to health and safety that the curriculum may present.

Ontario Curriculum Policy: Common Messages respecting Health and Safety, Safe Behaviours, and Safe Practices

In the front matter of every Ontario curriculum policy document, there is a section entitled “Health and Safety”. In all of the documents, these sections clearly state that students need to learn in a safe and healthy environment; some also speak to the role of the principal, educators, students, parents, and even community members in helping to maintain such an environment. These sections are more expansive where the discipline, by its nature, involves potential risks for students (e.g., health and physical education, science, and technological education). Nevertheless, health and safety is a primary consideration in *all* disciplines, and all educators are expected to familiarize themselves with the responsibilities outlined in the curriculum policy documents.

The following is a collection of statements from the documents that speak to the importance of health and safety in the particular programs:

The Ontario Curriculum, Grades 11 and 12: The Arts, 2010

- “As part of every course, students must be made aware that health and safety are everyone’s responsibility – at home, at school, and in the workplace. Students must be able to demonstrate knowledge of the equipment being used and the procedures necessary for its safe use.” (p. 46)

The Ontario Curriculum, Grades 11 and 12: Business Studies, 2006

- “Although the Internet is a powerful learning tool ... all students must be made aware of issues of privacy, safety, and responsible use ...” (p. 20)

The Ontario Curriculum, Grades 9 to 12: English as a Second Language and English Literacy Development, 2007

- “Health and safety issues must be addressed when learning involves cooperative education and other workplace experiences. Teachers who provide support for students in workplace learning placements need to assess placements for safety and ensure that students understand the importance of issues relating to health and safety in the workplace. Before taking part in workplace learning experiences, students must acquire the knowledge and skills needed for safe participation.” (p. 54)

The Ontario Curriculum, Grades 9 to 12: Health and Physical Education, 2015

- “Teachers should ... ensure that the learning environment is always physically and emotionally safe ... To ensure physical safety, teachers must follow all board safety guidelines ...” (p. 15)
- “Safety, including physical and emotional safety, is an integral part of the health and physical education curriculum. Although teachers have responsibility for following board safety guidelines in matters related to supervision, clothing and footwear, equipment, and facilities, and for applying special rules and instructions, students must also begin to take responsibility from a young age for their own safety and the safety of others around them at school, at home, and in the community. Following procedures, using equipment as instructed, wearing appropriate attire, and using thinking skills to assess risk and take appropriate precautions are some ways in which students can contribute to their own safety and the safety of others while participating in physical activity. Students must fulfil each expectation safely and responsibly without putting themselves and others at risk.” (p. 30)
- “... Teachers must establish and support a culture of safety-mindedness. They must think about safety before they ask students to participate in any activity. They must consider any potential dangers, assess those dangers, and implement control measures to protect the students from the risks. By implementing safer instructional practices, such as using logical teaching progressions and transitions and choosing age-appropriate and developmentally appropriate activities, teachers can reduce risk and guard against injury.” (p. 61)

The Ontario Curriculum, Grades 11 and 12: Science, 2008

- “To help ensure students’ safety, parents should inform teachers of any allergies that their children may have. Parents should also encourage their children to arrive at school prepared to participate safely in activities. Simple precautions such as wearing closed-toe shoes, tying back long hair, and removing loose jewellery (or taping it down in the case of Medic Alert bracelets) contribute to a safe environment when working within science classrooms.” (p. 7)

The Ontario Curriculum, Grades 9 to 12: Social Sciences and Humanities, 2013

- “Every student is entitled to learn in a safe, caring environment, free from violence and harassment. Research has shown that students learn and achieve better in such environments.” (p. 41)

The Ontario Curriculum, Grades 9 and 10: Technological Education, 2009

- “Before using any piece of equipment or any tool, students must be able to demonstrate knowledge of how the equipment or tool works and of the procedures they must follow to ensure its safe use. Personal protective gear must be worn as required.” (p. 28)

THE ARTS, GRADES 9 AND 10 (2010) AND GRADES 11 AND 12 (2010)

See the Preface for important information regarding:

- the organization of the following material;
- common messages respecting health and safety, safe behaviours, and safe practices found in the front matter of the curriculum policy documents.

See also the section “Health and Safety in the Arts Program” in *The Ontario Curriculum: Grades 9 and 10, The Arts, 2010*, page 44, and in *The Ontario Curriculum, Grades 11 and 12: The Arts, 2010*, page 46.

GRADES 9 AND 10

Dance, Grade 9, Open (ATC10)

C. Foundations

C3. Responsible Practices: demonstrate an understanding of safe, ethical, and responsible personal and interpersonal practices in dance activities

C3. Responsible Practices

C3.3 identify and follow safe and ethical practices in dance activities (*e.g., establish a code of conduct and a list of health and safety guidelines for the dance studio; create a web diagram outlining the key character traits necessary to maintain a safe and healthy environment in the dance class; ...*)

Teacher prompts: “What are some safety concerns that we need to address in our dance studio?” “How does showing respect for the feelings and opinions of others contribute to a safe environment?”

Dance, Grade 10, Open (ATC20)

C. Foundations

C3. Responsible Practices: demonstrate an understanding of safe, ethical, and responsible personal and interpersonal practices in dance activities

C3. Responsible Practices

C3.3 identify and follow safe and ethical practices in dance activities in both classroom and performance settings (*e.g., maintain appropriate distances; use equipment safely; refrain from displays of temperament and respond constructively to “acting out” by others; ...*)

Teacher prompts: “What are some key safety issues we face in dance class?”

Drama, Grade 9, Open (ADA10)

C. Foundations

C3. Responsible Practices: demonstrate an understanding of safe, ethical, and responsible personal and interpersonal practices in drama activities

C3. Responsible Practices

C3.1 identify and follow safe and ethical practices in drama activities (*e.g., find ways to ensure the emotional safety [trust] and physical safety of themselves and others, both onstage and offstage; ...*)

Drama, Grade 10, Open (ADA20)

C. Foundations

C3. Responsible Practices: demonstrate an understanding of safe, ethical, and responsible personal and interpersonal practices in drama activities

C3. Responsible Practices

C3.1 identify and follow safe and ethical practices in drama activities (*e.g., exhibit safe use of sound and lighting boards; follow procedures for the environmentally responsible use of materials and energy; ...*)

Teacher prompts: “What can we do to ensure that we are working safely in a theatre space?”

Integrated Arts, Grade 9 or 10, Open (ALC10/ALC20)

C. Foundations

C3. Conventions and Responsible Practices

C3.2 demonstrate an understanding of safe and conscientious work practices associated with the various arts disciplines, and apply these practices when engaged in the creative process (*e.g., create a quiz based on Workplace Hazardous Materials Information System [WHMIS] guidelines; follow instructional manuals or the teacher’s instructions when using new tools and technologies; demonstrate respect for the work of other students; create classroom rules and expectations through small-group discussions*)

Teacher prompts: “Why should you not use spray paint in a classroom?” “What organizations or unions are concerned with the safety of artists in your chosen media? Do they have specific safety guidelines? How do these apply to your work?”

C3.4 identify environmental issues associated with the arts, and apply environmentally responsible practices when creating and presenting art works, including integrated art works/productions (*e.g., dispose of paint containers in an environmentally responsible way; recycle batteries and toner cartridges; source environmentally friendly materials*)

Media Arts, Grade 10, Open (ASM2O)

C. Foundations

C3. Responsible Practices

- C3.1** identify and apply healthy, safe, and conscientious work practices when performing tasks related to media arts production (*e.g., use healthy practices such as stretching before movement activities; use safe practices when setting up lighting kits, using a tripod, or packing up equipment; ...*)

Teacher prompts: “What steps should you use when setting up a photo shoot to ensure the safety of all participants?”

- C3.3** identify and apply responsible environmental practices associated with the media arts workplace (*e.g., dispose of chemicals and batteries in environmentally safe ways; ...*)

Teacher prompt: “Are you working with any chemicals or other materials that could damage the environment? What practices could you adopt to minimize the environmental impact of your work?”

Music, Grade 9, Open (AMU1O)

C. Foundations

C3. Conventions and Responsible Practices

- C3.1** identify and describe key physical and health considerations associated with practising, performing, and listening to music (*e.g., the correct body posture for playing their musical instrument; the function of the major muscles and the skeleton in performance situations; the importance of keeping their instrument clean and well maintained; the risks from exposure to loud sounds and the precautions necessary to protect hearing when performing or listening to loud music*)

Teacher prompts: “What are some of the main physical considerations that musicians should address in their daily practice and performance routines?” “Why is it important to have good posture when performing?”

Music, Grade 10, Open (AMU2O)

C. Foundations

C3. Conventions and Responsible Practices

- C3.1** identify and explain physical and health considerations associated with practising, performing, and listening to music (*e.g., describe, on the basis of research, the importance of protecting their aural health, with specific reference to volume levels on personal music players and amplification at rock concerts; demonstrate the importance of instrument*

maintenance and cleanliness; describe a range of physical ailments that musicians are susceptible to)

Teacher prompts: ... “Would you consider using some type of ear plugs at a rock concert? Why or why not?”

Visual Arts, Grade 9, Open (AVI10)

C. Foundations

C3. Responsible Practices

C3.2 demonstrate safe and conscientious practices associated with the use of materials, tools, and technologies in visual arts (*e.g., identify hazardous materials and adopt appropriate precautions and/or protective measures when using them; demonstrate respect for property, including classroom facilities, tools, equipment, and technological devices*)

Teacher prompts: “What safe practices should you demonstrate when working with art tools?” “What are some ways in which you have contributed to the responsible use of materials, equipment, or technological devices in this classroom?”

C3.3 demonstrate an understanding of how the production and presentation of art works can affect the environment, and apply environmentally responsible practices when creating and presenting art works (*e.g., reduce, reuse, and recycle when possible; limit their use of environmentally hazardous substances; ...*)

Visual Arts, Grade 10, Open (AVI20)

C. Foundations

C3. Responsible Practices

C3.2 demonstrate an understanding of safe and conscientious practices associated with the use of materials, tools, and technologies in visual arts, and apply these practices when creating and/or presenting art works (*e.g., use appropriate precautions when dealing with hazardous materials; adopt protective measures when using sharp tools; keep their work space clean and free of physical and other hazards; demonstrate respect for classroom facilities, tools, equipment, and technological devices*)

Teacher prompt: “Why is it important to know about the toxicity of art materials? What are some precautions you should take when working with toxic materials?”

C3.3 demonstrate an understanding of how the production and presentation of art works can affect the environment, and apply environmentally responsible practices when creating and presenting art works

Teacher prompt: “What is the most environmentally responsible way of disposing of photographic chemicals? Why? ...”

DANCE, GRADES 11 AND 12

Dance, Grade 11, University/College Preparation (ATC3M)

C. Foundations

C3. Responsible Practices: demonstrate an understanding of safe, ethical, and responsible personal and interpersonal practices in dance activities

C3. Responsible Practices

C3.3 identify and follow safe and ethical practices in dance activities in both classroom and performance settings (*e.g., learn and apply procedures for the safe use of equipment in studios, classrooms, and rehearsal and performance spaces; ...*)

Teacher prompts: “What are some hazards related to equipment use we need to be aware of during dance activities? What physical, psychological, or environmental hazards do we need to protect against?”

Dance, Grade 11, Open (ATC3O)

C. Foundations

C3. Responsible Practices: demonstrate an understanding of safe, ethical, and responsible personal and interpersonal practices in dance activities

C3. Responsible Practices

C3.3 identify and follow safe and ethical practices in dance activities in both classroom and performance settings (*e.g., help others to use equipment safely; maintain appropriate boundaries; ...*)

Teacher prompts: “What specific safety concerns do we need to be aware of during this activity? Would it be helpful to give each student a specific safety feature to be responsible for?”

Dance, Grade 12, University/College Preparation (ATC4M)

C. Foundations

C3. Responsible Practices: demonstrate an understanding of safe, ethical, and responsible personal and interpersonal practices in dance activities

C3. Responsible Practices

C3.3 model safe and ethical practices in dance activities in both classroom and performance settings (*e.g., learn and apply procedures for the safe and appropriate use of equipment in studios, classrooms, rehearsal and performance spaces, and alternative venues; ...*)

Teacher prompts: “What steps can experienced dancers take to help raise awareness among younger students of appropriate safety practices in performance environments?”

Dance, Grade 12, Workplace Preparation (ATC4E)

C. Foundations

C3. Responsible Practices: demonstrate an understanding of safe, ethical, and responsible personal and interpersonal practices in dance activities

C3. Responsible Practices

C3.3 identify and follow safe and ethical practices in dance activities and demonstrate an understanding of their relevance to workplace environments (*e.g., follow correct procedures for the safe use of equipment; do appropriate exercises to guard against strain injuries; maintain appropriate distances from other dancers/workers; ...*)

Teacher prompts: “What are some rules for working safely with others in a confined space?”

DRAMA, GRADES 11 AND 12

Drama, Grade 11, University/College Preparation (ADA3M)

C. Foundations

C3. Responsible Practices: demonstrate an understanding of safe, ethical, and responsible personal and interpersonal practices in drama activities

C3. Responsible Practices

C3.1 identify and follow safe and ethical practices in all drama activities (*e.g., use vocal and physical warm-ups to protect against strain injuries; tape cords to ensure safety; store and handle flats safely; follow instructions and protocols for operating equipment; follow procedures for the environmentally responsible use of materials and energy; ...*)

Teacher prompts: “What safety concerns might we face as we move forward with this production?”

Drama, Grade 11, Open (ADA3O)

C. Foundations

C3. Responsible Practices: demonstrate an understanding of safe, ethical, and responsible personal and interpersonal practices in drama activities

C3. Responsible Practices

C3.1 identify and follow safe and ethical practices in all drama activities (*e.g., follow safety rules and procedures when performing backstage tasks and operating technical equipment; ...*)

Teacher prompts: “What safety issues must we consider when using lighting equipment in a production?” “What safety precautions do theatre technicians take when producing a show?”

Drama, Grade 12, University/College Preparation (ADA4M)

C. Foundations

C3. Responsible Practices: demonstrate an understanding of safe, ethical, and responsible personal and interpersonal practices in drama activities

C3. Responsible Practices

C3.1 identify and follow safe and ethical practices in all drama activities (*e.g., learn and use vocal warm-up and physical flexibility exercises to protect against strain injuries; learn and use safe stage fighting and falling techniques; ...*)

Teacher prompts: “Why is it important to warm up your voice and body before performing?”

Although specific expectation C3.2 (below) makes no specific mention of health and safety, safe behaviours, or safe practices, it does provide clear opportunities to address safety issues:

C3.2 demonstrate an understanding of the tasks and responsibilities involved in producing drama works (*e.g., itemize the multiple and interrelated responsibilities and competencies of front-of-house staff, stage crew, and production staff*)

Teacher prompt: “Why is it important for the different work teams to keep one another informed about their activities and progress? What problems could be caused by a breakdown in communication?”

Drama, Grade 12, Workplace Preparation (ADA4E)

A. Creating and Presenting

A2. Elements and Conventions

A2.1 combine and arrange the elements of drama to create scenes that explore common workplace roles and situations (*e.g., ... use a shop-floor setting in a drama about safe work habits*)

A3. Presentation Techniques and Technologies

A3.1 use a variety of techniques to engage specific workplace audiences for various purposes (*e.g., use questioning to engage an audience of trainees in a presentation about workplace safety; use a demonstration such as a make-up application as part of a sales pitch for a product*)

Teacher prompt: “How might audio of accident noises strengthen your presentation on safe work habits?”

C. Foundations

C3. Responsible Practices: demonstrate an understanding of safe, ethical, and responsible personal and interpersonal practices in drama activities

C3. Responsible Practices

C3.1 identify and follow safe and ethical practices in drama activities and explain their relevance to workplace settings (*e.g., explain the relevance of Workplace Hazardous Materials Information System [WHMIS] labelling to theatre and other workplace settings; identify safety training and certifications that are relevant to occupations in the theatre and other fields; identify and follow procedures for the environmentally responsible use of materials and energy; explain the importance of developing and implementing workplace anti-harassment and antidiscrimination policies and guidelines*)

Teacher prompts: “What safety concerns have you become aware of through your work in drama? How does safety training prepare you for other types of jobs?” “What steps can people take to prevent or combat harassment in their workplace?”

In addition to the expectations noted above, issues of health and safety, safe behaviours, and/or safe practices can be addressed in expectations in Strand B: Reflecting, Responding, and Analysing. For example, specific expectation B1.2 offers students the opportunity to compare real-world “workplace conditions and issues” with those depicted in some form of media. Health and safety concerns could be a component of those conditions and issues.

EXPLORING AND CREATING IN THE ARTS, GRADE 11/12

Exploring and Creating in the Arts, Grade 11 or 12, Open (AEA3O/AEA4O)

C. Foundations

C3. Conventions and Responsible Practices

C3.2 demonstrate an understanding of safe and conscientious work practices associated with various arts disciplines, and apply these practices when engaged in the creative process (*e.g., demonstrate familiarity with Workplace Hazardous Materials Information System [WHMIS] guidelines; show respect for the work of other students; apply safe practices when working with various tools and materials; use group discussion and consensus to determine effective rules and expectations in the integrated arts classroom*)

Teacher prompts: “What sorts of substances should not be used in the classroom? Which substances should be used only with protective equipment?” “Why is it important to warm up properly before a dance routine or before singing?”

C3.4 describe environmental issues associated with the arts, and apply environmentally responsible practices when creating, presenting, and promoting art works, including integrated art works/ productions (*e.g., safely and appropriately dispose of paint containers, toner cartridges, and other arts supplies; recycle batteries; ...*)

Teacher prompts: “Why is it important to check the source the supplies you use for your art works?” “Are any of the items you used in creating your art work classified as hazardous waste? How should you dispose of them?”

MEDIA ARTS, GRADES 11 AND 12

Media Arts, Grade 11, University/College Preparation (ASM3M)

C. Foundations

C3. Responsible Practices

C3.1 describe and apply healthy, safe, and conscientious work practices when producing, presenting, or promoting media art works (*e.g., develop studio safety checklists and conduct studio safety tests; apply appropriate practices, including using personal protective equipment, when working with sound, chemicals, hazardous equipment*)

Teacher prompt: “What practices or processes have you developed to ensure that you use equipment safely and effectively in a video studio? A sound studio?”

C3.3 identify and apply responsible environmental practices associated with the media arts workplace (*e.g., dispose of chemicals, batteries, and obsolete hardware in environmentally safe ways; ...*)

Media Arts, Grade 11, Open (ASM3O)

C. Foundations

C3. Responsible Practices

C3.1 identify and apply healthy, safe, and conscientious work practices when performing tasks related to media arts production (*e.g., use safe practices when setting up for a video shoot, using and storing chemicals, packing up equipment, or setting up microphones; apply ergonomic principles in their studio environment; ...*)

Teacher prompts: “What steps should you take to ensure safety on a film set?”

C3.3 identify and apply responsible environmental practices associated with the media arts workplace (*e.g., reuse and recycle materials when possible; dispose of chemicals and batteries in environmentally safe ways; ...*)

Media Arts, Grade 12, University/College Preparation (ASM4M)

C. Foundations

C3. Responsible Practices

C3.1 assess and apply health and safety procedures when producing, presenting, or promoting media art works (*e.g., use studio safety checklists, modifying them as necessary to suit*

- the type of studio work they are doing; apply safe practices when developing lighting and electrical plans; use appropriate stretching techniques before presentations that require movement; use appropriate vocal care practices; assess their work space and integrate ergonomic considerations into its design; use construction equipment and materials safely)*
- C3.3** identify and apply responsible environmental practices associated with the media arts workplace (*e.g., dispose of chemicals, batteries, and obsolete hardware in environmentally safe ways; ... substitute more environmentally friendly materials for hazardous ones*)

Media Arts, Grade 12, Workplace Preparation (ASM4E)

A. Creating and Presenting

A1. The Creative Process

- A1.1** use a variety of strategies ... to generate and organize ideas, individually and/or collaboratively, for addressing creative challenges (*e.g., the creation of a mixed-media installation that raises awareness of workplace safety issues in Ontario*)

A3. Using Technologies, Tools, and Techniques

- A3.1** explore and refine their use of a variety of traditional and emerging technologies, tools, and techniques, and apply them to produce effective media art works (*e.g., ... use 2D animation software to create an animation on workplace safety*)
- A3.2** create and present media art works that effectively communicate specific messages to specific audiences (*e.g., an audience of ... occupational health and safety representatives, ...*), using a variety of technologies, tools, and techniques ... and venues ...

C. Foundations

C3. Responsible Practices

- C3.1** identify and apply conscientious practices and accepted workplace health and safety procedures when producing, presenting, promoting, or distributing media art works (*e.g., demonstrate safe practices when setting up, taking down, and packing up lighting or sound equipment; use the proper personal protective equipment when working with chemicals or sharp tools; ... stretch properly before presenting an art work that involves movement; lift objects properly; use ladders or platforms safely*)
- C3.3** identify and apply responsible environmental practices associated with the media arts workplace (*e.g., dispose of chemicals and batteries in environmentally appropriate ways; ... substitute a less harmful substance for a hazardous one*)

MUSIC, GRADES 11 AND 12

Music, Grade 11, University/College Preparation (AMU3M)

C. Foundations

C3. Conventions and Responsible Practices

C3.1 explain the importance of and demonstrate safe and healthy practices associated with practising, performing, and listening to music (*e.g., ergonomic considerations associated with playing various instruments and using computers; connections between respiratory health and the rehearsal environment; safe sound levels in rehearsal and performance settings and when listening to recorded music*)

Teacher prompts: “What are some common injuries or physical problems that musicians are subject to? What measures could they take to help reduce the incidence of these injuries?”
“Why is it important for a vocalist to conduct warm-up exercises before a performance? What are some appropriate exercises?”

Music, Grade 11, Open (AMU3O)

C. Foundations

C3. Conventions and Responsible Practices

C3.1 explain the importance of safe and healthy practices for preventing performance- and production-related injuries and for maintaining respiratory, aural, and vocal health (*e.g., safe practices associated with performing on stage; ways to protect their hearing when playing or listening to loud music; warm-up exercises prior to playing an instrument or singing*)

Teacher prompts: “What are some potential dangers associated with practising or performing on stage?” “Why do vocalists do warm-up exercises before performing?”

Music, Grade 12, University/College Preparation (AMU4M)

C. Foundations

C3. Conventions and Responsible Practices

C3.1 demonstrate an understanding of performance-related injuries connected to the field of music and ways of minimizing such injuries (*e.g., the impact on the auditory system of repeated exposure to loud sound; injuries that can result from poor posture, playing position, or technique; the purpose of various types of protective or ergonomic equipment*)

Teacher prompt: “What types of repetitive strain injuries are a concern for musicians? What can be done to reduce their incidence?”

Music, Grade 12, Workplace Preparation (AMU4E)

C. Foundations

C3. Conventions and Responsible Practices

C3.1 demonstrate an understanding of safe and healthy practices related to the field of music, with an emphasis on maintaining a healthy lifestyle and preventing performance-related injuries (*e.g., create a radio ad outlining the importance of hearing protection for musicians and audiences; create an online or video public service announcement on the issue of drug and alcohol abuse in the music industry and its impact on careers and families*)

Teacher prompt: “How would you describe the sound levels at a rock concert? What phenomena produce similar levels of sound? In which occupations are workers exposed to similar levels? What precautions do these workers take?”

VISUAL ARTS, GRADES 11 AND 12

Visual Arts, Grade 11, University/College Preparation (AVI3M)

A. Creating and Presenting

A3. Production and Presentation

A3.3 describe appropriate standards and conventions for the presentation of different types of visual art works, and apply these standards and conventions when preparing their art works for presentation (*e.g., ensure ... that their three-dimensional work can be displayed safely, ...*)

C. Foundations

C3. Responsible Practices

C3.2 demonstrate an understanding of health and safety issues and conscientious practices associated with the use of materials, property, techniques, tools, and technologies in visual arts (*e.g., the appropriate use of aerosol products, utility knives, printing presses, electrical tools, computers; appropriate precautions to take when exposed to physical and chemical hazards*), and apply these practices when creating and/or presenting art works

Visual Arts, Grade 11, Open (AVI3O)

C. Foundations

C3. Responsible Practices

C3.2 demonstrate an understanding of safe and conscientious practices associated with the use of materials, property, tools, and technologies in visual arts, and apply these practices when

creating and/or presenting art works (*e.g., take appropriate precautions when working with hazardous materials; adopt protective measures when working with sharp or heavy tools; keep their work space tidy and free of physical and other hazards; demonstrate respect for physical property, classroom facilities, tools, and technological devices*)

Teacher prompt: “Why is it important to apply safe practices when handling art materials? What should you do if you don’t know whether a material is toxic?”

Visual Arts, Grade 12, University/College Preparation (AVI4M)

C. Foundations

C3. Responsible Practices

C3.2 demonstrate appropriate health and safety procedures and conscientious practices in the selection and use of various materials, techniques, tools, and technologies when producing or presenting art works (*e.g., demonstrate safe practices when creating installations, assemblages, earthworks, constructions, multimedia projects; demonstrate appropriate protocols, deportment, and respect for others when working in a studio or visiting a presentation space*)

Visual Arts, Grade 12, Workplace Preparation (AVI4E)

C. Foundations

C3. Responsible Practices

C3.2 demonstrate an understanding of health and safety procedures when creating or presenting art works, including applied and commercial art works (*e.g., demonstrate safe practices when creating installations, assemblages, constructions, paintings, prints, posters, jewellery, textiles, and/or multimedia projects; explain the importance of proper ventilation; use gloves or skin-barrier products when working with chemicals; demonstrate the safe storage of hazardous materials; use protective equipment for ears and eyes when working with noisy tools or materials that can chip or splash*)

C3.3 identify responsible environmental practices that should be used in applied arts workplaces (*e.g., safe disposal of paints, solvents, and photographic chemicals; ... substitution of a less harmful substance for a toxic one*), and apply these practices when creating visual art works

BUSINESS STUDIES, GRADES 9 AND 10 (2006) AND GRADES 11 AND 12 (2006)

See the Preface for important information regarding:

- the organization of the following material;
- common messages respecting health and safety, safe behaviours, and safe practices found in the front matter of the curriculum policy documents.

See also the section “Health and Safety in Business Studies” in *The Ontario Curriculum, Grades 9 and 10: Business Studies, 2006*, page 26, and in *The Ontario Curriculum, Grades 11 and 12: Business Studies, 2006*, page 26.

GRADES 9 AND 10

Introduction to Business, Grade 9 or 10, Open (BBI1O/BBI2O)

Business Fundamentals

Business Ethics and Social Responsibility

- explain the concepts of ethics and social responsibility as they apply to business (*e.g., workplace safety, antidiscrimination issues, accessibility issues for people with disabilities, environmental responsibility, respect for labour laws, fair trade*)

Information and Communication Technology in Business, Grade 9 or 10, Open (BTT1O/BBT2O)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course.

ACCOUNTING, GRADES 11 AND 12

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in the accounting courses.

ENTREPRENEURSHIP, GRADES 11 AND 12

Entrepreneurship: The Venture, Grade 11, College Preparation (BDI3C)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course.

Entrepreneurship: The Enterprising Person, Grade 11, Open (BDP3O)

The Enterprising Experience: Planning and Organizing an Event

Organizing and Executing the Event

- apply ethical practices, socially responsible actions, and correct safety procedures at all stages of organizing and executing the event

Entrepreneurship: Venture Planning in an Electronic Age, Grade 12, College Preparation (BDV4C)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course.

INFORMATION AND COMMUNICATION TECHNOLOGY, GRADES 11 AND 12

Information and Communication Technology: The Digital Environment, Grade 11, Open (BTA3O)

Information and Communication Technology Ethics and Issues

Health and Environmental Issues

- summarize health and environmental issues related to the use of information and communication technology
 - explain the importance of ergonomic practices in business
 - describe methods to ensure personal health and safety in an information and communication technology environment

Information and Communication Technology: Multimedia Solutions, Grade 12, College Preparation (BTX4C)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course.

Information and Communication Technology in the Workplace, Grade 12, Workplace Preparation (BTX4E)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course.

INTERNATIONAL BUSINESS, GRADE 12

International Business Fundamentals, Grade 12, University/College Preparation (BBB4M)

Working in International Markets

Ethical Issues

- evaluate the ethical issues that arise for companies competing internationally, in relation to the following groups: consumers (*e.g., safety, ...*); ... employees (*e.g., ... good working conditions, ...*) ...

International Business Essentials, Grade 12, Workplace Preparation (BBB4E)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course.

MARKETING, GRADE 11

Marketing: Goods, Services, Events, Grade 11, College Preparation (BMI3C)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course.

Marketing: Retail and Service, Grade 11, Workplace Preparation (BMX3E)

Trends in Retail and Service Marketing

Issues, Ethics, and the Environment

- identify ways that federal, provincial, and municipal laws and regulations (*e.g., concerning health and safety, environmental protection, product standards*) can affect how retail and service businesses operate

Retail and Service Operations

Human Resources in Retailing and Service

- identify, through research, labour and workplace safety laws and regulations as well as organizations offering health and safety certification and training (*e.g., in first aid, CPR, WHMIS*) to the retail and service industries

BUSINESS LEADERSHIP, GRADE 12

Business Leadership: Management Fundamentals, Grade 12, University/College Preparation (BOH4M)

Planning and Controlling

The Management of Change

- analyse major challenges ... and legal considerations (*e.g., workplace safety standards, access for people with disabilities, ...*) facing today's organizations

Organizing

Human Resources

- identify and describe the impact and importance of legal considerations in the human-resource process (*e.g., with regard to ... health and safety, ...*)

Business Leadership: Becoming a Manager, Grade 12, Workplace Preparation (BOG4E)

Human Resource Management

Legal Considerations

- demonstrate an understanding of the laws and regulations that govern working conditions
 - identify the legal requirements related to employee health and safety in a variety of workplaces (*e.g., WHMIS, First Aid Certificate*)

CANADIAN AND WORLD STUDIES, GRADES 9 AND 10 (2013) AND GRADES 11 AND 12 (2015)

See the Preface for important information regarding:

- the organization of the following material;
- common messages respecting health and safety, safe behaviours, and safe practices found in the front matter of the curriculum policy documents.

See also the section “Health and Safety in the Canadian and World Studies Program” in *The Ontario Curriculum, Grades 9 and 10: Canadian and World Studies, 2013*, page 58, and in *The Ontario Curriculum, Grades 11 and 12: Canadian and World Studies, 2015*, page 65.

GEOGRAPHY, GRADE 9

Issues in Canadian Geography, Grade 9, Academic (CGC1D)

B. Interactions in the Physical Environment

B1. Natural Processes and Human Activity

B1.5 analyse the risks that various physical processes and natural events, including disasters, present to Canadian communities, and assess ways of responding to these risks

Sample questions: “Why would people live in an area that is prone to natural disasters?”

“What criteria should be used to determine whether rebuilding or relocating is the more sustainable choice after a community has been severely damaged by a natural disaster?”

“What can be done to reduce the risk of earthquake damage in tectonically active regions like British Columbia, or flood damage in flood-prone areas along the Red River?” “How do governments and agencies use spatial technologies to monitor natural hazards and predict their occurrence (e.g., violent weather, floods, avalanches, earthquakes, icebergs)?” “How might a community respond to long-term changes in its environment, such as rising sea levels, coastal erosion, or lower lake levels, that threaten its economy or survival?” “How does your personal emergency preparedness plan address natural risks, and what does it look like?”

Using spatial skills: Students can create a choropleth map, using intensity of shading to illustrate areas of Canada that are more at risk from disasters or more exposed to damage from natural processes than others. The shaded areas can then be annotated with comments summarizing the type of risks associated with the area.

Issues in Canadian Geography, Grade 9, Applied (CGC1P)

B. Interactions in the Physical Environment

B1. Natural Processes and Human Activity

B1.2 assess ways of minimizing the impacts of different kinds of natural disasters, events, and phenomena

Sample questions: “What can the owners of houses on a river bank do to protect their homes from flooding?” “What can individuals and public officials in tornado-prone areas do to reduce the risk of injury and damage from tornadoes?” “What is the role of the media in warning people of natural disasters?” “How can spatial technologies (e.g., cartography, GIS, GPS, remote sensing) help monitor or predict violent weather, floods, avalanches, earthquakes, or coastal erosion?”

Using spatial skills: Examples of GIS maps can be used to illustrate the types of information about disasters, events, and phenomena that can be captured and monitored through mapping.

HISTORY, GRADE 10

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in the Grade 10 history courses.

CIVICS (POLITICS), GRADE 10

Civics and Citizenship, Grade 10, Open (CHV2O)

B. Civic Awareness

B1. Civic Issues, Democratic Values

B1.1 describe some civic issues of local, national, and/or global significance (*e.g., bullying in schools; violence in local communities; ...*), and compare the perspectives of different groups on selected issues

Sample questions: “What are some privacy or safety issues related to the use of social media? Do they have an impact on the way you or your friends use social media?”

ECONOMICS, GRADES 11 AND 12

The Individual and the Economy, Grade 11, University/College Preparation (CIE3M)

C. Economic Challenges and Responses

C2. Workers in Canada: explain the main roles, practices, and concerns of workers, both organized and unorganized, in Canada

C2. Workers in Canada

C2.3 explain the rights and responsibilities of workers in Canada (*e.g., rights: ... to refuse unsafe work, to compensation for workplace injuries, to freedom from discrimination and harassment; responsibilities: to be aware of and follow workplace health and safety requirements, to report unsafe working conditions, to use appropriate protective equipment, to treat co-workers in accordance with human rights regulations*)

Sample questions: “Do you think a worker has a responsibility to become a ‘whistleblower’ if he or she witnesses illegal or unethical behaviour in the workplace? Why or why not?”

D3. Economic Citizenship

D3.2 explain the responsibilities of individuals, firms, and government with respect to social inequities in Canadian workplaces (*e.g., to report discrimination or harassment, to ensure accessibility, to comply with human rights legislation, to enact and enforce regulations that protect workers’ right to a safe and harassment-free workplace*)

Analysing Current Economic Issues, Grade 12, University Preparation (CIA4U)

C. Firms, Markets, and Economic Stakeholders

C1. The Firm and Market Structures

C1.4 explain ways in which businesses are regulated in different countries (*e.g., ... health and safety regulations; ... working conditions; ...*), and assess the impact of this regulation on businesses, markets, workers, and consumers

C3. The Role of Government in Redressing Imbalance

C3.3 explain the role and rights of workers as well as the role of governments, both in Canada and internationally, in shaping and enforcing these rights (*e.g., with reference to ... maximum hours, health and safety legislation, regulations against discrimination and harassment, ...*)

Sample questions: ... “What are some differences in the rights of workers around the world? What impact do these differences have on their lives?”

Making Personal Economic Choices, Grade 12, Workplace Preparation (CIC4E)

C. Economic Fundamentals

C3. The Role of Labour

C3.1 describe some key rights and responsibilities of labour (*e.g., the right ... to safe working conditions, ... to a harassment-free workplace; the responsibility to comply with regulations, to alert the employer to safety hazards*)

Sample questions: “What action should a worker take if he or she has been asked to work on damaged or unsafe equipment?” “What type of behaviour constitutes harassment in the workplace? How should a worker respond to such behaviour?”

D. Markets, Consumers, and Producers

D3. Responsibilities of Producers: analyse some responsibilities and business practices of, and some regulations affecting, producers

D3. Responsibilities of Producers

D3.1 analyse the responsibilities of employers with regard to various stakeholders (*e.g., to provide a safe workplace, ...*)

D3.3 identify some government regulations that affect producers (*e.g., regulations related to ... worker health and safety, accessibility, hazardous materials, ...*), and assess the impact of regulations on different stakeholders ...

GEOGRAPHY, GRADES 11 AND 12

Except in Forces of Nature: Physical Processes and Disasters, Grade 11 (see below), there is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in the Grade 11 and 12 geography courses.

Forces of Nature: Physical Processes and Disasters, Grade 11, University/College Preparation (CGF3M)

A. Geographic Inquiry and Skill Development

A2. Developing Transferable Skills

A2.2 apply in everyday contexts skills and work habits developed through geographic investigation (*e.g., ... apply work habits such as collaboration when working with a team to determine the criteria that need to be considered when making a decision relating to outdoor safety; ...*)

HISTORY, GRADES 11 AND 12

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in the Grade 11 and 12 history courses.

LAW, GRADES 11 AND 12

Understanding Canadian Law, Grade 11, University/College Preparation (CLU3M)

A. The Inquiry Process and Skill Development in Legal Studies

A1. The Inquiry Process in Legal Studies

A1.7 communicate their ideas, arguments, and conclusions using various formats and styles, as appropriate for the audience and purpose (*e.g., ... a blog on current legal issues related to workplace health and safety and young workers; ...*)

B. Legal Foundations

B4. Development of Law

B4.1 explain how evolving societal attitudes and values have promoted or prevented changes to Canadian law (*e.g., in laws relating to ... workplace safety, ...*)

D. Civil Law

D3. Introduction to Employment Law: analyse the legal foundations of employment law; the factors influencing its development; and the role of employers, employees, and the courts in its processes

D3. Introduction to Employment Law

D3.3 describe issues related to the protection of employees' rights (*e.g., issues regarding worker safety, ...*) and the legal avenues and processes for adjudicating disputes and enforcing regulations related to employment conditions (*e.g., Employment Standards Act, Ontario Labour Relations Board, Workplace Safety and Insurance Board and its Appeals Tribunal, ...*)

Sample questions: ... "What occupational health and safety legislation exists in Ontario?"

D3.4 analyse from a legal perspective the roles and responsibilities of employers, employees, and governments in employment law

Sample questions: "In employment law, what is the responsibility of the employer if there is a safety concern in the workplace? What is the responsibility of the employee?" "How can employees best advocate for their rights when faced with a workplace injury?"

Understanding Canadian Law in Everyday Life, Grade 11, Workplace Preparation (CLU3E)

B. Legal Foundations

B2. Development of Law

B2.3 describe ways in which changes in societal attitudes and values have influenced the development of Canadian law (*e.g., with reference to laws relating to ... workplace safety, ...*)

D. Civil Law

D3. Introduction to Employment Law: describe the legal foundations and development of employment law and the role of employers, employees, and courts and adjudicatory tribunals in its processes

D3. Introduction to Employment Law

D3.1 demonstrate an understanding of the protections given to workers by provincial and federal employment legislation

Sample questions: “How does the Ontario Employment Standards Act address worker protection? Why is it important for workers to be aware of legal protections under this and federal employment laws?” “What are the requirements for employers under the Ontario Occupational Health and Safety Act with respect workplace violence and harassment?”

D3.2 describe some issues related to the protection of employees’ rights (*e.g., issues such as worker safety, ...*) and legal ways to resolve disputes regarding employment conditions

Sample questions: ... “What types of benefits and compensation are available to injured employees under the Workplace Safety and Insurance Act?” “What are some issues that relate to protecting young workers? How are they addressed in current Ontario legislation?”

Canadian and International Law, Grade 12, University Preparation (CLN4U)

C. Rights and Freedoms

C4. Contemporary Issues: analyse various contemporary issues in relation to their impact or potential impact on human rights law

C4. Contemporary Issues

C4.2 compare from a legal perspective the rights and protections (*e.g., protections related to workplace safety, ...*) for various kinds of workers ... in Canadian jurisdictions ...

Legal Studies, Grade 12, College Preparation (CLN4C)

A. The Inquiry Process and Skill Development in Legal Studies

A1. The Inquiry Process in Legal Studies

- A1.7** communicate their ideas, arguments, and conclusions using various formats and styles, as appropriate for the audience and purpose (*e.g., ... a mock trial based on an actual workplace health and safety case; ...*)

C. Rights and Responsibilities

C2. Rights and Responsibilities

- C2.1** describe some everyday legal responsibilities of Canadians (*e.g., responsibility to ... meet health and safety standards, ...*)

- C2.4** describe current Ontario laws that are designed to protect the rights of youth (*e.g., ... youth employment laws*) and to regulate their behaviour ...

Sample questions: “At what age is youth employment legal in Ontario and under what conditions? What branch of government should you contact to report a suspected or actual violation of Ontario’s youth employment laws?” “What are the similarities and differences between the labour laws that protect adults and those that protect youth workers?” “What do you need to know about workplace safety prior to accepting a job?”

D. Contemporary Legal Issues

D1. Law and Society

- D1.1** analyse the role of law in the workplace (*e.g., in creating and enforcing legislation related to: workplace health and safety, including the use of chemicals or hygienic food preparation practices, and protection from harassment and violence; professional standards; training requirements; employment standards; ...*)

D3. Emerging Legal Issues

- D3.1** explain the legal implications of issues affecting specific demographic groups (*e.g., ... migrant workers: workplace safety and employment standards, ...*)

E. Law in the Workplace

- E2. Roles and Responsibilities in the Workplace:** analyse the roles and responsibilities of employees, managers, employers, corporations, and governments in the workplace

E2. Roles and Responsibilities in the Workplace

- E2.1** analyse the roles and responsibilities of unions in the workplace, including their history, purpose, achievements, and limitations (*e.g., with reference to workplace health and safety standards, professional standards including training requirements, ...*)
- E2.3** describe legal obligations that apply to all Canadians – workers and employers – in the workplace (*e.g., requirements to: ... meet health and safety standards, comply with quality control standards, comply with human rights codes, ...*)

E2.4 analyse the legal roles and responsibilities of employers, companies, and corporations (*e.g., with reference to: ..., workplace health and safety, ...*)

E3. Legal Issues in the Workplace: analyse legal issues related to the influence of new technologies, environmental concerns, and national and international events on the workplace

E3. Legal Issues in the Workplace

E3.2 explain the impact on the workplace of legal issues related to environmental practices (*e.g., health and safety issues related to the handling of hazardous and other industrial waste or to second-hand smoke or other airborne toxins; ... health issues related to the disposal of electronic devices*)

POLITICS, GRADES 11 AND 12

Politics in Action: Making Change, Grade 11, Open (CPC3O)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course. However, in each strand, students' awareness of health and safety can be fostered through the learning context and/or learning materials. For example, with respect to overall expectation A1, "use the political inquiry process and the concepts of political thinking when investigating issues of political importance ...", students could choose to investigate issues relating to health and safety.

Canadian and International Politics, Grade 12, University Preparation (CPW4U)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course.

CLASSICAL STUDIES AND INTERNATIONAL LANGUAGES, GRADES 9 TO 12 (2016)

See the Preface for important information regarding:

- the organization of the following material;
- common messages respecting health and safety, safe behaviours, and safe practices found in the front matter of the curriculum policy documents.

See also the section “Health and Safety in the Classical Studies and International Languages Program” in *The Ontario Curriculum, Grades 9 to 12: Classical Studies and International Languages, 2016*, page 59.

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in the classical studies and international languages courses.

COMPUTER STUDIES, GRADES 10 TO 12 (2008)

See the Preface for important information regarding:

- the organization of the following material;
- common messages respecting health and safety, safe behaviours, and safe practices found in the front matter of the curriculum policy documents.

See also the section “Health and Safety in Computer Studies” in *The Ontario Curriculum, Grades 10 to 12: Computer Studies, 2008*, page 30.

Introduction to Computer Studies, Grade 10, Open (ICS2O)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course.

Introduction to Computer Science, Grade 11, University Preparation (ICS3U)

D. Topics in Computer Science

D1. Environmental Stewardship and Sustainability

D1.1 describe the negative effects of computer use on the environment ... and on human health (*e.g., exposure to radiation, musculoskeletal disorders, eye strain, mental health problems resulting from social isolation, various health consequences of reduced activity levels*)

D1.2 identify measures that help reduce the impact of computers on the environment ... and on human health (*e.g., ergonomic standards*)

Introduction to Computer Programming, Grade 11, College Preparation (ICS3C)

D. Computers and Society

D1. Environmental Stewardship and Sustainability

D1.1 describe negative effects of computer use on the environment ... and on human health (*e.g., exposure to radiation, musculoskeletal disorders, eye strain, various health consequences of reduced activity levels*)

D1.2 identify measures that help reduce the impact of computers on the environment ... and on human health (*e.g., ergonomic standards*)

D2. describe and apply procedures for safe computing to safeguard computer users and their data

D2. Safe Computing

D2.2 describe and use appropriate strategies to avoid potential health and safety problems associated with computer use (*e.g., musculoskeletal disorders, eye strain*)

Computer Science, Grade 12, University Preparation (ICS4U)

D. Topics in Computer Science

D1. Environmental Stewardship and Sustainability

D1.1 outline strategies to reduce the impact of computers and related technologies on the environment ... and on human health (*e.g., ergonomic standards*)

Computer Programming, Grade 12, College Preparation (ICS4C)

D. Computers and Society

D1. Environmental Stewardship and Sustainability

D1.1 outline and apply strategies to reduce the impact of computers and related technologies on the environment ... and on human health (*e.g., ergonomic standards*)

ENGLISH, GRADES 9 AND 10 (2007) AND GRADES 11 AND 12 (2007)

See the Preface for important information regarding:

- the organization of the following material;
- common messages respecting health and safety, safe behaviours, and safe practices found in the front matter of the curriculum policy documents.

See also the section “Health and Safety in the English Program” in *The Ontario Curriculum, Grades 9 and 10: English, 2007*, page 37, and in *The Ontario Curriculum, Grades 11 and 12: English, 2007*, page 37.

GRADES 9 AND 10

English, Grade 9, Academic (ENG1D)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course. However, within each strand, the learning context and/or learning materials could be used to foster students’ awareness and deepen their knowledge of health and safety issues. For example, students could focus on health or safety issues of concern to them when they are writing “for different purposes and audiences ...” (specific expectation 2.1 in the Writing strand), or when creating “media texts for different purposes and audiences...” (overall expectation 3 in the Media Studies strand).

English, Grade 9, Applied (ENG1P)

Apart from the example listed below, in which students are given the option of creating an informational text about safety, there is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course. However, within each strand, the learning context could be used to foster students’ awareness and deepen their knowledge of health and safety issues.

Writing

2. Using Knowledge of Form and Style

Form

- 2.1** write for different purposes and audiences using a few different informational, graphic, and literary forms (*e.g., ... text for an illustrated pamphlet to share tips about snowboard safety with classmates*)

English, Grade 10, Academic (ENG2D)

Media Studies

2. Understanding Media Forms, Conventions, and Techniques

Conventions and Techniques

- 2.2 identify conventions and/or techniques used in a variety of media forms and explain how they convey meaning and influence their audience (*e.g., ... the use of symbols as well as words to convey health and safety warnings on a range of product packages*)

English, Grade 10, Applied (ENG2P)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course. However, the learning context and/or learning materials could be used to foster students' awareness and deepen their knowledge of health and safety issues. For example, an oral text on a health or safety issue could be used in specific expectation 1.5 in the Oral Communication strand ("develop and explain interpretations of both simple and complex oral texts ...").

Literacy Skills: Reading and Writing, Grade 10, Open (ELS2O)

Reading Skills

2. Understanding Form and Style

Elements of Style

- 2.3 identify a variety of elements of style in texts and explain how they help communicate meaning and enhance the effectiveness of the text (*e.g., ... explain how precise technical words strengthen the message in an article about health or safety; ...*)

COMPULSORY COURSES, GRADES 11 AND 12

English, Grade 11, University Preparation (ENG3U)

Media Studies

1. Understanding Media Texts

Purpose and Audience

- 1.1 explain how media texts, including increasingly complex or difficult texts, are created to suit particular purposes and audiences ...

Teacher prompt: "Why does an image of an accident victim in a public service announcement focus your attention on safety practices?"

English, Grade 11, College Preparation (ENG3C)

Oral Communication

1. Listening to Understand

Demonstrating Understanding of Content

- 1.4 identify the important information and ideas in oral texts, including increasingly complex texts, in a variety of ways (*e.g., ... create a poster about workplace safety after listening to a presentation on the topic*)

Reading and Literature Studies

2. Understanding Form and Style

Text Forms

- 2.1 identify a variety of characteristics of informational, literary, and graphic text forms and explain how they help communicate meaning

Teacher prompt: “Why are safety instructions usually presented in lists of steps rather than in prose paragraphs? Why is the order in which the steps are listed important?”

Media Studies

3. Creating Media Texts

Purpose and Audience

- 3.1 describe the topic, purpose, and audience for media texts they plan to create (*e.g., a television news story to raise community awareness about a local health or safety issue; ...*) and identify significant challenges they may face in achieving their purpose

English, Grade 11, Workplace Preparation (ENG3E)

Oral Communication

2. Speaking to Communicate

Diction and Devices

- 2.4 use appropriate words, phrases, and terminology, and several different stylistic devices, to communicate their meaning and engage their intended audience (*e.g., use workplace terminology and specific details to report an accident to their manager in a role play; ...*)

Teacher prompt: “What specific words are used for effective communication in your workplace setting? ...”

3. Reflecting on Skills and Strategies

Interconnected Skills

- 3.2 identify a variety of their skills in viewing, representing, reading, and writing and explain how the skills help them improve their oral communication skills (*e.g., ... explain how viewing a film on workplace safety helps them prepare for an oral report on the topic*)

Reading and Literature Studies

1. Reading for Meaning

Making Inferences

- 1.4** make and explain inferences about both simple and complex texts, supporting their explanations with stated and implied ideas from the texts (*e.g., make a hypothesis about a company's safety practices based on evidence in a workplace incident report; ...*)

Teacher prompts: “What can you conclude about the company's training program based on what you read in the workplace incident report?”

Media Studies

3. Creating Media Texts

Purpose and Audience

- 3.1** describe the topic, purpose, and audience for media texts they plan to create (*e.g., a poster to caution workers about the need for safe storage and handling of hazardous materials*), and identify specific challenges they may face in achieving their purpose

Form

- 3.2** select a media form to suit the topic, purpose, and audience for a media text they plan to create and explain why it is an appropriate choice (*e.g., explain why a poster would be a good way to inform students about safety procedures to be followed in the science lab; ...*)

Teacher prompt: “What media form might be most effective for a presentation on workplace safety?”

English, Grade 12, University Preparation (ENG4U)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course. However, in each strand, the learning context and/or learning materials could be used to foster students' awareness and deepen their knowledge of health and safety issues. For example, students could focus on health or safety issues of concern to them when they are writing “for different purposes and audiences ...” (specific expectation 2.1 in the Writing strand) or when creating “media texts ... for a variety of purposes and audiences...” (overall expectation 3 in the Media Studies strand).

English, Grade 12, College Preparation (ENG4C)

Writing

2. Using Knowledge of Form and Style

Form

- 2.1** write for different purposes and audiences using a variety of informational, literary, and graphic forms (*e.g., ... a brochure on workplace safety*)

Teacher prompts: ... “What graphic elements will you include in your brochure on workplace safety? How will these elements appeal to the target audience?”

Media Studies

3. Creating Media Texts

Conventions and Techniques

- 3.3** identify a variety of conventions and/or techniques appropriate to a media form they plan to use, and explain how these will help communicate a specific aspect of their intended meaning effectively (*e.g., conventions/techniques for a multimedia workplace safety promotion ...*)

English, Grade 12, Workplace Preparation (ENG4E)

Media Studies

1. Understanding Media Texts

Interpreting Messages

- 1.2** interpret media texts, including increasingly complex texts, identifying and explaining the overt and implied messages they convey (*e.g., identify the implied messages that safety brochures use to strengthen their overt messages about following workplace safety rules and procedures; ...*)

3. Creating Media Texts

Conventions and Techniques

- 3.3** identify a variety of conventions and/or techniques appropriate to a media form they plan to use, and explain how these will help them communicate specific aspects of their intended meaning (*e.g., conventions/techniques for a storyboard for a workplace safety video ...*)

OPTIONAL COURSES, GRADES 11 AND 12

Canadian Literature, Grade 11, University/College Preparation (ETC3M)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course.

Media Studies, Grade 11, Open (EMS3O)

A. Understanding and Interpreting Media Texts

1. Understanding and Responding to Media Texts

Purpose and Audience

- 1.1** identify and explain the purpose and audience of a variety of media texts (*e.g., ... identify the target audience of a campaign on workplace safety ...*)

Presentation and Speaking Skills, Grade 11, Open (EPS3O)

B. Making Presentations

1. Planning Presentations

Research

- 1.4** select relevant and significant information from research to suit the topic, purpose, and audience (*e.g., ... select and research a specific topic related to workplace safety, taking into account the prior knowledge and needs of co-workers; ...*)

Studies in Literature, Grade 12, University Preparation (ETS4U)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course.

The Writer's Craft, Grade 12, University Preparation (EWC4U)

Although no overall or specific expectations in this course explicitly address issues related to health and safety, safe behaviours, or safe practices, such issues could be used as the context for learning. For example, students might choose to write about a health or safety issue of concern to them as they “produce polished written work, using a variety of effective presentation features appropriate for the purpose and intended audience” (specific expectation 3.2 in Strand B: Practising Writing).

Studies in Literature, Grade 12, College Preparation (ETS4C)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course.

The Writer's Craft, Grade 12, College Preparation (EWC4C)

Although no overall or specific expectations in this course explicitly address issues related to health and safety, safe behaviours, or safe practices, such issues could be used as the context for learning. For example, students might choose to write about a health or safety issue of concern to them as they “produce polished written work, using a variety of effective presentation features appropriate for the purpose and intended audience” (specific expectation 3.2 in Strand B: Practising Writing).

Business and Technological Communication, Grade 12, Open (EBT4O)

Although no overall or specific expectations in this course explicitly address issues relating to health and safety, safe behaviours, or safe practices, such issues could be used as the context for learning. For example, students might choose to write about a health or safety issue of concern to them as they “produce ... business and technological communications for different audiences and purposes ...” (overall expectation B1).

ENGLISH AS A SECOND LANGUAGE AND ENGLISH LITERACY DEVELOPMENT, GRADES 9 TO 12 (2007)

See the Preface for important information regarding:

- the organization of the following material;
- common messages respecting health and safety, safe behaviours, and safe practices found in the front matter of the curriculum policy documents.

See also the section “Health and Safety in ESL and ESD” in *The Ontario Curriculum, Grades 9 to 12: English as a Second Language and English Literacy Development, 2007*, page 56.

Except in English Literacy Development, ELD Level 3 (see below), there is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in the English as a second language (ESL) or English literacy development (ELD) courses. However, in various strands in all ESL/ELD courses, the learning context and/or learning materials could be used to foster students’ awareness and deepen their knowledge of health and safety issues.

English Literacy Development, ELD Level 3, Open (ELDCO)

Writing

1. Writing for Different Purposes

Academic Purposes

- 1.1** write short texts to convey information and ideas for academic purposes using a variety of scaffolded forms (*e.g., ... outline safety instructions in a technology class ...*)

Community and Workplace Purposes

- 1.3** write short texts to communicate information for official and personal purposes using a number of forms (*e.g., a school or work accident report, ...*)

FRENCH AS A SECOND LANGUAGE – CORE FRENCH, EXTENDED FRENCH, FRENCH IMMERSION (2014)

See the Preface for important information regarding:

- the organization of the following material;
- common messages respecting health and safety, safe behaviours, and safe practices found in the front matter of the curriculum policy documents.

See also the section “Health and Safety in the French as a Second Language Program” in *The Ontario Curriculum, Grades 9 to 12: French as a Second Language – Core French, Extended French, French Immersion, 2014*, page 55.

With the exception of the expectations listed below, there is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in the French as a second language (FSL) curriculum. However, in various strands in all FSL courses, the learning context and/or learning materials could be used to foster students’ awareness and deepen their knowledge of health and safety issues.

THE FRENCH IMMERSION PROGRAM, GRADES 9 TO 12

French Immersion, Grade 11, Open (FIF3O)

B. Speaking

B2. Speaking to Interact

B2.2 Interacting: engage in sustained spoken interactions in French (prepared and spontaneous), in a variety of contexts, about a variety of topics (*e.g., ... role-play a press conference with a minister of health in which they discuss health and safety in the lives of children, adolescents, ...*)

C. Reading

C1. Reading Comprehension

C1.5 Responding to and Evaluating Media Texts: explain ideas and information in a variety of French media texts, and evaluate the effectiveness of the treatment and presentation of the messages (*e.g., evaluate a poster created by a peer to inform workers about the safe storage, handling and disposal of hazardous materials; ...*)

French Immersion, Grade 12, Open (FIF4O)

D. Writing

D1. Purpose, Audience, and Form

D1.3 Creating Media Texts: create media texts in French on a variety of topics, using forms, conventions, and techniques appropriate to the purpose and audience (*e.g., ... create a brochure on workplace safety; ...*)

GUIDANCE AND CAREER EDUCATION, GRADES 9 AND 10 (2006) AND GRADES 11 AND 12 (2006)

See the Preface for important information regarding:

- the organization of the following material;
- common messages respecting health and safety, safe behaviours, and safe practices found in the front matter of the curriculum policy documents.

See also the section “Health and Safety in Guidance and Career Education” in *The Ontario Curriculum, Grades 9 and 10: Guidance and Career Education, 2006*, page 25, and in *The Ontario Curriculum, Grades 11 and 12: Guidance and Career Education, 2006*, page 25.

GRADES 9 AND 10

Learning Strategies 1: Skills for Success in Secondary School, Grade 9, Open (GLS10, GLE10, GLE20)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course.

Career Studies, Grade 10, Open (GLC20)

Exploration of Opportunities

Accessing and Managing Information

- describe, on the basis of research, selected occupations or fields of work, using identified criteria (*e.g., ... safety issues; ...*)
- explain the importance of safety in the workplace and related employee and employer rights and responsibilities

Discovering the Workplace, Grade 10, Open (GLD20)

Essential Skills for Working and Learning

The following expectations do not explicitly mention health and safety, safe behaviours, or safe practices. However, if teachers broaden the approach to “essential skills”, as discussed below, these expectations provide ample opportunities to foster students’ awareness and deepen their knowledge of health and safety issues.

Developing Workplace Essential Skills

- plan for, assess, and document their ongoing development and demonstration of selected workplace essential skills
 - assess their use of selected workplace essential skills, using feedback from others (*e.g., peers, teachers, supervisors*)
 - demonstrate the ability to plan for the development of the workplace essential skills that they require to complete specific tasks in school and in the community
 - document their development of selected workplace essential skills, including evidence of demonstration of these skills from their Ontario Skills Passport

Although these expectations refer only to essential skills, the Ontario Skills Passport (OSP) lists work habits in addition to these skills. Teachers are encouraged to integrate work habits from the OSP into an expanded discussion of essential skills, in the interests of more fully addressing health and safety issues. The following work habits are taken from a section of the OSP entitled “Working Safely”:

- working in a manner that prevents injury to self and others
- reporting unsafe conditions
- participating in health and safety training, as required
- using and wearing all required protective equipment and devices

For more information on essential skills and work habits, see the OSP website.

Exploration of Opportunities

Understanding the Workplace

- demonstrate an understanding of the nature of work and of workplace expectations and issues
 - identify various workplace issues (*e.g., ... harassment, ... responsible use of technology*) and explain how policies and procedures dealing with these issues contribute to a positive and productive work environment
 - explain workers’ rights (*e.g., right to refuse unsafe work, right to reasonable accommodation*) and responsibilities (*e.g., accident reporting*), and identify federal and provincial legislation in which they are described (*e.g., Hazardous Products Act, Ontario Human Rights Act*)

Demonstrating Health and Safety Awareness

- identify, explain, and follow health and safety policies and procedures in school and in workplace settings
 - identify health and safety hazards in school and in the workplace
 - explain and follow health and safety policies (*e.g., proper handling of tools/equipment, correct use of personal protective equipment*) and procedures (*e.g., fire drill, evacuation, equipment lockouts*) at school or in a workplace setting
 - identify procedures for reporting accidents and unsafe practices in school and in the workplace

GRADES 11 AND 12

Designing Your Future, Grade 11, Open (GWL3O)

Exploration of Opportunities

The Workplace

- demonstrate an understanding of types of workplaces, their related workplace issues, and legislation governing the workplace
 - describe key features of legislation governing human rights, antidiscrimination, employment, and workplace health and safety (*e.g., Ontario Human Rights Code, Employment Standards Act, Occupational Health and Safety Act*) and relate these to their observations of how the rights and responsibilities of employees and employers are addressed in their workplace experiences

Leadership and Peer Support, Grade 11, Open (GPP3O)

Interpersonal Knowledge and Skills

Connecting with the Community

- describe their rights (*e.g., a safe environment, freedom from harassment and discrimination, adequate training*) and responsibilities (*e.g., ... following safety procedures*) in various leadership and peer support roles

Advanced Learning Strategies: Skills for Success after Secondary School, Grade 12, Open (GLS4O/GLE4O/GLE3O)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course.

Navigating the Workplace, Grade 12, Open (GLN4O)

Essential Skills for Working and Learning

The following expectations do not explicitly mention health and safety, safe behaviours, or safe practices. However, if teachers broaden their approach to “essential skills”, as discussed below, these expectations provide ample opportunities to foster students’ awareness and deepen their knowledge of health and safety issues.

Developing Workplace Essential Skills

- plan for, assess, and document their ongoing development and demonstration of selected workplace essential skills
 - assess their application of selected workplace essential skills, using feedback from others (*e.g., peers, teachers, supervisors*)

- produce a gap analysis of their workplace essential skills by identifying the workplace essential skill requirements for a specific occupation, comparing the requirements with the skills they have, and identifying the skills they need to develop
- produce a plan for the development of the workplace essential skills that they require to complete specific tasks in the community or workplace
- document their ongoing development of selected workplace essential skills, including evidence of demonstration of these skills from their Ontario Skills Passport

Although these expectations refer only to essential skills, the Ontario Skills Passport (OSP) lists work habits in addition to these skills. Teachers are encouraged to integrate work habits from the OSP into an expanded discussion of essential skills, in the interests of more fully addressing health and safety issues. The following work habits are taken from a section of the OSP entitled “Working Safely”:

- working in a manner that prevents injury to self and others
- reporting unsafe conditions
- participating in health and safety training, as required
- using and wearing all required protective equipment and devices

For more information, see the OSP website.

Exploration of Opportunities

Understanding the Workplace

- demonstrate an understanding of the nature of work and of workplace expectations and issues
 - explain workers’ rights (*e.g., right to refuse unsafe work, right to reasonable accommodation*) and responsibilities (*e.g., accident reporting*), and identify federal and provincial legislation in which they are described (*e.g., Hazardous Products Act, Ontario Human Rights Act*)

Demonstrating Health and Safety Awareness

- identify, explain, and follow health and safety policies and procedures in school and in the workplace
 - identify potential health and safety hazards in a workplace setting
 - describe safety practices associated with work-related risk reduction and injury prevention (*e.g., safety training, hazard recognition, risk management, ergonomic considerations, workplace accessibility*) in a workplace setting
 - explain and follow health and safety policies (*e.g., proper handling of tools and equipment, use of personal protective equipment*) and procedures (*e.g., fire drill, evacuation, equipment lockouts*) in a workplace setting
 - describe procedures for reporting accidents and unsafe practices, and explain why they are necessary in the workplace

Preparation for Transitions and Change

Searching for Work

- document evidence of the knowledge, skills (including workplace essential skills), and work habits that they have acquired in the workplace or through volunteering, using the Ontario Skills Passport and other tracking tools

HEALTH AND PHYSICAL EDUCATION, GRADES 9 TO 12 (2015)

See the Preface for important information regarding:

- the organization of the following material;
- common messages respecting health and safety, safe behaviours, and safe practices found in the front matter of the curriculum policy documents.

See the section “Health and Safety in Health and Physical Education” in *The Ontario Curriculum, Grades 9 to 12: Health and Physical Education, 2015*, page 61. For the Healthy Active Living Education (HALE) courses, see also the descriptions of the curriculum strands Active Living (specifically the subsection “Safety”, p. 30) and Healthy Living (specifically the subsection “Personal Safety and Injury Prevention”, p. 41).

In the health and physical education curriculum, expectations often have extensive examples and teacher prompts/student responses, many of which illustrate relevant learning opportunities. Although every instance may not be given, the selection below is representative.

Healthy Active Living Education, Grade 9, Open (PPL10)

A. Active Living

- A3.** demonstrate responsibility for their own safety and the safety of others as they participate in physical activities

A3. Safety

- A3.1** demonstrate behaviours and apply procedures that maximize their safety and that of others (*e.g., wearing appropriate clothing and required protective equipment, ensuring that they are carrying personal medical devices such as inhalers or epinephrine autoinjectors, participating in warm-up and cool-down activities, ... using equipment and facilities correctly and in an appropriate manner, performing a safety check of the area before starting an activity, ...*) in a variety of physical activity settings ...

Teacher prompt: “What should you do to ensure that your surroundings are safe before participating in various kinds of activities?”

Students: ... “Before hiking on park trails, we should check for weather warnings and find out about any hazards in the area.” “No matter what the activity is, we should always ‘think on our feet’. If we find ourselves in an unfamiliar or unexpected situation, we should look for potential risks and hazards and think about how to respond safely to them.”

- A3.2** demonstrate an understanding of how to deal with emergency situations related to physical activities (*e.g., know when to call for assistance or phone 9-1-1; ...*)

Teacher prompt: “What are some examples of situations in which you should call 9-1-1?”

Student: “You should call 9-1-1 whenever there is a life-threatening emergency or you need an ambulance, the police, or the fire department. For example, you should call 9-1-1 if someone is having a hard time speaking or breathing, or if someone collapses, passes out ...”

C. Healthy Living

- C3.** demonstrate the ability to make connections that relate to health and well-being – how their choices and behaviours affect both themselves and others, and how factors in the world around them affect their own and others’ health and well-being

C3. Making Connections for Healthy Living

Personal Safety and Injury Prevention

- C3.3** describe skills and strategies (*e.g., communication, social, refusal, adaptive, and coping skills, conflict resolution strategies*) that can be used to prevent or respond to situations of verbal, physical, and social bullying and sexual harassment (*e.g., ... homophobic comments, racial teasing or conflict, weight-based teasing, ... inappropriate sexual behaviour*)

Teacher prompt: “Everyone needs to feel accepted and safe in their school and in the community. This requires respect for others, cooperation, and an appreciation of others’ differences. Slurs against others are disrespectful and hurtful and violate their human dignity. What can be done to change or challenge this kind of harassment?”

Student: “We can be role models by not using disrespectful language and not accepting it if we hear others say things that are sexist, homophobic, or racist or use other put-downs such as comments about weight or appearance. We can show our support for those who are being disrespected by standing up for them and telling their abusers to stop. If the situation doesn’t feel safe, we can help the person get out of the situation or get help.”

Healthy Active Living Education, Grade 10, Open (PPL2O)

A. Active Living

- A3.** demonstrate responsibility for their own safety and the safety of others as they participate in physical activities

A3. Safety

- A3.1** demonstrate behaviours and apply procedures that maximize their safety and that of others (*e.g., ... wearing safety equipment where necessary, ...*) in a variety of physical activity settings

Teacher prompt: “What are some things you can do to make conditions safe for your activity?”

Students: “We can look for hazards, like spilled water on the floor or unnecessary equipment on the playing area, and remove them.”

- A3.2** identify resources that can be of assistance in emergency situations related to physical activity (*e.g., automated external defibrillator [AED] to restart the heart; first-aid kit for minor injuries; communication devices such as intercoms, walkie-talkies, and cell phones; GPS device for determining location; ... epinephrine autoinjector for someone with a severe allergic reaction or inhaler for someone with asthma*)

C. Healthy Living

- C2.** demonstrate the ability to apply health knowledge and living skills to make reasoned decisions and take appropriate actions relating to their personal health and well-being

C2. Making Healthy Choices

Personal Safety and Injury Prevention

- C2.3** demonstrate the ability to analyse situations involving conflict within oneself ... or conflict with others ... and apply appropriate conflict resolution strategies (*e.g., ... applying de-escalation techniques such as using calming words or taking a break to defuse a tense situation, ... seeking help from a person in authority*)

Teacher prompt: "... How would you handle a conflict with someone, such as a teacher or an employer, who is in a position of authority over you?"

Students: "In the case of a conflict with an employer, I would make sure that I know what my rights are. For example, if my boss asks me to do work that is unsafe, I know that I have the legal right to refuse. However, in a situation like that I would first try to resolve the situation without conflict by asking my boss for the proper training or a different job. If my boss still insisted that I do the work, I would need to get support from another adult."

Healthy Active Living Education, Grade 11, Open (PPL3O)

Living Skills

- 1.** demonstrate personal and interpersonal skills and the use of critical and creative thinking processes as they acquire knowledge and skills in connection with the expectations in the Active Living, Movement Competence, and Healthy Living strands for this grade

Personal Skills

- 1.1** use self-awareness and self-monitoring skills to help them understand their strengths and needs, recognize sources of stress, take responsibility for their actions, and monitor their own progress as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living (*e.g., ... Healthy Living: explain how some of their choices and behaviours can keep them safe and how others can put them at higher risk of injury or death*)
- 1.2** use adaptive, management, and coping skills to help them respond to the various challenges they encounter as they participate in physical activities, develop movement competence, and acquire knowledge and skills related to healthy living (*e.g., Active Living: conduct a safety inspection of the activity area and remove hazards, modify activities so that hazards are avoided, or move to a safer activity area; ...*)

A. Active Living

- A3.** demonstrate responsibility for their own safety and the safety of others as they participate in physical activities.

A3. Safety

- A3.1** demonstrate behaviours and apply procedures that maximize their safety and that of others (*e.g., wearing appropriate clothing and/or required safety equipment where necessary, ... ; checking environmental and facility conditions before an activity; ...*)
- A3.2** demonstrate an understanding of basic procedures for ensuring safety at physical activity sites and events (*e.g., preparing an emergency action plan, ensuring that a working communication device is readily accessible, checking to see that activity areas are free of hazards and that equipment is in safe working condition, ...*), and describe resources, community agencies, and services that can be accessed in emergency situations (*e.g., on-site emergency equipment such as a first-aid kit or an automated external defibrillator (AED), on-site medical team made up of certified personnel, community and commercial medical emergency response teams, nearby hospitals or community health centres*)

C. Healthy Living

- C1.** demonstrate an understanding of factors that contribute to healthy development

C1. Understanding Health Concepts

Personal Safety and Injury Prevention

- C1.2** identify behaviours and actions that can lead to adolescent injuries or death, and explain the factors that can influence adolescents to engage in or refrain from potentially harmful or dangerous behaviour

Teacher prompt: “... What might influence someone to engage in behaviour that involves a risk of harm to themselves or others? What are some things that can help you make safer decisions?”

Student: “... Things that help you make safer decisions include education and training, having clear personal goals, and pre-planning what you might do when someone suggests taking part in an activity that could put you at risk. Peer influence can also be a positive factor if it prevents you from doing something unsafe.”

Teacher prompt: “What are some examples of things you can do to stay safe in a variety of situations?”

Students: ... “Always get adequate training and use protective equipment with potentially dangerous work.”

- C2.** demonstrate the ability to apply health knowledge and living skills to make reasoned decisions and take appropriate actions relating to their personal health and well-being

C2. Making Healthy Choices

Personal Safety and Injury Prevention

- C2.1** describe behaviours and strategies (*e.g., thinking before acting, ... using workplace safety checklists, wearing protective gear, ... following guidelines, planning before making decisions, ... using refusal and assertiveness skills to question and refuse to participate in unsafe situations, supporting peers in making safer decisions*) that can be applied to make safer choices in a variety of situations and settings (*e.g., at school, at home, in the workplace, in the community*) and reduce the risk of personal injury or death

- C3.** demonstrate the ability to make connections that relate to health and well-being – how their choices and behaviours affect both themselves and others, and how factors in the world around them affect their own and others’ health and well-being

C3. Making Connections for Healthy Living

Personal Safety and Injury Prevention

- C3.2** describe the social and financial impacts (*e.g., medical costs, costs of emergency services, risk to emergency workers, emotional trauma for friends and family*) of behaviours and actions that can lead to injury or harm, and describe ways of promoting behaviours that reduce adolescent injuries or deaths

Teacher prompt: “Give examples of how you could promote behaviours that could reduce the chances of injuries among people in your age group.”

Students: “Both at school and elsewhere, we can encourage others to make decisions that keep them safe. We can also be role models by taking responsibility for our own actions.”
“We could have an assembly about safety to promote things like thinking first, wearing proper safety equipment, and being careful when driving or working with machinery.”

Healthy Active Living Education, Grade 12, Open (PPL40)

A. Active Living

- A3.** demonstrate responsibility for their own safety and the safety of others as they participate in physical activities

A3. Safety

- A3.1** demonstrate behaviours and apply procedures that maximize their safety and that of others (*e.g., making sure they and others are ready before beginning activities, ... assessing the safety of the equipment and reporting concerns to the instructor*) in a variety of physical activity settings ...

Teacher prompt: “You have just done a facility check of the fitness room. What did you find?”

Student: “There were some free weights on the floor, so we put them back on the rack. We noticed that one of the cables was starting to fray. Could you please come and look at it?”

C. Healthy Living

- C1.** demonstrate an understanding of factors that contribute to healthy development

C1. Understanding Health Concepts

Personal Safety and Injury Prevention

- C1.1** demonstrate an understanding of the effects and legal implications of different types of harassment, violence, and abuse (*e.g., physical, psychological, social, sexual*) in different relationships and settings (*e.g., peer, family, intimate, workplace, community, online*) as they relate to persons being targeted, bystanders, and perpetrators, and describe ways of responding to and preventing such situations

Health for Life, Grade 11, College Preparation (PPZ3C)

A. Determinants of Health

A2. explain how social factors influence personal health

A2. Social Factors

A2.3 explain how sex, gender identity, and social and cultural background can influence health ...

Teacher prompt: "... Provide some ... examples of how gender- and sex-related differences can affect a person's health and well-being."

Students: "In some families, women continue to have the major responsibility for family care. Trying to balance the demands of their jobs with the needs of their families can be a major source of stress that may lead to significant health problems." "Men are more likely to be injured or killed in work-related accidents. This is mainly because men tend to be employed more in occupations that involve working with heavy equipment, working outdoors, or working in other situations that present a higher level of physical risk." "Accidental injury rates are highest among young men. Higher numbers of young males are connected to incidents involving physical risks or behaviour that may cause harm involving drugs, alcohol, or vehicles." "The classic signs of a heart attack are similar for both sexes, but women are more likely to have symptoms that are less typical and women's symptoms may be less pronounced. As a result, women's heart attacks may not be detected and treated as quickly as men's."

A3. demonstrate an understanding of various environmental factors that influence personal health

A3. Environmental Factors

A3.3 identify school and workplace conditions (*e.g., poor air quality, overcrowding, noise, poor lighting, hygiene problems, poor quality of machinery and equipment, inadequate inspection or maintenance of machinery and equipment*) that could have harmful effects on personal health and safety ... and describe ways to make school and workplace environments healthier and safer ...

C. Healthy Communities

C1. demonstrate the ability to assess the quality of health information and use credible health information to make informed decisions and take appropriate action about matters affecting their health

C1. Consumer Health

C1.2 identify factors (*e.g., contamination during production, consumption of foods after their expiry dates, certain food additives, improperly prepared foods*) that may lead to food-related ailments, and describe measures for avoiding their occurrence

Teacher prompt: "... We can ... get food-related illnesses if we do not handle food properly at home. What are some things that we can do to prevent food-related illnesses ...?"

Student: "When handling food, we should ensure that perishables are refrigerated properly, that we wash our hands before preparing food, that food preparation areas and equipment are clean and sanitary, and that we do not keep foods past their expiry dates ..."

Introduction to Kinesiology, Grade 12, University Preparation (PSK4U)

There is no mention of injury prevention or health protection, safe behaviours, or safe practices in either the overall or specific expectations in this course. However, such issues would be pertinent when addressing growth and motor development in specific expectation C2.2 (“demonstrate the ability to design a movement-based activity appropriate to a particular age and stage of development”).

Recreation and Healthy Active Living Leadership, Grade 12, University/College Preparation (PLF4M)

B. Facilitation of Recreation and Leisure

B3. demonstrate an understanding of safety procedures needed for injury prevention in a variety of activities related to healthy, active living

B3. Safety and Injury Prevention

B3.2 demonstrate the ability to apply procedures for preventing injuries in a variety of activities related to healthy, active living (*e.g., following the board’s risk management guidelines, using protective equipment, identifying hazards within the event area and bringing attention to them, following fire regulations*)

Teacher prompt: “When planning an event, we need to develop an emergency action plan that adheres to the board’s risk management guidelines and the school’s safety policies and procedures. What other steps can we take to avoid injuries during physical activity?”

Student: “We can also go through a safety checklist before beginning the activity. The checklist would include such questions as: Is there appropriate supervision in place or a qualified instructor to lead the activity? Have the activity area and equipment been inspected? Is there a fully stocked and readily available first-aid kit? Is the emergency action plan in place? Can students of all abilities participate safely?”

B3.3 demonstrate an understanding of skills needed by first responders (*e.g., qualified first-aid personnel, including those with cardiopulmonary resuscitation [CPR], emergency first aid, or aquatics certification and individuals trained in the use of an automated external defibrillator [AED]*) to respond to medical emergencies in a variety of physical activities

Teacher prompt: “When planning an event, you need to make sure that procedures are in place for ensuring the safety of both participants and spectators. Events should be overseen by qualified supervisors so that the risk of injury is minimized, but qualified first responders should also be available so that medical emergencies can be dealt with immediately. Think of some different events you might be involved in planning and the kinds of medical emergencies that might arise. What types of skills would first responders need to respond to those emergencies? Who would have those skills?”

INTERDISCIPLINARY STUDIES, GRADES 11 AND 12 (2002)

See the Preface for important information regarding:

- the organization of the following material;
- common messages respecting health and safety, safe behaviours, and safe practices found in the front matter of the curriculum policy documents.

See also the section “Health and Safety” in *The Ontario Curriculum, Grades 11 and 12: Interdisciplinary Studies, 2002*, page 49.

Interdisciplinary Studies, Grade 11, Open (IDC3O or IDP3O)

Implementation, Evaluation, Impacts, and Consequences

Implementation and Communication

- create interdisciplinary products based on their own plans or designs, independently or as members of a team (*e.g., ... a health and safety plan in response to a customer survey*)

Interdisciplinary Studies, Grade 12, University Preparation (IDC4U or IDP4U)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course.

Interdisciplinary Studies, Grade 12, Open (IDC4O or IDP4O)

Theory and Foundation

Ideas and Issues

- identify the principles, practices, and systems regarding the safe, ethical, and legal use of information technologies (*e.g., in terms of ergonomics, ...*) and describe the consequences of their appropriate and inappropriate use for each of the subjects or disciplines studied

Implementation, Evaluation, Impacts, and Consequences

Implementation and Communication

- analyse case studies in which specific methods and technologies were used in each of the subjects or disciplines studied to communicate and receive information safely, legally, and ethically (*e.g., ... applying health and safety procedures*) and assess the effectiveness of the methods and technologies used

Personal and Career Development

- analyse their personal information skills (*e.g., their ability ... to follow appropriate safety and privacy procedures, ...*) and identify those skills that require development if they are to achieve success in interdisciplinary studies

MATHEMATICS, GRADES 9 AND 10 (2005) AND GRADES 11 AND 12 (2007)

See the Preface for important information regarding:

- the organization of the following material;
- common messages respecting health and safety, safe behaviours, and safe practices found in the front matter of the curriculum policy documents.

See also the section “Health and Safety in Mathematics” in *The Ontario Curriculum, Grades 9 and 10: Mathematics, 2005*, page 28, and in *The Ontario Curriculum, Grades 11 and 12: Mathematics, 2007*, page 39.

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in the mathematics curriculum. However, teachers could integrate aspects of health and safety into mathematical problem solving, as shown below. The “Connecting” expectation within the “Mathematical process expectations” that appear at the beginning of each mathematics course requires that students “make connections among mathematical concepts and procedures, and relate mathematical ideas to situations or phenomena drawn from other contexts (e.g., other curriculum areas, daily life, current events, art and culture, sports)”. To support this expectation, teachers could integrate health and safety issues from other disciplines, from students’ work experience, or from the media into mathematical problem solving. For example, in the following expectation, drawn from Strand A: Reasoning with Data, in *Mathematics for Work and Everyday Life, Grade 12, Workplace Preparation (MEL4E)*, it is suggested that students use data on workplace injuries when investigating probability:

- 2.6** interpret information involving the use of probability and statistics in the media, and describe how probability and statistics can help in making informed decisions in a variety of situations (*e.g., weighing the risk of injury when considering different occupations; ...*)

NATIVE LANGUAGES, GRADES 9 AND 10 (1999) AND GRADES 11 AND 12 (2000)

See the Preface for important information regarding:

- the organization of the following material;
- common messages respecting health and safety, safe behaviours, and safe practices found in the front matter of many of the curriculum policy documents. While the front matter of the Native languages documents does not include a section on health and safety, many of the common messages given in the Preface still apply.

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in the Native languages courses. However, teachers should be aware that the achievement chart for Native languages includes the criterion of safety in the assessment of the “application of procedures, equipment, and technology” (see *The Ontario Curriculum, Grades 9 and 10: Native Languages, 1999*, page 35, and *The Ontario Curriculum, Grades 11 and 12: Native Languages, 2000*, page 29). Teachers should plan for, recognize, and seize “teachable moments” to build on students’ understanding and awareness of safety in these contexts.

In addition, as shown below, examples in some Native language courses refer to health issues. In such instances, students could focus on issues related to health and safety, safe behaviours, or safe practices in the workplace.

Native Languages, Level 4, Open (NL4) (LNADO–LNODO)

Reading

Use of Words and Language Patterns

- communicate in a Native language to exchange ideas and feelings on social issues (e.g., *issues in health, ...*) with other students, using electronic technology

Writing

Reasoning and Critical Thinking

- communicate in a Native language to exchange ideas and feelings on social issues (e.g., *health issues, ...*) with other students, using electronic technology

Native Languages, Level 5, Open (NL5) (LNAEO–LNOEO)

Writing

Reasoning and Critical Thinking

- communicate in a Native language with other students on contemporary issues (e.g., *... health*) using electronic technology

NATIVE STUDIES, GRADES 9 AND 10 (1999) AND GRADES 11 AND 12 (2000)

See the Preface for important information regarding:

- common messages respecting health and safety, safe behaviours, and safe practices found in the front matter of curriculum policy documents. While the front matter of the Native studies documents does not include a section on health and safety, many of the common messages given in the Preface still apply.

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in the Native studies curriculum. However, teachers should be aware that the achievement chart for Native studies includes the criterion of safety in the assessment of the “application of procedures, equipment, and technology” (see *The Ontario Curriculum, Grades 9 and 10: Native Studies, 1999*, page 25, and *The Ontario Curriculum, Grades 11 and 12: Native Languages, 2000*, page 29). Teachers should plan for, recognize, and seize “teachable moments” to build on students’ understanding and awareness of safety in these contexts.

SCIENCE, GRADES 9 AND 10 (2008) AND GRADES 11 AND 12 (2008)

See the Preface for important information regarding:

- the organization of the following material;
- common messages respecting health and safety, safe behaviours, and safe practices found in the front matter of the curriculum policy documents.

See also the section “Health and Safety in Science” in *The Ontario Curriculum, Grades 9 and 10: Science, 2008*, page 30, and in *The Ontario Curriculum, Grades 11 and 12: Science, 2008*, page 32.

GRADES 9 AND 10

Science, Grade 9, Academic (SNC1D)

A. Scientific Investigation Skills and Career Exploration

A1. Scientific Investigation Skills

Initiating and Planning

A1.4 apply knowledge and understanding of safe practices and procedures when planning investigations (*e.g., appropriate techniques for handling, storing, and disposing of laboratory materials [following the Workplace Hazardous Materials Information System–WHMIS]; safe operation of electrical equipment; safe handling of biological materials*), with the aid of appropriate support materials (*e.g., the Reference Manual on the WHMIS website; the Live Safe! Work Smart! website*)

Performing and Recording

A1.5 conduct inquiries, controlling some variables, adapting or extending procedures as required, and using standard equipment and materials safely, accurately, and effectively, to collect observations and data

Science, Grade 9, Applied (SNC1P)

A. Scientific Investigation Skills and Career Exploration

A1. Scientific Investigation Skills

Initiating and Planning

A1.4 apply knowledge and understanding of safe practices and procedures when planning investigations (*e.g., appropriate techniques for handling, storing, and disposing of laboratory materials [following the Workplace Hazardous Materials Information System–WHMIS]; safe operation of electrical equipment; safe handling of biological materials*), with the aid of appropriate support materials (*e.g., the Reference Manual on the WHMIS website; the Live Safe! Work Smart! website*)

Performing and Recording

A1.5 conduct inquiries, controlling some variables, adapting or extending procedures as required, and using standard equipment and materials safely, accurately, and effectively, to collect observations and data

Science, Grade 10, Academic (SNC2D)

A. Scientific Investigation Skills and Career Exploration

A1. Scientific Investigation Skills

Initiating and Planning

A1.4 apply knowledge and understanding of safe practices and procedures when planning investigations (*e.g., appropriate techniques for handling, storing, and disposing of laboratory materials [following the Workplace Hazardous Materials Information System–WHMIS]; safe operation of optical equipment; safe handling and disposal of biological materials*), with the aid of appropriate support materials (*e.g., the Reference Manual on the WHMIS website; the Live Safe! Work Smart! website*)

Performing and Recording

A1.5 conduct inquiries, controlling some variables, adapting or extending procedures as required, and using standard equipment and materials safely, accurately, and effectively, to collect observations and data

C. Chemistry: Chemical Reactions

C1. analyse a variety of safety and environmental issues associated with chemical reactions ...

C1. Relating Science to Technology, Society, and the Environment

C1.1 analyse, on the basis of research, various safety and environmental issues associated with chemical reactions and their reactants and/or product(s) ...

Sample questions: ... Why is it important to understand WHMIS information, including Material Safety Data Sheets, before using any chemicals?

Science, Grade 10, Applied (SNC2P)

A. Scientific Investigation Skills and Career Exploration

A1. Scientific Investigation Skills

Initiating and Planning

A1.4 apply knowledge and understanding of safe practices and procedures when planning investigations (*e.g., appropriate techniques for handling, storing, and disposing of laboratory materials [following the Workplace Hazardous Materials Information System–WHMIS]; safe operation of optical equipment; safe handling and disposal of biological materials*), with the aid of appropriate support materials (*e.g., the Reference Manual on the WHMIS website; the Live Safe! Work Smart! website*)

Performing and Recording

A1.5 conduct inquiries, controlling some variables, adapting or extending procedures as required, and using standard equipment and materials safely, accurately, and effectively, to collect observations and data

C. Chemistry: Chemical Reactions and Their Practical Applications

C1. analyse how chemical reactions are employed in common products and processes, and assess the safety and environmental hazards associated with them

C1. Relating Science to Technology, Society, and the Environment

C1.2 identify practical applications of chemical reactions in a particular profession (*e.g., ceramics, cosmetology, firefighting, heating and cooling system technology, food preparation, plumbing, custodial services*), and assess the associated hazards, including hazards associated with the handling and disposal of chemicals

Sample questions: How do lab technicians protect themselves from chemical reactions in their work environment? What applications of chemical reactions are used by hair stylists? What precautions can they take in using and disposing of the chemicals? What types of chemical reactions do chefs need to be aware of when they process or store food? What precautions should an auto mechanic take when changing the fluids in a car?

BIOLOGY, GRADES 11 AND 12

Biology, Grade 11, University Preparation (SBI3U)

A. Scientific Investigation Skills and Career Exploration

A1. Scientific Investigation Skills

Initiating and Planning

A1.4 apply knowledge and understanding of safe laboratory practices and procedures when planning investigations by correctly interpreting Workplace Hazardous Materials Information System (WHMIS) symbols; by using appropriate techniques for handling and storing laboratory equipment and materials and disposing of laboratory and biological materials (*e.g., preserved specimens*); and by using appropriate personal protection

Performing and Recording

A1.5 conduct inquiries, controlling relevant variables, adapting or extending procedures as required, and using appropriate materials and equipment safely, accurately, and effectively, to collect observations and data

Biology, Grade 11, College Preparation (SBI3C)

A. Scientific Investigation Skills and Career Exploration

A1. Scientific Investigation Skills

Initiating and Planning

A1.4 apply knowledge and understanding of safe laboratory practices and procedures when planning investigations by correctly interpreting Workplace Hazardous Materials Information System (WHMIS) symbols; by using appropriate techniques for handling and storing laboratory equipment and materials and disposing of laboratory and biological materials (*e.g., preserved specimens*); and by using appropriate personal protection

Performing and Recording

A1.5 conduct inquiries, controlling relevant variables, adapting or extending procedures as required, and using appropriate materials and equipment safely, accurately, and effectively, to collect observations and data

Biology, Grade 12, University Preparation (SBI4U)

A. Scientific Investigation Skills and Career Exploration

A1. Scientific Investigation Skills

Initiating and Planning

A1.4 apply knowledge and understanding of safe laboratory practices and procedures when planning investigations by correctly interpreting Workplace Hazardous Materials Information System (WHMIS) symbols; by using appropriate techniques for handling and storing laboratory equipment and materials and disposing of laboratory and biological materials (*e.g., plants and invertebrates*); and by using appropriate personal protection

Performing and Recording

A1.5 conduct inquiries, controlling relevant variables, adapting or extending procedures as required, and using appropriate materials and equipment safely, accurately, and effectively, to collect observations and data

CHEMISTRY, GRADES 11 AND 12

Chemistry, Grade 11, University Preparation (SCH3U)

A. Scientific Investigation Skills and Career Exploration

A1. Scientific Investigation Skills

Initiating and Planning

A1.4 apply knowledge and understanding of safe laboratory practices and procedures when planning investigations by correctly interpreting Workplace Hazardous Materials Information System (WHMIS) symbols; by using appropriate techniques for handling and storing

laboratory equipment and materials and disposing of laboratory materials; and by using appropriate personal protection (*e.g., wearing safety goggles*)

Performing and Recording

A1.5 conduct inquiries, controlling relevant variables, adapting or extending procedures as required, and using appropriate materials and equipment safely, accurately, and effectively, to collect observations and data

Chemistry, Grade 12, University Preparation (SCH4U)

A. Scientific Investigation Skills and Career Exploration

A1. Scientific Investigation Skills

Initiating and Planning

A1.4 apply knowledge and understanding of safe laboratory practices and procedures when planning investigations by correctly interpreting Workplace Hazardous Materials Information System (WHMIS) symbols; by using appropriate techniques for handling and storing laboratory equipment and materials and disposing of laboratory materials; and by using appropriate personal protection (*e.g., wearing safety goggles*)

Performing and Recording

A1.5 conduct inquiries, controlling relevant variables, adapting or extending procedures as required, and using appropriate materials and equipment safely, accurately, and effectively, to collect observations and data

B. Organic Chemistry

B1. assess the social and environmental impact of organic compounds used in everyday life, and propose a course of action to reduce the use of compounds that are harmful to human health and the environment

B1. Relating Science to Technology, Society, and the Environment

B1.1 assess the impact on human health, society, and the environment of organic compounds used in everyday life (*e.g., polymers, nutritional supplements, food additives, pharmaceuticals, pesticides*)

Sample issue: Organic solvents can dissolve many substances such as paint, oil, and grease. They are used to produce plastics, dyes, detergents, textiles, and pharmaceuticals. However, workers exposed to organic solvents may experience long-term effects on their health. Also, solvents from industrial spills and leaks can leach into soil and groundwater, posing serious health and environmental risks.

Sample questions: What methods should be used to safely dispose of volatile organic compounds? What WHMIS symbols or Household Hazardous Waste Symbols (HHWS) should appear on containers of pesticides? ...

C. Structure and Properties of Matter

C1. Relating Science to Technology, Society, and the Environment

C1.2 evaluate the benefits to society, and the impact on the environment, of specialized materials that have been created on the basis of scientific research into the structure of matter and chemical bonding ...

Sample questions: What precautions are taken to protect the health and safety of people working with nanoparticles? ...

Chemistry, Grade 12, College Preparation (SCH4C)

A. Scientific Investigation Skills and Career Exploration

A1. Scientific Investigation Skills

Initiating and Planning

A1.4 apply knowledge and understanding of safe laboratory practices and procedures when planning investigations by correctly interpreting Workplace Hazardous Materials Information System (WHMIS) symbols; by using appropriate techniques for handling and storing laboratory equipment and materials and disposing of laboratory materials (*e.g., safely disposing of organic solutions*); and by using appropriate personal protection (*e.g., wearing safety goggles*)

Performing and Recording

A1.5 conduct inquiries, controlling relevant variables, adapting or extending procedures as required, and using appropriate materials and equipment safely, accurately, and effectively, to collect observations and data

C. Organic Chemistry

C3. Understanding Basic Concepts

C3.7 explain the dangers associated with the use of organic solvents (*e.g., dry-cleaning compounds, paint thinners, glue solvents, nail polish remover*), and some general precautions related to their use

F. Chemistry in the Environment

F1. Relating Science to Technology, Society, and the Environment

F1.2 evaluate the importance of quantitative chemical analysis in assessing air and water quality ..., and explain how these analyses contribute to environmental awareness and responsibility

Sample questions: ... How does WHMIS aid in minimizing damage to the environment and ensuring the safety of individuals in a case of an industrial accident?

EARTH AND SPACE SCIENCE, GRADE 12

Earth and Space Science, Grade 12, University Preparation (SES4U)

A. Scientific Investigation Skills and Career Exploration

A1. Scientific Investigation Skills

Initiating and Planning

A1.4 apply knowledge and understanding of safe laboratory practices and procedures when planning investigations by correctly interpreting Workplace Hazardous Materials Information System (WHMIS) symbols; by using appropriate techniques for handling and storing laboratory equipment and materials and disposing of laboratory materials (*e.g., following safety procedures when collecting samples; using materials safely when identifying minerals and rocks*); and by using appropriate personal protection (*e.g., wearing safety goggles when testing rock or mineral samples; using proper protective eyewear when observing the sun*)

Performing and Recording

A1.5 conduct inquiries, controlling relevant variables, adapting or extending procedures as required, and using appropriate materials and equipment safely, accurately, and effectively, to collect observations and data

ENVIRONMENTAL SCIENCE, GRADES 11 AND 12

Environmental Science, Grade 11, University/College Preparation (SVN3M)

A. Scientific Investigation Skills and Career Exploration

A1. Scientific Investigation Skills

A1.4 apply knowledge and understanding of safe laboratory practices and procedures when planning investigations by correctly interpreting Workplace Hazardous Materials Information System (WHMIS) symbols; by using appropriate techniques for handling and storing laboratory equipment and materials and disposing of laboratory materials; and by using appropriate personal protection

Performing and Recording

A1.5 conduct inquiries, controlling relevant variables, adapting or extending procedures as required, and using appropriate materials and equipment safely, accurately, and effectively, to collect observations and data

Environmental Science, Grade 11, Workplace Preparation (SVN3E)

Big Ideas

The Safe and Environmentally Responsible Workplace: Workplace safety is the responsibility of both employees and employers.

A. Scientific Investigation Skills and Career Exploration

A1. Scientific Investigation Skills

Initiating and Planning

A1.4 apply knowledge and understanding of safe laboratory practices and procedures when planning investigations by correctly interpreting Workplace Hazardous Materials Information System (WHMIS) symbols; by using appropriate techniques for handling and storing laboratory equipment and materials and disposing of laboratory materials; and by using appropriate personal protection

Performing and Recording

A1.5 conduct inquiries, controlling relevant variables, adapting or extending procedures as required, and using appropriate materials and equipment safely, accurately, and effectively, to collect observations and data

F. The Safe and Environmentally Responsible Workplace

F1. assess workplace situations with respect to safety and environmental issues, and propose a course of action to address unsafe working conditions

F1. Relating Science to Technology, Society, and the Environment

F1.1 analyse unsafe working conditions that can affect young workers in various workplace situations (*e.g., using information from the Live Safe! Work Smart! website; using information obtained during a co-op placement or through experiential learning*), and propose a course of action that would help to improve one such situation

Sample issue: A young worker is asked by her employer to place boxes on the top shelf of an eight-foot storage unit. However, no one is available to help her, and the only ladder in the workplace is unstable. She is unsure what action she should take.

Sample questions: What are the most frequent injuries among young workers? What types of jobs result in the most frequent and/or most serious injuries among young workers? How can the risks associated with these injuries be reduced? How should a young worker address a safety concern? ...

F2. investigate a variety of safe and environmentally responsible workplace practices

F2. Developing Skills of Investigation and Communication

F2.1 use appropriate terminology related to safety and environmental responsibility in the workplace, including, but not limited to: *Möbius loop*, *Material Safety Data Sheet (MSDS)*, *Hazardous Household Product Symbols (HHPS)*, *hazardous material*, and *personal protective equipment (PPE)*

F2.2 demonstrate proper use of a variety of safety techniques and procedures after completing a recognized safety training program (*e.g., a “virtual WHMIS” program such as Passport to Safety*)

- F2.3** conduct an inventory of hazardous products, safety equipment, and personal protective equipment found in a workplace, using an accepted tool (*e.g., a FireSmart Assessment test from the Ministry of Natural Resources*), and communicate the results using a table or checklist
- F2.4** use appropriate techniques for handling, storing, and disposing of teacher-selected materials, drawing on Material Safety Data Sheets and Canadian Environmental Protection Act regulations (*e.g., use appropriate personal protective equipment*), and outline proper procedures for handling those materials in the workplace
- F2.5** design and report on a plan for reusing, recycling, reducing the volume of, or disposing of a hazardous material found in the workplace (*e.g., disposing of batteries, reusing motor or cooking oils for a different purpose*)
- F2.6** investigate the effectiveness of a personal protective device or environmental protection device for use in the workplace (*e.g., compare two different spill kits for absorbing spills; test the key features of a mask for protection from airborne particulate matter; identify the appropriate types of eye protection for different situations*)
- F3.** demonstrate an understanding of general workplace safety procedures and environmentally responsible practices
- F3. Understanding Basic Concepts**
 - F3.2** compare some of the features, uses, and environmental implications of Hazardous Household Product Symbols and WHMIS hazard symbols
 - F3.3** identify and describe common types of biological, physical, and chemical hazards in the workplace (*e.g., hazards posed by bacteria, noise, work at dangerous heights, use of chemicals and other hazardous materials*) and associated accident-prevention methods (*e.g., sterilization, soundproofing, use of five-point safety harnesses, use of safe storage cabinets, safe disposal of chemicals*)
 - F3.4** explain how the use of personal protective equipment (*e.g., aluminized gloves, a welding shield, ear plugs, a self-contained breathing apparatus, an air-purifying mask*) minimizes exposure to hazardous materials that can enter the body through ingestion, inhalation, absorption, and injection

PHYSICS, GRADES 11 AND 12

Physics, Grade 11, University Preparation (SPH3U)

A. Scientific Investigation Skills and Career Exploration

A1. Scientific Investigation Skills

Initiating and Planning

- A1.4** apply knowledge and understanding of safe laboratory practices and procedures when planning investigations by correctly interpreting Workplace Hazardous Materials Information System (WHMIS) symbols; by using appropriate techniques for handling and storing laboratory equipment and materials and disposing of laboratory materials; and by using appropriate personal protection

Performing and Recording

A1.5 conduct inquiries, controlling relevant variables, adapting or extending procedures as required, and using appropriate materials and equipment safely, accurately, and effectively, to collect observations and data

F. Electricity and Magnetism

F3. Understanding Basic Concepts:

F3.9 describe and explain safety precautions (*e.g., “call before you dig”, current-limiting outlets in bathrooms*) related to electrical circuits and higher transmission voltages (*e.g., with reference to transformer substations, buried cables, overhead power lines*)

Physics, Grade 12, University Preparation (SPH4U)

A. Scientific Investigation Skills and Career Exploration

A1. Scientific Investigation Skills

Initiating and Planning

A1.4 apply knowledge and understanding of safe laboratory practices and procedures when planning investigations by correctly interpreting Workplace Hazardous Materials Information System (WHMIS) symbols; by using appropriate techniques for handling and storing laboratory equipment and materials and disposing of laboratory materials; and by using appropriate personal protection

Performing and Recording

A1.5 conduct inquiries, controlling relevant variables, adapting or extending procedures as required, and using appropriate materials and equipment safely, accurately, and effectively, to collect observations and data

Physics, Grade 12, College Preparation (SPH4C)

A. Scientific Investigation Skills and Career Exploration

A1. Scientific Investigation Skills

Initiating and Planning

A1.4 apply knowledge and understanding of safe laboratory practices and procedures when planning investigations by correctly interpreting Workplace Hazardous Materials Information System (WHMIS) symbols; by using appropriate techniques for handling and storing laboratory equipment and materials and disposing of laboratory materials; and by using appropriate personal protection (*e.g., personal protective equipment when carrying out fluids experiments*)

Performing and Recording

A1.5 conduct inquiries, controlling relevant variables, adapting or extending procedures as required, and using appropriate materials and equipment safely, accurately, and effectively, to collect observations and data

D. Electricity and Magnetism

D3. Understanding Basic Concepts

D3.3 identify and explain safety precautions related to electrical circuits in the school, home, and workplace (*e.g., the importance of turning off the current before performing electrical repairs; the reasons for grounding circuits; how to safely replace spent fuses; the use of double insulated tools and appliance circuit breakers*)

SCIENCE, GRADE 12

Science, Grade 12, University/College Preparation (SNC4M)

A. Scientific Investigation Skills and Career Exploration

A1. Scientific Investigation Skills

Initiating and Planning

A1.4 apply knowledge and understanding of safe laboratory practices and procedures when planning investigations by correctly interpreting Workplace Hazardous Materials Information System (WHMIS) symbols; by using appropriate techniques for handling and storing laboratory equipment and materials and disposing of laboratory materials, including biological waste (*e.g., techniques to prevent contamination of specimens*); and by using appropriate personal protection (*e.g., wearing gloves when handling biological specimens*)

Performing and Recording

A1.5 conduct inquiries, controlling relevant variables, adapting or extending procedures as required, and using appropriate materials and equipment safely, accurately, and effectively, to collect observations and data

C. Pathogens and Disease

C1. Relating Science to Technology, Society, and the Environment

C1.2 evaluate the impact of individual choices (*e.g., with respect to vaccination, the proper use of antibiotics or mosquito repellent*) on the control of pathogens and the prevention of disease
Sample questions: What measures should food handlers take to prevent the spread of disease? ...

C3. Understanding Basic Concepts

C3.7 describe aseptic techniques used in the workplace, and explain their importance in preventing the spread of pathogens (*e.g., cooking meat to a safe temperature and refrigerating leftovers quickly to avoid growth of bacteria in restaurant food; frequent hand sanitizing and use of sterile gloves in hospitals to prevent the spread of pathogens to vulnerable populations*)

Science, Grade 12, Workplace Preparation (SNC4E)

Big Ideas

Hazards in the Workplace: Knowledge and understanding of science enable people to identify, explain, and minimize hazardous situations in the workplace.

Chemicals in Consumer Products: Incorrect handling and disposal of chemicals can lead to unsafe conditions in the home and the workplace and can harm the environment.

Electricity at Home and Work: Electrical equipment can pose a safety hazard in the home and workplace if it is not used correctly.

A. Scientific Investigation Skills and Career Exploration

A1. Scientific Investigation Skills

Initiating and Planning

A1.4 apply knowledge and understanding of safe laboratory practices and procedures when planning investigations by correctly interpreting Workplace Hazardous Materials Information System (WHMIS) symbols; by using appropriate techniques for handling and storing laboratory equipment and materials and disposing of laboratory materials; and by using appropriate personal protection

Performing and Recording

A1.5 conduct inquiries, controlling relevant variables, adapting or extending procedures as required, and using appropriate materials and equipment safely, accurately, and effectively, to collect observations and data

B. Hazards in the Workplace

B1. assess common workplace settings with respect to hazards, and analyse selected legislation that is in place to protect workers and the environment from these hazards

B1. Relating Science to Technology, Society, and the Environment

B1.1 assess a workplace setting, either real or simulated, with respect to hazards that could affect workers or the environment, using appropriate criteria (*e.g., a checklist for a health and safety audit*)

Sample issue: An employee has been asked to clean out the oil fryer at the restaurant where he works. He knows from his training that the fryer must cool down first, but the manager is rushing the clean-up crew to avoid having to pay them overtime.

Sample questions: What hazardous substances are used in the workplace being assessed? Are warnings posted as to the dangers they pose? How are the substances handled, stored, and disposed of? Are these practices safe? How might they be improved?

B1.2 analyse and summarize the requirements of selected sections of workplace safety and/or environmental protection legislation related to a career of personal interest (*e.g., regulations applying to mining in the Occupational Health and Safety Act; regulations applying to waste management in the Ontario Environmental Protection Act*)

Sample issue: Section 91.1 of the Ontario Environmental Protection Act requires employers to prevent or reduce the risk of spills of pollutants and, if such a spill does occur, to provide

the appropriate equipment, personnel, and material to clean it up. This section covers a range of workplaces where spills of environmental contaminants may occur.

Sample questions: What types of jobs are affected by regulations under the Ontario Environmental Protection Act? What types of workers are covered by the Canada Labour Code? What changes did Bill C-45 make to the Canadian Criminal Code? Why? What is the purpose of the Ontario Needle Safety Regulation under the Occupational Health and Safety Act? What measures are in place in Ontario to protect workers from violence and harassment on the job?

- B2.** investigate the nature of workplace hazards and various ways in which workers can protect themselves from these hazards

B2. Developing Skills of Investigation and Communication

- B2.1** use appropriate terminology related to hazards in the workplace, including, but not limited to: *occupational exposure limits (OEL), designated substance regulation (DSR), personal protective equipment (PPE), route of entry, controlled product, infectious material, inhalation, absorption, ingestion, injection, and exposure values*
 - B2.3** investigate the effectiveness of methods used to reduce the impact of noise in the workplace (*e.g., use a decibel meter to measure noise level before and after the installation of sound insulation; measure the effectiveness of earplugs at different sound levels*)
 - B2.4** investigate the effects of workers' exposure to heat or cold (*e.g., the effects of industrial heat sources such as molten materials on workers in foundries and factories; the effects of seasonal heat and cold, including exposure to solar radiation, on outdoor workers in construction, landscaping, agriculture, or hydro line repair; the effects of cold on workers in refrigerated warehouses*)
 - B2.5** use a research process to investigate procedures for the safe handling of biohazardous and/or infectious materials in the workplace, and communicate their findings (*e.g., create a webpage on the universal precautions for handling biological hazards; create a poster illustrating the steps for proper hand washing*)
- B3.** demonstrate an understanding of common biological, chemical, and physical workplace hazards

B3. Understanding Basic Concepts

- B3.1** describe the ways in which hazardous materials enter the body (i.e., ingestion, inhalation, absorption, and injection), and explain the importance of using personal protective equipment (*e.g., gloves, appropriate eye wear, aprons, self-contained breathing apparatus*) to avoid contamination
- B3.2** identify common physical hazards in the workplace (*e.g., hazards posed by noise; cutting tools; electrical power lines; extreme heat and cold*), and describe potentially harmful situations and practices (*e.g., work at heights on unstable equipment*) as well as best safety practices (*e.g., properly securing ladders and scaffolding*) relating to these hazards
- B3.3** identify common biological hazards in the workplace (*e.g., bacteria, viruses, fungi*), and describe potentially harmful situations and practices (*e.g., improper disposal of syringes*) as well as best safety practices (*e.g., use of PPE such as gloves and masks*) relating to these hazards

- B3.4** identify common chemical hazards in the workplace (*e.g., oxidizers, acid and base solutions*), and describe potentially harmful situations and practices (*e.g., inadequate venting of fine dust particles in flour mills*) as well as best safety practices (*e.g., wearing goggles and a self-contained breathing apparatus when working near substances that can irritate the eyes or lungs*) relating to these hazards
- B3.5** describe ways in which workers can address safety issues in the workplace (*e.g., by reporting an unsafe condition to a supervisor; by refusing unsafe work*)
- B3.6** explain qualitatively how factors such as temperature, concentration, and the size of the opening of a container affect storage and disposal of chemicals in the workplace

C. Chemicals in Consumer Products

- C1.** analyse chemical products used in the home and workplace, and issues related to their safe and environmentally responsible use and disposal

C1. Relating Science to Technology, Society, and the Environment

- C1.1** analyse, on the basis of research, a chemical product used in a particular profession or in the home (*e.g., pool chemicals, chlorine bleach, hair dye*), and prepare guidelines for safe and responsible use of the product

Sample issue: Bathroom cleaners need to be strong enough to kill germs and remove stains, but such requirements often mean that these products contain chemicals that can burn the skin and the irritate the eyes. What do people need to know about the precautions that should be taken when using such products?

Sample questions: What chemicals are in hair dye? How should hair stylists protect themselves and their clients from the harmful effects of these chemicals? What precautions must be taken when using solvents or bleaches? Why?
- C1.3** evaluate the appropriateness of current disposal practices in their home, at school, or in the community, with particular reference to the disposal of chemical waste

Sample issue: ... Some chemicals are combustible, produce toxic vapours, or are corrosive. Some otherwise safe chemicals can become toxic if combined with another chemical. Safe disposal methods must take the properties of each chemical into account.

Sample questions: What is the proper method for disposing of solvent-soaked rags? What sorts of items are considered to be household hazardous waste (HHW)? ...

E. Electricity at Home and Work

- E1.** assess electrical hazards in the home and workplace, and the social and environmental impact of electrical technologies
- ### **E1. Relating Science to Technology, Society, and the Environment**
- E1.2** assess electrical hazards that can be found at home and in the workplace (*e.g., electrical outlets close to areas where spills might occur; overloaded circuits*), and propose practical courses of action to address the problems

Sample issue: Portable electric tools are convenient and efficient. However, if used improperly or if basic electrical safety precautions, such as proper grounding, are ignored, such tools can constitute a safety hazard.

Sample questions: What factors are important to consider when wiring a circuit in an area near water? What are the dangers of using electric hair dryers or razors near a sink full of water? ...

- E3.** demonstrate an understanding of electrical circuits, common electrical devices, and safety procedures related to electric systems

E3. Understanding Basic Concepts

- E3.5** describe safety procedures to be followed when using electric systems at home or at work (*e.g., ensuring that tools and appliances are properly grounded; unplugging appliances by pulling the plug, not the cord*), and explain how dangerous situations can occur (*e.g., an overloaded circuit can overheat and cause a fire; digging through buried electrical cable can cause a severe shock*)

SOCIAL SCIENCES AND HUMANITIES (2013)

See the Preface for important information regarding:

- the organization of the following material;
- common messages respecting health and safety, safe behaviours, and safe practices found in the front matter of the curriculum policy documents.

See also the section “Health and Safety in Social Sciences and Humanities” in *The Ontario Curriculum, Grades 9 and 10: Social Sciences and the Humanities, 2013*, page 34.

EQUITY STUDIES, GRADES 11 AND 12

Gender Studies, Grade 11, University/College Preparation (HSG3M)

D. Implementing Change

D1. Changes in the Workplace

D1.3 assess the contribution of Canadian legislation as well as government and employment policies to gender equity in the workplace ... and explain how these policies were achieved
Teacher prompts: ... “In what ways have women’s organizing and lobbying resulted in better working conditions and improved health and safety for women workers?” ...

In addition to the expectation above, this course offers ample opportunity to address health and safety and healthy relationships in the school and workplace, with particular regard to issues related to sexism, racism, gender stereotypes, and body image, and similar social issues.

Equity, Diversity, and Social Justice, Grade 11, Workplace Preparation (HSE3E)

D. Promoting Equity and Social Justice

D2. Human Rights, Equity, and Antidiscrimination: demonstrate an understanding of their rights and responsibilities relating to equity and human rights, and of how to appropriately address situations involving discrimination, harassment, and the denial of rights

D2. Human Rights, Equity, and Antidiscrimination

D2.1 describe the protections outlined in the Ontario Human Rights Code and other human rights legislation and policies (*e.g., equity and antidiscrimination legislation; antiharassment, union, worker safety, safe school policies*) as they apply to school, workplace, and community settings

Teacher prompt: “What policies are in place to protect individuals who are harassed at school or in a volunteer or cooperative placement?”

D2.3 demonstrate an understanding of how to respond safely and effectively when witnessing a situation or behaviour that reflects prejudice, discrimination, oppression, harassment, or bullying

Teacher prompts: “What can you do if you hear racist or homophobic comments in the hallway?” “How can you safely intervene if a friend is being harassed or bullied?”

Equity and Social Justice: From Theory to Practice, Grade 12, University/College Preparation (HSE4M)

B. Understanding Social Construction

B1. Approaches and Perspectives: demonstrate an understanding of a range of perspectives on and approaches to equity and social justice issues, and of factors that affect inequity and social injustice

B1. Approaches and Perspectives

B1.5 analyse how legislation, the courts, and public policy approach equity and social justice issues (*e.g., ... workplace policies on discrimination and harassment ...*), and how they can affect people’s perceptions of these issues

World Cultures, Grade 12, University/College Preparation (HSC4M)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course.

FAMILY STUDIES, GRADES 9 TO 12

Exploring Family Studies, Grade 9 or 10, Open (HIF10/20)

C. Daily Living Skills

C3. Practical Skills: demonstrate an understanding of practical skills and knowledge needed to safely and effectively perform day-to-day tasks that help meet their needs and those of the family

C3. Practical Skills

C3.1 describe and demonstrate appropriate procedures that contribute to household safety (*e.g., safe procedures for working with household chemicals and kitchen appliances, preparing and storing food, ... caring for young children; what to do in case of fire; ...*)

Clothing, Grade 10, Open (HNL2O)

D. Design and Clothing Construction Skills

D2. Tools and Technologies: identify a variety of tools and technologies associated with the creation of clothing and accessories, and use tools and technologies safely and correctly when creating and/or repairing clothing and accessories

D2. Tools and Technologies

D2.2 demonstrate the safe use of tools and technologies when creating and/or repairing clothing and accessories (*e.g., safe practices when using sharp objects such as pins, needles, or scissors, or chemicals such as dye or glue*)

Teacher prompts: “How do you properly use a pair of sewing shears?” “How do you safely replace a sewing machine needle?” “How do you safely operate a sewing machine?”

Understanding Fashion, Grade 11, College Preparation (HNC3C)

D. Design and Fashion Construction Skills

D2. Tools and Technologies: describe a variety of tools and technologies associated with the creation of fashion products, and use tools and technologies safely and correctly when creating such products

D2. Tools and Technologies

D2.2 demonstrate the safe use of tools and technologies when creating fashion products (*e.g., keep pins in a pin cushion, store the iron on its heel when not in use, promptly replace blunt or bent needles in sewing machines or sergers*)

Teacher prompts: “Why is it important to replace a bent or dull needle on a sewing machine?” “When using a sewing machine, why is it important to wear safety glasses or tie back long hair?”

Housing and Home Design, Grade 11, Open (HLS3O)

D. Creating and Maintaining Living Spaces

D3. Home Maintenance: demonstrate an understanding of the importance of home maintenance and of ways to create a safe and healthy home

D3. Home Maintenance

D3.2 describe strategies for maintaining a healthy home environment (*e.g., limiting use of household chemicals or choosing environmentally responsible products; using proper waste disposal and recycling procedures; using safe and appropriate pest control; using exhaust fans in the kitchen and bathroom; cleaning, vacuuming, and dusting regularly; mopping up spills and fixing leaks promptly; ...*)

- D3.3** identify household hazards and outline related safety precautions (*e.g., ... storing toxic or flammable substances safely or avoiding their use altogether; removing snow and ice, ensuring fire extinguishers are in working order, installing and regularly checking smoke and carbon monoxide detectors, avoiding overloading electrical outlets, cleaning dryer ducts*)

The World of Fashion, Grade 12, University/College Preparation (HNB4M)

D. Design and Fashion Construction Skills

- D2. Tools and Technologies:** describe the function and use of a variety of tools and technologies associated with the creation of fashion products, and use tools and technologies safely and correctly when creating such products

D2. Tools and Technologies

- D2.2** demonstrate the safe use of tools and technologies when creating fashion products

Teacher prompts: “What safety rules need to be observed when you use a sewing machine or a rotary cutter?” “What precautions do you need to take when pressing fabric?”

Food and Nutrition, Grade 9 or 10, Open (HFN10/20)

A. Research and Inquiry Skills

A1. Exploring

- A1.1** explore a variety of topics related to food and nutrition (*e.g., Canadian food regulations, food safety, school food regulations*) to identify topics for research and inquiry

E. Food-Preparation Skills

- E1. Kitchen Safety:** demonstrate an understanding of practices that ensure or enhance kitchen safety

E1. Kitchen Safety

- E1.1** describe common accidents that can occur in the kitchen (*e.g., cuts, burns, fires, falls, poisoning, electric shocks*)
- E1.2** demonstrate an understanding of safe practices within the food-preparation area (*e.g., safely handle hot foods; prevent spatters, scalds, and cuts; wipe up spills immediately*)
- E1.3** demonstrate an understanding of appropriate emergency responses to common accidents associated with food preparation (*e.g., cuts, burns, scalds, fires*)

E2. Food Safety: demonstrate an understanding of practices that ensure or enhance food safety

E2. Food Safety

E2.1 describe the causes and symptoms of food-borne illnesses (*e.g., E. Coli poisoning, botulism poisoning, Clostridium perfringens poisoning, salmonellosis, listeriosis*) and techniques for preventing them

E2.2 use appropriate personal hygiene practices to prevent contamination of food (*e.g., wash hands frequently; cover a cough or sneeze in their sleeve; use gloves to cover cuts or wounds; tie hair back*)

E2.3 demonstrate the use of safe food-handling practices required to prevent cross-contamination by pathogens, parasites, and allergens in the food-preparation area (*e.g., wash fresh produce; sanitize cutting boards after contact with meat products; sanitize implements that come into contact with allergens when preparing food for or with people with known allergies; sanitize work surfaces; replace and/or sanitize sponges and cloths frequently; use proper clean-up procedures*)

E2.4 follow appropriate protocols to ensure food safety (*e.g., cook foods to recommended temperatures; keep hot foods hot and cold foods cold; store food appropriately; wipe tops of cans before opening; check “best-before” dates; demonstrate awareness of common allergenic ingredients*)

E3. Food Preparation

E3.2 demonstrate the ability to safely use, maintain, clean, and store tools and equipment used in food preparation

Food and Culture, Grade 11, University/College Preparation (HFC3M)

D. Food-Preparation Skills

D1. Kitchen Safety: demonstrate an understanding of practices that ensure or enhance kitchen safety

D1. Kitchen Safety

D1.1 describe common accidents that can occur in the kitchen (*e.g., cuts, burns, fires, falls, poisoning, electric shocks*)

D1.2 demonstrate an understanding of safe practices within the food-preparation area (*e.g., safely handle hot foods; prevent spatters, scalds, and cuts; wipe up spills immediately*)

D1.3 demonstrate an understanding of appropriate emergency responses to common accidents associated with food preparation (*e.g., cuts, burns, scalds, fires*)

D2. Food Safety: demonstrate an understanding of practices that ensure or enhance food safety

D2. Food Safety

D2.1 explain the causes of food-borne illnesses (*e.g., E. coli poisoning, botulism poisoning, Clostridium perfringens poisoning, salmonellosis, listeriosis*) and describe the symptoms of, and the techniques for preventing, these illnesses

- D2.2** use appropriate personal hygiene practices to prevent contamination of food (*e.g., wash hands frequently; cover a cough or sneeze in their sleeve; use gloves to cover cuts or wounds; tie hair back*)
 - D2.3** use safe food-handling practices to prevent cross-contamination by pathogens, parasites, and allergens in the food-preparation area (*e.g., wash fresh produce; sanitize cutting boards after contact with meat products; sanitize implements that come into contact with allergens when preparing food for or with people with known allergies; sanitize work surfaces; replace and/or sanitize sponges or cloths frequently; use proper clean-up procedures*)
 - D2.4** follow appropriate protocols to ensure food safety (*e.g., cook foods to recommended temperatures; keep hot foods hot and cold foods cold; store food appropriately; wipe tops of cans before opening; check “best-before” dates; demonstrate an awareness of common allergenic ingredients*)
- D3. Food Preparation**
- D3.2** demonstrate the ability to safely use, maintain, clean, and store tools and equipment used in food preparation

Food and Culture, Grade 11, Workplace Preparation (HFC3E)

D. Food Preparation Skills

- D1. Kitchen Safety:** demonstrate an understanding of practices that ensure or enhance kitchen safety
- D1. Kitchen Safety**
- D1.1** describe common accidents that can occur in the kitchen (*e.g., cuts, burns, fires, falls, poisoning, electric shocks*)
 - D1.2** demonstrate an understanding of safe practices within the food-preparation area (*e.g., safely handle hot foods; prevent splatters, scalds, and cuts; wipe up spills immediately*)
 - D1.3** demonstrate an understanding of appropriate emergency responses to common accidents associated with food preparation (*e.g., cuts, burns, scalds, fires*)
- D2. Food Safety:** demonstrate an understanding of practices that ensure or enhance food safety
- D2. Food Safety**
- D2.1** describe the causes and symptoms of food-borne illnesses (*e.g., E. coli poisoning, botulism poisoning, Clostridium perfringens poisoning, salmonellosis, listeriosis*) and techniques for preventing these illnesses
 - D2.2** use appropriate personal hygiene practices to prevent contamination of food (*e.g., wash hands frequently; cover a cough or sneeze in their sleeve; use gloves to cover cuts or wounds; tie hair back*)
 - D2.3** use safe food-handling practices to prevent cross-contamination by pathogens, parasites, and allergens in the food-preparation area (*e.g., wash fresh produce; sanitize cutting boards after contact with meat products; sanitize implements that come into contact with allergens when preparing food for or with people with known allergies; sanitize work surfaces; replace and/or sanitize sponges or cloths frequently; use proper clean-up procedures*)

D2.4 follow appropriate protocols to ensure food safety (*e.g., cook foods to recommended temperatures; keep hot foods hot and cold foods cold; store food appropriately; wipe tops of cans before opening; check “best-before” dates; demonstrate an awareness of common allergenic ingredients*)

D3. Food Preparation

D3.2 demonstrate the ability to safely use, maintain, clean, and store tools and equipment used in food preparation

Nutrition and Health, Grade 12, University Preparation (HFA4U)

E. Food-Preparation Skills

E1. Kitchen Safety: demonstrate an understanding of practices that ensure or enhance kitchen safety

E1. Kitchen Safety

E1.1 describe common accidents that can occur in the kitchen (*e.g., cuts, burns, fires, falls, poisoning, electric shocks*)

E1.2 demonstrate an understanding of safe practices within the food-preparation area (*e.g., safely handle hot foods; prevent splatters, scalds, and cuts; wipe up spills immediately*)

E1.3 demonstrate an understanding of appropriate emergency responses to common accidents associated with food preparation (*e.g., cuts, burns, scalds, fires*)

E2. Food Safety: demonstrate an understanding of practices that ensure or enhance food safety

E2. Food Safety

E2.1 outline the causes and symptoms of food-borne illnesses (*e.g., E. coli poisoning, botulism poisoning, Clostridium perfringens poisoning, salmonellosis, listeriosis*) and techniques for preventing these illnesses

E2.2 use appropriate personal hygiene practices to prevent contamination of food (*e.g., wash hands frequently; cover a cough or sneeze in their sleeve; use gloves to cover cuts or wounds; tie hair back*)

E2.3 use safe food-handling practices to prevent cross-contamination by pathogens, parasites, and allergens in the food-preparation area (*e.g., wash fresh produce; sanitize cutting boards after contact with meat products; sanitize implements that come into contact with allergens when preparing food for or with people with known allergies; sanitize work surfaces; replace and/or sanitize sponges or cloths frequently; use proper clean-up procedures*)

E2.4 follow appropriate protocols to ensure food safety (*e.g., cook foods to recommended temperatures; keep hot foods hot and cold foods cold; store food appropriately; wipe tops of cans before opening; check “best-before” dates; demonstrate awareness of common allergenic ingredients*)

E3. Food Preparation

E3.2 demonstrate the ability to safely use, maintain, clean, and store tools and equipment used in food preparation

Nutrition and Health, Grade 12, College Preparation (HFA4C)

D. Local and Global Issues

D3. Food Production and the Environment

D3.4 demonstrate an understanding of health, safety, and environmental issues related to food supply and production (*e.g., risks associated with bioaccumulation of pesticides and hormones, risks of contamination during food production*), and identify legislation that is designed to protect Canadian consumers (*e.g., Canada Agricultural Products Act, Food and Drugs Act*)

E. Food-Preparation Skills

E1. Kitchen Safety: demonstrate an understanding of practices that ensure or enhance kitchen safety

E1. Kitchen Safety

E1.1 describe common accidents that can occur in the kitchen (*e.g., cuts, burns, fires, falls, poisoning, electric shocks*)

E1.2 demonstrate an understanding of safe practices within the food-preparation area (*e.g., safely handle hot foods; prevent spatters, scalds, and cuts; wipe up spills immediately*)

E1.3 demonstrate an understanding of appropriate emergency responses to common accidents associated with food preparation (*e.g., cuts, burns, scalds, fires*)

E2. Food Safety: demonstrate an understanding of practices that ensure or enhance food safety

E2. Food Safety

E2.1 outline the causes and symptoms of food-borne illnesses (*e.g., E. coli poisoning, botulism poisoning, Clostridium perfringens poisoning, salmonellosis, listeriosis*) and techniques for preventing these illnesses

E2.2 use appropriate personal hygiene practices to prevent contamination of food (*e.g., wash hands frequently; cover a cough or sneeze in their sleeve; use gloves to cover cuts or wounds; tie hair back*)

E2.3 use safe food-handling practices to prevent cross-contamination by pathogens, parasites, and allergens in the food-preparation area (*e.g., wash fresh produce; sanitize cutting boards after contact with meat products; sanitize implements that come into contact with allergens when preparing food for or with people with known allergies; sanitize work surfaces; replace and/or sanitize sponges or cloths frequently; use proper clean-up procedures*)

E2.4 follow appropriate protocols to ensure food safety (*e.g., cook foods to recommended temperatures; keep hot foods hot and cold foods cold; store food appropriately; wipe tops of cans before opening; check “best-before” dates; demonstrate awareness of common allergenic ingredients*)

E3. Food Preparation

E3.4 demonstrate the ability to safely use, maintain, clean, and store tools and equipment used in food preparation

Food and Healthy Living, Grade 12, Workplace Preparation (HFL4E)

B. Kitchen Fundamentals

B1. Kitchen Safety: demonstrate an understanding of practices that ensure or enhance kitchen safety

B1. Kitchen Safety

B1.1 describe common accidents that can occur in the kitchen (*e.g., cuts, burns, fires, falls, poisoning, electric shocks*)

B1.2 demonstrate an understanding of safe practices within the food-preparation area (*e.g., safely handle hot foods; prevent spatters, scalds, and cuts; wipe up spills immediately*)

B1.3 demonstrate an understanding of appropriate emergency responses to common accidents associated with food preparation (*e.g., cuts, burns, scalds, fires*)

B2. Food Safety: demonstrate an understanding of practices that ensure or enhance food safety

B2. Food Safety

B2.1 outline the causes and symptoms of food-borne illnesses (*e.g., E. coli poisoning, botulism poisoning, Clostridium perfringens poisoning, salmonellosis, listeriosis*) and techniques for preventing these illnesses

B2.2 use appropriate personal hygiene practices to prevent contamination of food (*e.g., wash hands frequently; cover a cough or sneeze in their sleeve; use gloves to cover cuts or wounds; tie hair back*)

B2.3 use safe food-handling practices to prevent cross-contamination by pathogens, parasites, and allergens in the food-preparation area (*e.g., wash fresh produce; sanitize cutting boards after contact with meat products; sanitize implements that come into contact with allergens when preparing food for or with people with known allergies; sanitize work surfaces; replace or sanitize sponges or cloths frequently; use proper clean-up procedures*)

B2.4 follow appropriate protocols to ensure food safety (*e.g., cook foods to recommended temperatures; keep hot foods hot and cold foods cold; store food appropriately; wipe tops of cans before opening; check “best-before” dates; demonstrate awareness of common allergenic ingredients*)

B3. Food Preparation

B3.2 demonstrate the ability to safely use, maintain, clean, and store tools and equipment used in food preparation

B4. Kitchen Essentials

B4.5 describe the optimal placement of kitchen items for maximum efficiency and safety (*e.g., ... cleaning supplies should be separate from food items*)

D. The Food Consumer

D1. Food Shopping: demonstrate an understanding of efficient and economical purchasing strategies that ensure food safety and quality

D1. Food Shopping

D1.4 describe shopping practices they can use to ensure food quality and safety (*e.g., assessing ripeness, avoiding dented cans, checking “best-before” dates, ...*)

D1.5 identify proper methods for storing perishable and non perishable foods (*e.g., refrigeration, freezing, drying, canning*)

D3. Consumer Literacy and Numeracy

D3.2 use the information found on Canadian food labels (*e.g., ingredient lists, ... “best-before” dates, lists of food additives*) to check for food safety and nutritional value

Dynamics of Human Relationships, Grade 11, Open (HHD3O)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course. However, opportunities exist to integrate these topics into explorations of issues related to personal well-being, self-concept and self-esteem, and building healthy relationships at home, in the community, and in the workplace.

Families in Canada, Grade 12, University Preparation (HHS4U)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course.

Families in Canada, Grade 12, College Preparation (HHS4C)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course.

Human Development throughout the Lifespan, Grade 12, University/ College Preparation (HHG4M)

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in this course. However, opportunities exist to integrate these topics into explorations of issues related to risk and resilience, sensory and motor development, and factors affecting physical development.

Personal Life Management, Grade 12, Open (HIP4O)

C. Daily Living Skills

C3. Managing a Household

C3.2 describe the basic responsibilities involved in maintaining a safe and functional home environment (*e.g., ... making informed decisions about the use of toxic household products, ... storing flammable liquids safely, ensuring that smoke detectors and fire extinguishers are in working order, planning escape routes*)

C3.4 demonstrate the skills required to plan and safely prepare healthy meals (*e.g., ... using small appliances appropriately, practising food and kitchen safety*)

D. Personal and Social Responsibilities

D2. Workplace Rights and Responsibilities: demonstrate an understanding of the rights and responsibilities of employers and employees, including both personal and legal responsibilities

D2. Workplace Rights and Responsibilities

D2.4 identify policies, laws, and government regulations related to health and safety in the workplace (*e.g., employee manuals, workplace safety policies, the Workplace Hazardous Materials Information System, the Ontario Occupational Health and Safety Act*)

E. Economics and Personal Finances

E3. Benefits and Costs of Working

E3.1 identify the economic and personal costs associated with working for pay (*e.g., cost of ... safety equipment, ... ; job-related stress or illness; ...*)

Working with Infants and Young Children, Grade 11, College Preparation (HPW3C)

C. Employment Opportunities and Requirements

C2. Workplace Expectations: explain the legal and social workplace expectations for employment in early childhood education in Ontario

C2. Workplace Expectations

C2.2 describe the legal expectations for ensuring physically safe environments for children in early learning programs (*e.g., fire-safety regulations, food-safety regulations, WHMIS regulations, provisions of the Day Nurseries Act of Ontario*)

Teacher prompts: “How would you position equipment in an early learning centre in order to be in compliance with Ontario fire-safety codes?” “What is ‘lead flushing’ and why does the Day Nurseries Act require all childcare facilities to flush for lead each day?”

C2.3 identify laws and safety requirements that apply to employees who work with children (*e.g., requirement for a vulnerable sector criminal check, provisions of the Day Nurseries Act of Ontario and the Child and Family Services Act of Ontario*)

E. Addressing Social Challenges

E1. Issues and Challenges

E1.4 identify strategies used for ensuring the safety of children from birth to six years of age in a variety of childcare environments (*e.g., Internet safety education; bullying prevention programs; Stay Alert, Stay Safe programs*)

E2. Neglect and Abuse: demonstrate an understanding of factors that contribute to neglect and physical, sexual, and emotional abuse and of the roles of early childhood educators in dealing with these issues

E2. Neglect and Abuse

E2.1 demonstrate an understanding of factors that can lead to neglect or physical, sexual, or emotional abuse (*e.g., a family history of violence, stress, alcoholism*)

E2.2 identify indicators of neglect and physical, sexual, and emotional abuse (*e.g., unexplained bruising or laceration, withdrawal, unexplained fears*)

E2.3 demonstrate an understanding that people who work with children have a duty to report and intervene in suspected cases of neglect and physical, sexual, and emotional abuse, and describe prescribed procedures for doing so

E2.4 describe strategies early childhood educators can use to anticipate and prevent neglect and physical, sexual, and emotional abuse (*e.g., education, communication, policy development*)

Raising Healthy Children, Grade 11, Open (HPC3O)

E. Addressing Social Challenges

E2. Neglect and Abuse: describe strategies for building healthy family relationships in order to prevent neglect and/or physical, sexual, or emotional abuse of children

E2. Neglect and Abuse

E2.1 describe indicators of possible neglect or physical, sexual, or emotional abuse (*e.g., malnutrition, lack of trust, unexplained bruises*)

E2.2 describe strategies that can be used to secure a safe and peaceful family, community, and social environment for children (*e.g., teaching children that “touch” should never be kept secret; teaching safe Internet practices; providing “streetproofing” training to children*)

E2.3 demonstrate an understanding of the laws relating to child abuse and children’s rights (*e.g., ... the duty to report suspected child abuse*)

Working with School-Age Children and Adolescents, Grade 12, College Preparation (HPD4C)

B. Growth and Development

B3. Positive Environments for Development

B3.1 describe conditions that promote growth and development in school-age children and adolescents in caregiving contexts (*e.g., ... safe spaces*)

C. Employment Opportunities and Requirements

C2. Workplace Expectations: explain the legal and social workplace expectations related to working with school-age children and adolescents in Ontario

C2. Workplace Expectations

C2.1 demonstrate an understanding of the responsibilities of people who work with school-age children and adolescents as outlined in various local, provincial, federal, and international codes (*e.g., school board policies, daycare policies, Ontario's Equity and Inclusive Education Strategy, the Ontario Human Rights Code, the Canadian Charter of Rights and Freedoms, the United Nations Convention on the Rights of the Child*)

C2.2 describe the legal expectations for ensuring physically safe environments for school-age children and adolescents (*e.g., fire-safety regulations, food-safety regulations, WHMIS regulations, the Day Nurseries Act*)

Teacher prompt: “What food-safety guidelines should be followed in an after-school program when preparing snacks?”

C2.3 describe the rules and regulations governing schooling that parents and professional caregivers are required to observe (*e.g., truancy regulations, provisions of Ontario's Safe Schools Act and Child and Family Services Act, Learning to 18 regulations, requirements for a vulnerable sector criminal check*)

Teacher prompt: “What provisions of Ontario's Child and Family Services Act would a counsellor at a summer camp need to know about?”

C2.4 identify ways in which people who work with school-age children and adolescents carry out their responsibility to promote children's socialization and healthy development (*e.g., ... fostering vigilance about physical safety; ...*)

GENERAL SOCIAL SCIENCES, GRADES 11 AND 12

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in the general social sciences courses.

PHILOSOPHY, GRADES 11 AND 12

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in the philosophy courses.

WORLD RELIGIONS, GRADES 11 AND 12

There is no mention of health and safety, safe behaviours, or safe practices in either the overall or specific expectations in the world religion courses.

TECHNOLOGICAL EDUCATION, GRADES 9 AND 10 (2009) AND GRADES 11 AND 12 (2009)

See the Preface for important information regarding:

- the organization of the following material;
- common messages respecting health and safety, safe behaviours, and safe practices found in the front matter of the curriculum policy documents.

See also the section “Health and Safety in Technological Education” in *The Ontario Curriculum, Grades 9 and 10: Technological Education, 2009*, page 28, and in *The Ontario Curriculum, Grades 11 and 12: Technological Education, 2009*, page 32.

GRADES 9 AND 10

Exploring Technologies, Grade 9, Open (TIJ1O)

A. *Technology Fundamentals*

A1. Planning and Development

A1.4 incorporate appropriate technological concepts (*e.g., ... safety, ...*) in the design, fabrication or delivery, and evaluation of a product or service

A3. Product or Service Evaluation

A3.2 suggest improvements to a product or service on the basis of a set of criteria relevant to that product or service (*e.g., ... safety, ...*)

B. *Technological Skills*

B2. Creating Products or Delivering Services

B2.3 meet all design criteria (*e.g., ... safety, ...*) in creating a product or delivering a service

B2.4 demonstrate the ability to use, maintain, and store tools and equipment properly and with care

C. *Technology, the Environment, and Society*

C1. Technology and the Environment

C1.3 follow proper procedures for the safe storage and disposal of materials and waste products (*e.g., keep flammable solvents, paints, and varnishes in non-combustible cabinets; ...*)

D. Professional Practice and Career Opportunities

D1. follow safe practices and procedures when using materials, tools, and equipment

D1. Health and Safety

D1.1 use appropriate personal protective equipment (*e.g., gloves, safety glasses or goggles, hard-hat, hearing protection, respirator mask*)

D1.2 use the safety features of tools and equipment (*e.g., bandsaw guard, stock guides, tire balancer cover*) appropriately

D1.3 follow proper shop practices, which help protect the safety of workers (*e.g., keep work area clean and organized, avoid horseplay*)

D1.4 use appropriate aids (*e.g., push stick, featherboard, soldering iron holder*) to minimize the risk of injury

D1.5 use appropriate strategies to prevent health problems (*e.g., follow proper sanitation and sterilization practices; ensure proper ventilation; use proper lifting techniques; follow Workplace Hazardous Materials Information System [WHMIS] and Material Safety Data Sheet [MSDS] guidelines*)

D2. Career Opportunities

D2.5 demonstrate an understanding of the work habits that are important for success in the technology industries, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Communications Technology, Grade 10, Open (TGJ20)

D. Professional Practice and Career Opportunities

D1. demonstrate an understanding of and apply safe work practices in communications technology activities

D1. Health and Safety

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

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, ...*)

Computer Technology, Grade 10, Open (TEJ2O)

B. Computer Technology Skills

B2. Electronics, Robotics, and Computer Interfacing

- B2.1** safely construct and test electronic circuits (*e.g., LED circuit, flasher, timer*), using both breadboard and soldering techniques to connect discrete components and/or integrated circuits

D. Professional Practice and Career Opportunities

- D1.** follow appropriate health and safety procedures when assembling, using, and maintaining computer systems

D1. Health and Safety

- D1.1** use appropriate equipment, procedures, and techniques (*e.g., use a wrist support, ensure power is off before opening the case of a computer, use proper lifting techniques when moving heavy equipment*) to protect health and ensure safety when working with computers (*e.g., to avoid musculoskeletal injuries, eye strain, repetitive strain injuries*)

D3. Career Opportunities

- D3.5** demonstrate an understanding of the work habits that are important for success in the computer industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Construction Technology, Grade 10, Open (TCJ2O)

A. Construction Technology Fundamentals

- A2.** demonstrate an understanding of the safe and correct use of construction tools, equipment, and techniques

A2. Tools, Equipment, and Techniques

- A2.1** explain how to correctly and safely use, maintain, and store construction tools and equipment (*e.g., hammers, measuring instruments, table saws, mitre saws, drills, lathes, cordless drills*)
- A2.2** select the most appropriate tools or equipment for specific tasks (*e.g., wooden mallet versus framing hammer, crosscut saw versus rip saw, combination square versus framing square*)

B. Design, Layout, and Planning Skills

B1. Design and Problem Solving

- B1.3** apply appropriate technological concepts (*e.g., ... ergonomics, ... safety, ...*) as they work through design and/or problem-solving processes

C. Fabrication, Assembly, and Finishing Skills

- C1.** use tools, equipment, and techniques correctly and safely when preparing materials for a project

C1. Technical Skills

- C1.1** use tools, equipment, and techniques in a correct, efficient, and safe manner to prepare project materials (*e.g., dress raw lumber; measure, cut, and square stock; drill; fasten and join*)

- C2.** use fabrication and assembly techniques safely, accurately, and in the correct sequence

C2. Fabrication and Assembly

- C2.2** fabricate and/or assemble project components in a logical and efficient sequence (*e.g., select appropriate materials and tools, follow step-by-step instructions*)

- C3.** prepare surfaces and apply finishing products, trim, and hardware correctly and safely

C3. Finishing

- C3.2** apply suitable finishes (*e.g., stain, paint, varnish, oil, wax*), taking into account the type of material to be finished, the function of the finish, and the intended use of the project, and use appropriate methods to apply these finishes correctly (*e.g., brush, spray, roller*)
- C3.3** use appropriate tools, equipment, and techniques correctly and safely to install trim and hardware ...

E. Professional Practice and Career Opportunities

- E1.** identify and follow health and safety regulations, standards, and procedures related to the construction industry

E1. Health and Safety

- E1.1** identify laws, regulations, standards, regulatory agencies, and advocacy bodies related to health and safety in the construction industry (*e.g., Workplace Safety and Insurance Board [WSIB], Ministry of Labour, Construction Safety Association of Ontario*)
- E1.2** identify hazards related to materials, processes, and equipment used in construction (*e.g., flammable solvents, toxic chemicals, sharp blades, moving parts in machinery*), as well as resources and methods for reducing these hazards (*e.g., Workplace Hazardous Materials Information System [WHMIS], safe handling and operating practices, personal protective equipment*)
- E1.3** demonstrate an understanding of and adhere to safety practices and procedures for facilities, processes, materials, tools, and equipment used in construction (*e.g., use of tool and equipment guards*)
- E1.4** describe the rights and responsibilities of employees (*e.g., the right to know, the right to refuse, the right to participate, as outlined in the Occupational Health and Safety Act [OHSA]*)
- E1.5** use protective clothing, gear, and equipment appropriately (*e.g., dust mask, safety glasses*)

E2. Career Opportunities

E2.5 demonstrate an understanding of the work habits that are important for success in the construction industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Green Industries, Grade 10, Open (THJ2O)

D. Professional Practice and Career Opportunities

D1. demonstrate an understanding of and comply with occupational health and safety standards

D1. Health and Safety

D1.1 identify the personal protective clothing and equipment needed to perform various green industry tasks safely, and use as required to ensure their own and others' safety in the work environment

D1.2 demonstrate an understanding of appropriate uses, safe operating practices, and correct maintenance procedures for materials, tools, and equipment that are commonly used in the green industries (*e.g., lawn maintenance equipment, garden tools, chainsaws, skidding equipment, mechanical harvesting equipment, milking machines, feeding systems*)

D1.3 identify potential hazards (*e.g., trip hazards, environmental conditions, danger zones*) related to the materials, site conditions, and equipment used in the work environment

D1.4 demonstrate an understanding of and apply safe shop and site practices (*e.g., using correct lockout procedures, using equipment guards, holding shop orientation sessions, having sanitary wash stations available, cleaning up spills and leaks when they happen, keeping areas clean and clear of obstruction, storing materials and equipment neatly and safely*)

D1.5 identify and comply with legislation, regulations, and guidelines pertaining to the health and safety of workers in the green industries (*e.g., Occupational Health and Safety Act [OHSA], Workplace Hazardous Materials Information System [WHMIS]*)

D2. Career Opportunities

D2.1 describe career opportunities in a variety of sectors in the green industries ... and the education, training, and certification required for employment in green industry occupations (*e.g., training in first aid, CPR, and WHMIS; ...*)

D2.5 demonstrate an understanding of the work habits that are important for success in the green industries, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Hairstyling and Aesthetics, Grade 10, Open (TXJ2O)

A. Hairstyling and Aesthetics Fundamentals

A2. Products, Tools, and Procedures

A2.3 apply literacy skills (*e.g., to read manufacturers' instructions*) and mathematical skills (*e.g., to measure volume and/or proportions*) to ensure the safe and appropriate use of hairstyling and aesthetics techniques, tools, and products

B. Hairstyling and Aesthetics Skills

- B1.** perform a variety of salon/spa services, using appropriate tools and products in a professional and safe manner

B1. Performing Salon/Spa Services

- B1.1** select safe and appropriate materials, tools, and products and use them correctly to perform professional salon/spa services
- B1.2** identify appropriate sterilization and sanitation products and equipment and use them correctly when providing salon/spa services (*e.g., disinfectants, antiseptics, wet sanitizer, ultra-violet-ray sanitizer, autoclave*)
- B1.3** comply with workplace health and safety regulations in handling salon/spa products and equipment (*e.g., regulations for handling and storing chemicals, preventing harm from spills and vapour emissions, wearing personal protective equipment*)
- B1.4** apply appropriate ergonomic principles in the workplace by adjusting equipment and tools properly to help maintain good posture while working (*e.g., setting chairs to proper height, using a mannequin stand extension*)

D. Professional Practice and Career Opportunities

- D1.** comply with occupational health and safety standards in performing salon/spa services

D1. Health and Safety

- D1.1** use safe and sanitary work practices in performing hairstyling and aesthetics services (*e.g., develop an inspection program and a safety checklist for tools and equipment; label products correctly; use a fresh towel for every customer; keep floors swept and dry*) and identify potential problems related to working in an unsanitary or unsafe work environment (*e.g., possibility of infection from contaminated instruments; danger of slipping on wet floor*)
- D1.2** describe common health and medical issues that may arise during hairstyling and aesthetics procedures (*e.g., burns, cuts, abrasions, electric shock, heat exhaustion, fainting, nose bleeds*)
- D1.3** identify laws, regulations, and regulatory/oversight organizations that govern the hairstyling and aesthetics industry (*e.g., Occupational Health and Safety Act [OHSA], Workplace Hazardous Materials Information System [WHMIS], Apprenticeship and Certification Act [Restricted Skill Sets], Food and Drugs Act – Cosmetic Regulations; Canadian Centre for Occupational Health and Safety*)

Health Care, Grade 10, Open (TPJ20)

B. Health Care Skills

- B1.** demonstrate an understanding of and apply correct procedures for ensuring asepsis, good hygiene, and proper use of medical equipment

B1. Asepsis, Hygiene, and Equipment Use

- B1.1** demonstrate an understanding of and perform proper hand-washing techniques to prevent transmission of disease (*e.g., preventing the spread of rhinovirus and/or conjunctivitis*)

B1.2 describe a variety of health care instruments and equipment and demonstrate the ability to use them correctly (*e.g., thermometer for body temperature, stethoscope for heart rate and respiration, EpiPen® for immediate treatment of allergic reaction*)

B1.3 demonstrate an understanding of and apply safe procedures for preparing, handling, and storing food in order to reduce or eliminate contaminants (*e.g., bacteria, viruses, fungi, parasites*) and prevent disease (*e.g., salmonella or E. coli infections*)

B2. develop and use a variety of age-appropriate recreational activities to promote safe and healthy play for children and adolescents

B2. Recreational Activities

B2.1 create a recreational activity for either a child or an adolescent that is age appropriate and safe and that promotes a health, fitness, or social objective ...

B2.2 identify common play space hazards, and design a safe play space for children of a specific age group

B5. demonstrate the ability to perform basic first aid procedures

B5. First Aid

B5.1 demonstrate competence (*e.g., through role play*) in emergency scene management and in the performance of cardiopulmonary resuscitation (CPR) and interventions for choking and anaphylactic shock

B5.2 demonstrate competence (*e.g., through role play*) in using procedures for controlling bleeding and treating cuts, abrasions, sprains, fractures, burns, and loss of consciousness

D. Professional Practice and Career Opportunities

D1. identify and apply health and safety legislation and safe working practices relating to the health care industry

D1. Health and Safety

D1.1 identify and explain the importance of legislation, regulations, information systems, and oversight bodies concerned with protecting the health and safety of workers in the health care workplace (*e.g., Occupational Health and Safety Act [OHSA], Workplace Hazardous Materials Information System [WHMIS], Workplace Safety and Insurance Board [WSIB]*)

D1.2 comply with legislation, regulations, and standards pertaining to health and safety in the workplace

D1.3 demonstrate an understanding of and apply safe procedures for the use of tools and equipment, as outlined in safety manuals, operating instructions, and institutional requirements

D1.4 use protective clothing and equipment as required to keep themselves and others safe and free from harm

D2. Career Opportunities

D2.6 demonstrate an understanding of the work habits that are important for success in the health care industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Hospitality and Tourism, Grade 10, Open (TFJ2O)

B. Hospitality and Tourism Skills

B1. use tools and equipment in accordance with industry standards

B.1 Using Tools and Equipment

B1.1 select the appropriate tools or equipment for assigned tasks (*e.g., knives, steamer, mixer, proofer, computer, washing machine, vacuum cleaner*), and demonstrate the ability to use them safely and correctly

B1.3 apply standard industry practices (*e.g., mise en place, three-sink method, use of equipment guards and safety features, “clean as you go” system*) when using tools and equipment to prepare and serve food and clean up afterwards

B2. demonstrate the use of safe and correct culinary techniques in the preparation, cooking, and presentation of food, and demonstrate professional serving methods

B2. Culinary Techniques and Serving Methods

B2.3 use a variety of cutting techniques ... correctly ... and safely for a variety of food preparations

D. Professional Practice and Career Opportunities

D1. identify and demonstrate compliance with health and safety standards in the various sectors of the tourism industry

D1. Health and Safety

D1.1 identify the laws, regulations, and regulatory/oversight organizations that govern health, safety, and sanitary standards in the tourism industry (*e.g., Health Protection and Promotion Act [HPPA], Occupational Health and Safety Act [OHSA], Workplace Hazardous Materials Information System [WHMIS], local health departments*)

D1.2 demonstrate an understanding of emergency preparedness (*e.g., know the location and understand the features of safety equipment such as the fire blanket, first aid kit, and eye wash station*) and procedures to be followed (*e.g., evacuation procedures*) in the event of an accident

D1.3 use protective clothing and equipment as required to ensure their own and others' safety in the work environment

D1.4 demonstrate appropriate and timely use of safety and sanitary practices (*e.g., washing hands, labelling containers, sanitizing work surfaces and utensils, storing perishable items appropriately, monitoring temperature control*) when handling food and beverages

D2. Customer Service and Professionalism

D2.2 describe the importance of professional appearance and conduct for success in a career in hospitality and tourism (*e.g., ... high standards of hygiene required for customer comfort and safety, ...*)

D3. Career Opportunities

D3.4 identify industry-recognized training and/or certifications that it would be beneficial to have if they are pursuing a career in the tourism industry (*e.g., Standard First Aid, cardiopulmonary resuscitation [CPR], ... Safe Food Handling*)

D3.7 demonstrate an understanding of the work habits that are important for success in the tourism industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Manufacturing Technology, Grade 10, Open (TMJ2O)

A. Manufacturing Technology Fundamentals

A2. Design Fundamentals

A2.2 identify technological concepts (*e.g., ... safety, ...*) and particular environmental concerns ... that are important considerations in product design

B. Manufacturing Technology Skills

B3. use hand tools, machine tools, power tools, materials, and equipment safely and correctly in the manufacture of a product

B3. Using Materials, Tools, and Equipment

B3.1 set up hand tools, machine tools, power tools, and equipment (*e.g., jigs and fixtures, clamps, engine lathe, welding equipment, milling machine, drill press, injection-moulding machine*) properly in preparation for the manufacture of a product ...

B3.2 use various hand tools, power tools, machine tools, and related equipment (*e.g., saws, grinders, milling machine, engine lathe, welding equipment, vacuum-forming machine*) safely and correctly to manufacture a product

B3.3 use the proper procedures for maintaining and storing materials, tools, and equipment

B3.4 demonstrate safe workplace practices and behaviours (*e.g., follow instructions, keep work area clean and dry, don't distract other workers*) when using materials, tools, and equipment to manufacture a product

D. Professional Practice and Career Opportunities

D1. identify and demonstrate compliance with health and safety legislation, standards, and procedures related to the manufacturing industry

D1. Health and Safety

D1.1 identify and explain the importance of legislation and standards related to procedures and operations used in manufacturing facilities (*e.g., Occupational Health and Safety Act [OHSA], Workplace Hazardous Materials Information System [WHMIS]*) and the relevant oversight/regulatory organizations (*e.g., Workplace Safety and Insurance Board [WSIB]*)

D1.2 identify health and safety roles, responsibilities, and procedures in manufacturing (*e.g., concerning choice of equipment and materials, maintenance of equipment, storing of materials and equipment, inspection of facilities and equipment, in-service and training*)

- D1.3** demonstrate compliance with health and safety standards (*e.g., rules, procedures*) related to facilities, processes, materials, tools, and equipment (*e.g., ensure that correct fire extinguishers and blankets are accessible, appropriate equipment guards are in place, and materials and chemicals are appropriately labelled*)
- D1.4** demonstrate the safe use of tools and equipment in compliance with safety manuals, instructions, and institutional requirements
- D1.5** use protective clothing and equipment as required to ensure their own and others' safety in the work environment
- D2. Career Opportunities**
- D2.5** demonstrate an understanding of the work habits that are important for success in the manufacturing industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Technological Design, Grade 10, Open (TDJ2O)

D. Professional Practice and Career Opportunities

- D1.** apply appropriate health, safety, and environmental practices throughout the design process

D1. Health and Safety

- D1.1** identify health and safety regulations and standards that must be considered when designing products and/or processes (*e.g., regulations and standards from the Canadian Standards Association, Ontario Building Code, and Workplace Hazardous Materials Information System [WHMIS]*)
- D1.2** demonstrate an understanding of and follow personal and environmental health and safety procedures with respect to processes, materials, tools, equipment, and facilities throughout the design process and related activities (*e.g., use protective equipment; set tool and equipment guards properly; ensure adequate ventilation and ergonomic seating and other workplace arrangements; follow safe operating procedures; keep work areas clean and organized; store materials and dispose of wastes properly*)

D2. Career Opportunities

- D2.5** demonstrate an understanding of the work habits that are important for success in the technological design industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Transportation Technology, Grade 10, Open (TTJ2O)

B. Transportation Technology Skills

- B2.** demonstrate the safe and correct use of a variety of maintenance and repair techniques for servicing powertrain components

B2. Maintenance and Repair Techniques

- B2.1** use tools required for basic service tasks related to powertrains (*e.g., hand and power tools*) correctly and maintain the tools in good working order
- B2.3** perform basic maintenance procedures related to powertrains (*e.g., engine oil change, basic vehicle/craft inspection, blade or cutting tool sharpening*) safely and correctly
- B2.4** demonstrate the correct use of various fastening techniques (*e.g., use of fasteners, sealants, bonding agents*)
- B2.5** demonstrate the safe and correct use of various fabrication and repair techniques (*e.g., cutting threads, heating, soldering, welding*)
- B2.6** perform basic engine repair, demonstrating understanding of the function and operation of engine components (*e.g., dismantle and reassemble a small engine safely and correctly, making necessary repairs in the process*)

B3. Basic Service of Vehicle and/or Craft Systems and Components

- B3.3** service steering/control, suspension, brake, electrical, and body system components (*e.g., lubricate body hinges [on doors, hood, trunk or hatch], balance tires, check brake fluid level, check vehicle height, charge a discharged battery*) safely and correctly

B4. Care and Maintenance of Vehicles and/or Craft

- B4.1** perform exterior and interior surface care procedures (*e.g., detailing, washing and waxing, removal of debris from undercarriage*) safely and correctly

D. Professional Practice and Career Opportunities

- D1.** demonstrate an understanding of and compliance with occupational health and safety regulations and standards in transportation technology

D1. Health and Safety

- D1.1** identify and explain the importance of legislation and regulations related to procedures and operations used in transportation technology facilities (*e.g., Occupational Health and Safety Act [OHSA], Workplace Hazardous Materials Information System [WHMIS], Apprenticeship and Certification Act*)
- D1.2** demonstrate good housekeeping and safety practices in the work environment (*e.g., cleaning up spills and leaks, proper disposal of waste, keeping areas clean and clear of obstructions*)
- D1.3** use protective clothing and equipment (*e.g., eye and hearing protection, gloves, breathing apparatus*) as required to ensure their own and others' safety in the work environment

D2. Career Opportunities

- D2.5** demonstrate an understanding of the work habits that are important for success in the transportation industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

COMMUNICATIONS TECHNOLOGY, GRADES 11 AND 12

Communications Technology, Grade 11, University/College Preparation (TGJ3M)

D. Professional Practice and Career Opportunities

D1. demonstrate an understanding of and apply safe work practices when performing communications technology tasks

D1. Health and Safety

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*)

D3. Career Opportunities

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, ...*)

Communications Technology: Broadcast and Print Production, Grade 11, Open (TGJ3O)

A. Communications Technology Fundamentals

A1. Core Concepts, Techniques, and Skills

A1.1 demonstrate an understanding of technological concepts (*e.g., ... safety, ...*) and their relevance to the design and creation of media projects

A1.2 use audio, video, broadcast journalism, graphic arts, and publishing equipment safely and correctly to perform basic production tasks or create simple products ...

A1.6 use safe and appropriate methods for installing, transporting, and storing audio, video, broadcast journalism, and graphic arts equipment (*e.g., cameras, tripods, lights, microphones, teleprompters, portable mixers, cables, scanners*) and setting up printing equipment

D. Professional Practice and Career Opportunities

D1. demonstrate an understanding of and apply safe work practices in the use of audio, video, broadcast journalism, graphic arts, and printing equipment

D1. Health and Safety

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 for preventing accidents

D1.2 demonstrate an understanding of and apply safe work practices when using equipment (*e.g., use of gloves and other protective clothing, correct seat placement, use of proper cable management techniques, use of ergonomically designed equipment, proper grounding of electrical devices, use of safety chains, correct use of ladders, proper use and storage of equipment*)

D1.3 describe health risks (*e.g., carpal tunnel syndrome, eye strain*) associated with the use of audio, video, broadcast journalism, graphic arts, and printing equipment, and identify ways of avoiding them

D2. Career Opportunities

D2.4 demonstrate an understanding of and apply the work habits that are important for success in the audio and video production, broadcast journalism, graphic arts, and printing and publishing industries, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Communications Technology, Grade 12, University/College Preparation (TGJ4M)**D. Professional Practice and Career Opportunities**

D1. demonstrate an understanding of and apply safe work practices when performing communications technology tasks

D1. Health and Safety

D1.1 describe industry hazards (*e.g., ergonomic, mechanical, electrical, and chemical 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 safety training*)

D1.2 demonstrate an understanding of and apply safe work practices (*e.g., using ergonomically designed equipment and work areas, keeping equipment in proper working order, maintaining a well-organized workplace, using lockout procedures when installing or maintaining equipment, wearing gloves when handling hot lights, using a spotter when climbing ladders, keeping liquids away from electronic equipment*) when performing communications technology procedures

D3. Career Opportunities

D3.6 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, ...*)

Communications Technology: Digital Imagery and Web Design, Grade 12, Open (TGJ4O)

A. Communications Technology Fundamentals

A1. Core Concepts, Techniques, and Skills

- A1.1** demonstrate an understanding of technological concepts (*e.g., ... safety, ...*) and their relevance to the design and creation of media projects
- A1.2** use photographic, imaging, and computer equipment safely and correctly to perform basic production tasks or create simple products (*e.g., set up cameras, tripods, and lights; ...*)
- A1.6** use safe and appropriate methods for installing, transporting, and storing photographic and imaging equipment (*e.g., removable storage devices, cameras, cables, flashes, tripods, lights, scanners*)

D. Professional Practice and Career Opportunities

- D1.** demonstrate an understanding of and apply safe work practices in the use of photographic, imaging, and computer equipment

D1. Health and Safety

- 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 for preventing accidents
- D1.2** demonstrate an understanding of and apply safe work practices when using equipment (*e.g., use of gloves and other protective clothing, correct seat placement, use of proper cable management techniques, use of ergonomically designed equipment, proper grounding of electrical devices, use of safety chains, correct use of ladders, proper use and storage of equipment*)
- D1.3** describe health risks (*e.g., carpal tunnel syndrome, eye strain*) associated with the use of photographic, imaging, and computer equipment, and identify ways of avoiding them

D2. Career Opportunities

- D2.4** demonstrate an understanding of and apply the work habits that are important for success in the photography, digital imaging, animation, 3D modelling, and/or web design industries, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

COMPUTER TECHNOLOGY, GRADES 11 AND 12

Computer Engineering Technology, Grade 11, University/College Preparation (TEJ3M)

B. Computer Technology Skills

B3. Electronics, Robotics, and Computer Interfacing

B3.1 use a design process ... to design and safely construct and test interfacing or robotics circuits (*e.g., for LED traffic lights, VU meter, alarm system, or motor control*), using appropriate materials and techniques, including soldering

D. Professional Practice and Career Opportunities

D1. demonstrate an understanding of relevant safety practices, standards, and legislation

D1. Health and Safety

D1.1 comply with relevant industry practices, standards, and related legislation to ensure workplace safety (*e.g., standards and regulations specified in the Workplace Hazardous Materials Information System [WHMIS] and the Electrical Safety Code; grounding and enclosure standards for electrical circuits; ergonomically sound workplace arrangements and practices*)

D1.2 describe and use appropriate equipment, techniques, and strategies to avoid health and safety problems associated with computer use (*e.g., back injuries from improper lifting of heavy equipment, repetitive strain injuries, eye strain*)

D3. Career Opportunities

D3.5 demonstrate an understanding of and apply the work habits that are important for success in the computer technology industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Computer Technology, Grade 11, Workplace Preparation (TEJ3E)

D. Professional Practice and Career Opportunities

D1. identify and follow computer-related safety practices

D1. Health and Safety

D1.1 use appropriate equipment, techniques, and strategies to avoid health and safety problems when assembling, using, and maintaining computer systems (*e.g., repetitive strain injuries, eye strain, electrical shock*)

D5. Career Opportunities

D5.6 demonstrate an understanding of and apply the work habits that are important for success in the computer technology industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Computer Engineering Technology, Grade 12, University/College Preparation (TEJ4M)

B. Computer Technology Skills

B3. Electronics, Robotics, and Computer Interfacing

B3.3 safely construct electronic circuits for interfacing or robotic applications using appropriate materials, tools, and techniques, including soldering (*e.g., materials: breadboard, printed circuit board, etchant, solder; tools: soldering iron, etch bath, third hand with magnifier*)

D. Professional Practice and Career Opportunities

D1. explain the importance of safety standards and practices, and use appropriate techniques to avoid health and safety problems

D1. Health and Safety

D1.1 explain the importance of following industry health and safety standards and practices (*e.g., standards and regulations specified in the Workplace Hazardous Materials Information System [WHMIS] and the Electrical Safety Code; practices such as electrical grounding and precautionary measures when working with live circuits and devices that store electrical energy; ergonomically sound workplace arrangements and practices*)

D1.2 evaluate and use appropriate techniques to avoid health and safety problems (*e.g., repetitive strain injuries, eye strain, electrical shock, burns from soldering tools*) when assembling, using, and maintaining computer systems

D3. Career Opportunities

D3.4 demonstrate an understanding of and apply the work habits that are important for success in the computer technology industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Computer Technology, Grade 12, Workplace Preparation (TEJ4E)

D. Professional Practice and Career Opportunities

D1. explain and follow computer-related safety standards and practices

D1. Health and Safety

D1.1 explain the importance of following industry health and safety standards and practices (*e.g., standards and regulations specified in the Workplace Hazardous Materials Information System [WHMIS], the Electrical Safety Code, and the Occupational Health and Safety Act,*

and by the Workplace Safety and Insurance Board [WSIB]; ergonomically sound workplace arrangements and practices)

D1.2 describe and use appropriate equipment, techniques, and strategies to avoid health and safety problems when assembling, using, and maintaining computer systems (*e.g., repetitive strain injuries, eye strain, electrical shock*)

D5. Career Opportunities

D5.5 demonstrate an understanding of and apply the work habits that are important for success in the computer technology industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

CONSTRUCTION TECHNOLOGY, GRADES 11 AND 12

Construction Engineering Technology, Grade 11, College Preparation (TCJ3C)

A. Construction Technology Fundamentals

A2. describe the building codes, regulations, and standards that govern construction projects

A2. Building Codes, Regulations, and Standards

A2.1 describe the purpose of building codes (*e.g., Ontario Building Code, Ontario Electrical Safety Code, Ontario Fire and Plumbing codes*)

A2.2 identify and describe regulations and/or bylaws that apply to the design and construction of residential buildings (*e.g., municipal by-laws; zoning regulations; official plans; requirements for setbacks, easements, and barrier-free access*)

A2.3 identify and describe standards that apply to residential construction projects (*e.g., standards from the Canadian Standards Association [CSA], Underwriters Laboratories of Canada [ULC], and the Workplace Safety and Insurance Board [WSIB]*)

A2.4 identify permits and inspections required for residential construction projects (*e.g., building, plumbing, electrical*)

C. Fabrication, Assembly, and Finishing Skills

C1. demonstrate appropriate technical skills, including the safe use of construction tools, equipment, and materials

C1. Technical Skills

C1.1 demonstrate safe work practices when using hand tools, power tools, equipment, and materials

C2. demonstrate safe and accurate building techniques

C2. Fabrication and Assembly

C2.1 safely construct projects in accordance with the specifications for the project (*e.g., technical drawings, lists of specified materials and fixtures*)

C2.2 install various systems of a construction project (*e.g., structural, electrical, plumbing, heating/ventilation/air-conditioning, cabinetry*) in accordance with codes, regulations, and standards (*e.g., ... Ontario Electrical Safety Code requirements for wiring and fixtures*)

Although there is no explicit mention of health and safety, safe behaviours, or safe practices in overall expectation C3, “correctly apply various finishes to complete residential construction projects”, it is expected that instruction regarding the safe use of finishing materials and safe procedures would be addressed in C3 and its related specific expectations. Safety practices with respect to finishing materials is also addressed in Strand E below.

E. Professional Practice and Career Opportunities

E1. demonstrate an understanding of and comply with health and safety regulations and practices specific to the construction industry

E1. Health and Safety

E1.1 describe hazards related to construction materials, processes, tools, and equipment (*e.g., toxic or flammable fumes from solvents, paints, varnishes, and gasoline; explosion or burns from propane; lung damage from silica; tripping or falls in unfinished buildings; shock from damaged power tools or electrical equipment*), and the precautions that should be taken to avoid these hazards

E1.2 outline and comply with health and safety legislation and practices for the construction industry (*e.g., Workplace Safety and Insurance Board [WSIB] regulations, provincial labour legislation, Ontario Building Code, local by-laws*)

E1.3 use, handle, and store materials in accordance with Workplace Hazardous Materials Information System (WHMIS) guidelines

E1.4 describe the rights and responsibilities of employees (*e.g., the right to know, the right to refuse, the right to participate, as outlined in the Occupational Health and Safety Act*)

E1.5 use protective clothing, gear, and equipment appropriately (*e.g., dust mask, hard hat, safety glasses, safety harness*)

E2. Career Opportunities

E2.5 demonstrate an understanding of and apply the work habits that are important for success in the construction industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Construction Technology, Grade 11, Workplace Preparation (TCJ3E)

A. Construction Technology Fundamentals

A2. describe the scope and purpose of building codes, and identify other regulations and standards that apply to construction projects

A2. Codes, Regulations, and Standards

- A2.1** describe the scope and purpose of the regulations (*e.g., for framing members, built-up beams, electrical wiring, potable water piping, and drain, waste, and vent systems*) in the codes that apply to building construction (*e.g., Ontario Building Code, Ontario Electrical Safety Code, Ontario Fire Code*)
- A2.3** identify safety standards that apply to construction projects (*e.g., standards from the Occupational Health and Safety Act, the Canadian Standards Association [CSA], and the Technical Standards and Safety Authority*)

C. Fabrication, Assembly, and Finishing Skills

- C1.** demonstrate appropriate technical skills, including the safe use of construction tools, equipment, and materials

C1. Technical Skills

- C1.1** use, maintain, and store construction tools, equipment, and materials safely and correctly (*e.g., tools: builder's level, framing hammer, wire stripper, pliers, tri-square, trowel, pipe cutter, hand saw, reciprocating saw, masonry saw, circular saw, drill; equipment: air compressor, scaffolding, cement mixer, generator, electrical test meter; materials: lumber, sheet goods, plumbing materials, bricks, wiring*)

- C2.** demonstrate safe and accurate techniques for assembling construction projects

C2. Building and Assembly

- C2.2** install, test, and, if necessary, troubleshoot various systems of a construction project (*e.g., electrical, plumbing, heating, masonry*), ensuring that these systems comply with all applicable codes, regulations, and standards

E. Professional Practice and Career Opportunities

- E1.** demonstrate an understanding of and comply with health and safety regulations and practices specific to the construction industry

E1. Health and Safety

- E1.1** identify hazards related to construction materials, processes, tools, and equipment (*e.g., toxic or flammable fumes from solvents, paints, varnishes, and gasoline; explosion or burns from propane; lung damage from silica; tripping or falls in unfinished buildings; shock from damaged power tools or electrical equipment*), and the precautions that should be taken to avoid these hazards
- E1.2** identify and comply with health and safety legislation and practices for the construction industry (*e.g., Workplace Safety and Insurance Board [WSIB] regulations, provincial labour legislation, Ontario Building Code, local by-laws*)
- E1.3** use, handle, and store materials in accordance with Workplace Hazardous Materials Information System (WHMIS) guidelines
- E1.4** describe the rights and responsibilities of employees (*e.g., the right to know, the right to refuse, the right to participate, as outlined in the Occupational Health and Safety Act*)
- E1.5** use protective clothing, gear, and equipment appropriately (*e.g., dust mask, safety glasses, safety harness*)

E2. Career Opportunities

E2.5 demonstrate an understanding of and apply the work habits that are important for success in the construction industry, as identified in the Ontario Skills Passport (*e.g., working safely ...*)

Custom Woodworking, Grade 11, Workplace Preparation (TWJ3E)

A. Custom Woodworking Fundamentals

A2. describe woodworking tools, equipment, and techniques, and use them safely

A2. Tools, Equipment, and Techniques

A2.2 demonstrate the ability to use, maintain, adjust, and store woodworking tools and equipment correctly and safely (*e.g., hammers, measuring instruments, saws, drills, lathes*)

B. Design Layout and Planning Skills

B1. apply a design process and/or other problem-solving processes and techniques when planning a variety of woodworking projects, taking into account relevant design principles and safety standards

B1. Design

B1.6 identify and describe the safety standards that apply to woodworking projects (*e.g., Canadian Standards Association [CSA] standards, Underwriters Laboratories of Canada [ULC] standards*)

B3. Planning and Preparation

B3.2 plan the safe construction and installation of components commonly used in woodworking projects ...

C. Fabrication, Assembly, and Finishing Skills

C1. fabricate and assemble custom woodworking projects safely, accurately, and efficiently

C1. Fabrication and Assembly

C1.2 use techniques, tools, and equipment to safely and accurately prepare project materials (*e.g., dress raw lumber; measure, cut, square, and drill stock*)

C1.5 use clamps, fasteners, and adhesives safely and appropriately

C1.6 assemble joints safely and accurately ...

C2. prepare surfaces and apply finishing products, trim, and hardware correctly and safely

C2. Finishing

C2.3 use appropriate techniques, tools, and equipment correctly and safely to install trim and hardware

E. Professional Practice and Career Opportunities

E1. demonstrate an understanding of health and safety regulations and practices specific to woodworking

E1. Health and Safety

E1.1 identify hazards related to the materials, processes, and equipment used for custom woodworking (*e.g., flammable or toxic fumes from solvents, paints, and varnishes; risk of injury from cutting tools*)

E1.2 outline the health and safety legislation, regulations, and standards that apply to the custom woodworking industry (*e.g., Workplace Hazardous Materials Information System [WHMIS], Workplace Safety and Insurance Board [WSIB] regulations, provincial labour legislation, local by-laws*)

E1.3 describe the rights and responsibilities of employees (*e.g., the right to know, the right to refuse, the right to participate, as outlined in the Occupational Health and Safety Act*)

E1.4 demonstrate safe practices related to materials, processes, tools, equipment, and facilities used in woodworking

E1.5 demonstrate an understanding of when and how to use protective clothing, gear, and equipment (*e.g., ensure proper ventilation and use appropriate protective masks when sanding materials or applying finishes that give off hazardous vapours*)

Construction Engineering Technology, Grade 12, College Preparation (TCJ4C)

A. Construction Technology Fundamentals

A2. demonstrate an understanding of building codes, regulations, and standards that govern residential and light commercial construction projects

A2. Building Codes, Regulations, and Standards

A2.1 identify and explain the building codes that apply to residential and light commercial construction (*e.g., Ontario Building Code, Ontario Electrical Safety Code, Ontario Fire Code*)

A2.3 identify permits and inspections required for residential and light commercial construction projects (*e.g., building, plumbing, electrical*)

A2.4 identify and describe the standards that apply to residential and light commercial construction projects (*e.g., standards from the Workplace Safety and Insurance Board [WSIB], the Canadian Standards Association [CSA], and Underwriters Laboratories of Canada [ULC]*)

A3. Building Systems

A3.3 describe the components of electrical systems of typical residential and light commercial buildings and outline the requirements of the Ontario Electrical Safety Code that apply to these systems

A3.4 describe the components of plumbing systems of typical residential and light commercial buildings and outline the requirements of the Ontario Building Code (Parts 7 and 8) that apply to these systems

C. Fabrication, Assembly, and Finishing Skills

C1. demonstrate appropriate technical skills, including the safe use of construction tools, equipment, and materials

C1. Technical Skills

C1.1 demonstrate safe work practices when using hand and power tools, materials, and equipment

C2. demonstrate safe and accurate building techniques

C2. Fabrication and Assembly

C2.2 safely install various systems of a construction project (*e.g., electrical, plumbing, heating/ventilation/air-conditioning*) in accordance with codes, regulations, and standards (*e.g., Ontario Building Code requirements for joists and beams*)

E. Professional Practice and Career Opportunities

E1. demonstrate an understanding of and comply with health and safety regulations and practices specific to the construction industry

E1. Health and Safety

E1.1 assess hazards related to construction materials, processes, tools, and equipment (*e.g., toxic or flammable fumes from solvents, paints, varnishes, and gasoline; explosion or burns from propane; lung damage from silica; tripping or falls in unfinished buildings; shock from damaged power tools or electrical equipment*), and describe the precautions that should be taken to avoid these hazards

E1.2 describe and comply with health and safety legislation and practices for the construction industry (*e.g., Workplace Safety and Insurance Board [WSIB] regulations, provincial labour legislation, local by-laws*)

E1.3 use, handle, and store materials in accordance with Workplace Hazardous Materials Information System (WHMIS) guidelines

E1.4 describe the rights and responsibilities of employees (*e.g., the right to know, the right to refuse, the right to participate, as outlined in the Occupational Health and Safety Act*)

E1.5 demonstrate the understanding of when and how to use appropriate protective clothing, gear, and equipment (*e.g., hard hat, respirator, safety harness*)

E2. Career Opportunities

E2.4 demonstrate an understanding of and apply the work habits that are important for success in the construction industry, as identified in the Ontario Skills Passport (*e.g., working safely ...*)

Construction Technology, Grade 12, Workplace Preparation (TCJ4E)

A. Construction Technology Fundamentals

A2. demonstrate an understanding of building codes, regulations, and standards for construction projects

A2. Codes, Regulations, and Standards

- A2.1** correctly identify and interpret the sections of building, electrical, and fire codes that apply to residential and/or light commercial construction projects in Ontario (*e.g., ... Ontario Electrical Safety Code chapters for residential and/or commercial electrical wiring and equipment; ...*)
- A2.3** describe safety standards and regulations that apply to construction projects (*e.g., standards and/or regulations from the Canadian Standards Association [CSA], Underwriters Laboratories of Canada [ULC], the Workplace Safety and Insurance Board [WSIB], the Technical Standards and Safety Authority, and the Occupational Health and Safety Act*)

C. Fabrication, Assembly, and Finishing Skills

- C1.** apply appropriate technical skills, including the safe use of the tools, equipment, and materials required to build construction projects

C1. Technical Skills

- C1.1** use safe work practices with all construction tools, materials, and equipment
- C1.3** install various systems of residential and/or light commercial construction projects (*e.g., structural, electrical, plumbing, masonry, heating/ventilation/air-conditioning*) safely and in accordance with codes, regulations, and standards

- C2.** apply safe and accurate techniques for building construction projects

C2. Building and Assembly

- C2.1** safely construct residential and/or light commercial projects in accordance with design specifications ...

E. Professional Practice and Career Opportunities

- E1.** demonstrate an understanding of and comply with health and safety regulations and practices specific to the construction industry

E1. Health and Safety

- E1.1** describe hazards related to construction materials, processes, and equipment (*e.g., toxic or flammable fumes from solvents, paints, varnishes, and gasoline; explosion or burns from propane; lung damage from silica; tripping or falls in unfinished buildings; shock from damaged power tools or electrical equipment*), and the precautions that should be taken to avoid these hazards
- E1.2** describe and comply with health and safety legislation and practices for the construction industry (*e.g., Workplace Safety and Insurance Board [WSIB] regulations, provincial labour legislation, the Ontario Building Code, local by-laws*)
- E1.3** use, handle, and store materials in accordance with Workplace Hazardous Materials Information System (WHMIS) guidelines
- E1.4** describe and follow proper procedures for locking out equipment, and for the set-up, use, and maintenance of trenches, ladders, and scaffolding in accordance with Occupational Health and Safety Act regulations and Construction Safety Association of Ontario guidelines

- E1.5** describe the rights and responsibilities of employees (*e.g., the right to know, the right to refuse, the right to participate, as outlined in the Occupational Health and Safety Act*)
- E1.6** demonstrate an understanding of when and how to use appropriate protective clothing, gear, and equipment (*e.g., hard hat, respirator, safety harness*)
- E3. Career Opportunities**
- E3.4** demonstrate an understanding of and apply the work habits that are important for success in the construction industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Custom Woodworking, Grade 12, Workplace (TWJ4E)

A. Custom Woodworking Fundamentals

- A2.** demonstrate an understanding and safe use of tools, equipment, and techniques for custom woodworking
- A2. Tools, Equipment, and Techniques**
- A2.1** demonstrate proficiency in using, maintaining, adjusting, and storing construction tools and equipment safely (*e.g., chisels, planes, measuring instruments, table saws, drills, lathes*)
- A2.3** demonstrate proficiency in the selection and safe application of appropriate clamps, fasteners, and adhesives
- A2.4** demonstrate proficiency in safely and accurately constructing and fitting commonly used joints ...

B. Design, Layout, and Planning Skills

- B1.** apply a design process and other problem-solving processes and techniques when planning a variety of woodworking projects, taking into account design principles, safety standards, and other relevant factors
- B1. Design**
- B1.7** describe the building codes and regulations that apply to built-in woodworking projects (*e.g., Ontario Building Code [Part 7 – Plumbing and Part 9 – Housing and Small Buildings], fire codes, municipal by-laws*)
- B1.8** describe product standards that apply to woodworking projects (*e.g., Canadian Standards Association [CSA], Underwriters Laboratories of Canada [ULC], and National Lumber Grades Authority standards*)

C. Fabrication, Assembly, and Finishing Skills

- C1.** fabricate and assemble residential and/or commercial custom woodworking projects safely, accurately, and efficiently
- C1. Fabrication and Assembly**
- C1.1** apply techniques for using tools and materials safely and efficiently to reduce the cost of producing components that meet the required specifications (*e.g., follow proper procedures for operating machine tools; ...*)

C1.2 use tools, equipment, and techniques to safely and accurately prepare project materials (*e.g., dress raw lumber; measure, cut, square, and drill stock*)

C2. prepare surfaces and apply finishing products, trim, and hardware correctly and safely

C2. Finishing

C2.2 use appropriate tools, equipment, and techniques correctly and safely to install trim and hardware ...

E. Professional Practice and Career Opportunities

E1. explain and follow health and safety regulations and practices specific to woodworking

E1. Health and Safety

E1.1 describe hazards related to woodworking materials, processes, tools, and equipment (*e.g., flammable or toxic fumes from solvents, paints, and varnishes; risk of injury from tools and equipment*)

E1.2 describe an understanding of health and safety legislation, regulations, and standards that apply to the custom woodworking industry (*e.g., Workplace Hazardous Materials Information System [WHMIS], Workplace Safety and Insurance Board [WSIB] regulations, provincial labour legislation, Ontario Building Code, local by-laws*)

E1.3 understand the rights and responsibilities of employees (*e.g., the right to know, the right to refuse, the right to participate, as outlined in the Occupational Health and Safety Act*)

E1.4 demonstrate safe practices when using woodworking materials, processes, tools, equipment, and facilities

E1.5 demonstrate an understanding of how to select and use appropriate protective clothing, gear, and equipment (*e.g., dust mask, respirator, safety glasses, goggles, ventilation system*)

GREEN INDUSTRIES, GRADES 11 AND 12

Green Industries, Grade 11, University/College Preparation (THJ3M)

D. Professional Practice and Career Opportunities

D1. demonstrate an understanding of and apply safe working practices as they relate to the green industries

D1. Health and Safety

D1.1 identify the personal protective clothing and equipment needed to perform various green industry tasks safely, and use as required to ensure their own and others' safety in the work environment (*e.g., eye and ear protection; hand, head, and foot protection; sun protection; equipment guards*)

D1.2 demonstrate an understanding of environmental and site-related hazards (*e.g., land conditions; weather conditions; crew competence and organization; presence of utility lines, glass structures, hanging limbs, chicots*) and apply appropriate safety measures for avoiding

them (*e.g., roping off an area, setting up caution signs, removing hazards, implementing traffic control measures*)

- D1.3** demonstrate an understanding of and apply safe procedures for using and maintaining materials, tools, and equipment (*e.g., avoid moving parts and pinch points; perform a circle check of vehicles and equipment; check condition of materials, hydraulic systems, and protective equipment; check oil and fuel levels*)
- D1.4** demonstrate an understanding of and apply safe procedures for handling plants and/or animals (*e.g., dethorning plants, using ergonomic lifting techniques or devices, using hand protection, securing loads correctly for transport, understanding animal perception, avoiding actions that startle animals, using chutes and restraining devices*)
- D1.5** identify potentially hazardous situations in the workplace by conducting and documenting personal and workplace safety audits
- D1.6** identify sources of information about workplace hazards and how to avoid them (*e.g., Workplace Hazardous Materials Information System [WHMIS], Passport to Safety*)
- D1.7** outline and comply with legislation for protecting the health and safety of workers in the green industries (*e.g., Occupational Health and Safety Act, local by-laws, fire prevention regulations*)

D3. Career Opportunities

- D3.6** demonstrate an understanding of and apply the work habits that are important for success in the green industries (*e.g., working safely, ...*)

Green Industries, Grade 11, Workplace Preparation (THJ3E)

D. Professional Practice and Career Opportunities

- D1.** demonstrate an understanding of and apply safe working practices as they relate to the green industries

D1. Health and Safety

- D1.1** identify the personal protective clothing and equipment needed to perform various green industry tasks safely, and use as required to ensure their own and others' safety in the work environment (*e.g., eye and ear protection, hand and foot protection, head protection, sun protection, equipment guards*)
- D1.2** demonstrate an understanding of environmental and site-related hazards (*e.g., land conditions, weather conditions, dangerous plants and animals, utility lines, glass structures, hanging limbs, chicots*) and apply appropriate safety measures for avoiding them (*e.g., roping off danger areas, removing hazards, setting up traffic controls*)
- D1.3** demonstrate an understanding of and apply safe procedures for using and maintaining materials, tools, and equipment (*e.g., avoid moving parts and pinch points; perform a circle check of vehicles and equipment; check condition of materials, hydraulic systems, and protective equipment; check oil and fuel levels*)
- D1.4** demonstrate an understanding of and apply safe procedures for handling plants and/or animals (*e.g., dethorning plants, using ergonomic lifting techniques or devices, using hand protection, securing loads correctly for transport, understanding animal perception, avoiding actions that startle animals, using chutes and restraining devices*)

- D1.5** identify potentially hazardous situations in the workplace by conducting and documenting personal and workplace safety audits
- D1.6** identify sources of information about workplace hazards and how to avoid them (*e.g., workplace Hazardous Materials Information System [WHMIS], Passport to Safety*)
- D1.7** outline and comply with legislation for protecting the health and safety of workers in the green industries (*e.g., Occupational Health and Safety Act, local by-laws, fire prevention regulations*)

D2. Career Opportunities

- D2.6** demonstrate an understanding of and apply the work habits that are important for success in the green industries (*e.g., working safely, ...*)

Green Industries, Grade 12, University/College Preparation (THJ4M)

D. Professional Practice and Career Opportunities

- D1.** demonstrate an understanding of and apply safe working practices as they relate to the green industries

D1. Health and Safety

- D1.1** describe common industry hazards (*e.g., ergonomic hazards, mechanical hazards, chemical hazards*) and sources of information about accident prevention (*e.g., Workplace Hazardous Materials Information System [WHMIS], Passport to Safety*)
- D1.2** identify the personal protective clothing and equipment needed to perform various green industry tasks safely, and use as required to ensure their own and others' safety in the work environment (*e.g., safety glasses, hard hats, safety boots, fall protection gear, equipment guards*)
- D1.3** demonstrate the ability to make appropriate safety decisions for personnel on the basis of environmental and site conditions (*e.g., weather conditions, presence of poisonous plants or dangerous gases, hazardous trees, reliability of communications in remote areas, access to emergency services*) and level of crew training and experience
- D1.4** demonstrate an understanding of and apply safe procedures for using and maintaining materials, tools, and equipment (*e.g., avoid moving parts and pinch points; perform a circle check of vehicles and equipment; check condition of materials, hydraulic systems, and protective equipment; check oil and fuel levels*)
- D1.5** demonstrate an understanding of and apply safe procedures for handling plants and/or animals (*e.g., dethorning plants, using ergonomic lifting techniques or devices, using hand protection, securing loads correctly for transport, understanding animal perception, avoiding actions that startle animals, using chutes and restraining devices*)
- D1.6** demonstrate an understanding of specific components of the Occupational Health and Safety Act (*e.g., use of hazardous materials in the workplace, duties of employers, rights and responsibilities of workers*)

D2. Business and Regulatory Environment

- D2.3** outline and comply with legislation and guidelines governing the quality and safety of green industry products and services (*e.g., product quality regulations, grading standards, inspection requirements, voluntary guidelines such as the Landscape Ontario guidelines for the landscaping industry*)

Green Industries, Grade 12, Workplace Preparation (THJ4E)

D. Professional Practice and Career Opportunities

- D1.** demonstrate an understanding of and apply safe working practices as they relate to the green industries

D1. Health and Safety

- D1.1** identify common industry hazards (*e.g., ergonomic hazards, mechanical hazards, chemical hazards*) and sources of information about accident prevention (*e.g., Workplace Hazardous Materials Information System [WHMIS], Passport to Safety*)
- D1.2** identify the personal protective clothing and equipment needed to perform various green industry tasks safely, and use as required to ensure their own and others' safety in the work environment (*e.g., safety glasses, hard hats, safety boots, fall protection gear*)
- D1.3** demonstrate the ability to make appropriate safety decisions that take account of environmental conditions and worker preparedness (*e.g., level of training or experience, access to seasonal work wear, comfort level around large animals, fire response capabilities, weather and site hazards*)
- D1.4** demonstrate an understanding of and apply safe procedures for using and maintaining materials, tools, and equipment (*e.g., avoid moving parts and pinch points; perform a circle check of vehicles and equipment; check condition of materials, hydraulic systems, and protective equipment; check oil and fuel levels*)
- D1.5** demonstrate an understanding of and apply safe procedures for handling plants and/or animals (*e.g., dethorning plants, using ergonomic lifting techniques or devices, using hand protection, securing loads correctly for transport, understanding animal perception, avoiding actions that startle animals, using chutes and restraining devices*)
- D1.6** demonstrate an understanding of specific components of the Occupational Health and Safety Act and other safety-related requirements that relate to the green industries (*e.g., Ontario Forestry Safe Workplace Association guidelines, Grower Pesticide Safety Course certificate, Forest Fires Prevention Act*)

D2. Business and Regulatory Environment

- D2.3** outline and comply with legislation and guidelines governing the quality and safety of green industry products and services (*e.g., product quality regulations, grading standards, inspection requirements, voluntary guidelines such as the Landscape Ontario guidelines for the landscaping industry*)

HAIRSTYLING AND AESTHETICS, GRADES 11 AND 12

Hairstyling and Aesthetics, Grade 11, Workplace Preparation (TXJ3E)

A. Hairstyling and Aesthetics Fundamentals

A3. Business Practices and Strategies

A3.5 apply literacy skills (*e.g., to read manufacturers' instructions, product ingredients and directions*) and mathematical skills (*e.g., to measure volume and/or proportions*) to ensure the safe and appropriate use of hairstyling and aesthetics techniques, tools, and products

B. Hairstyling and Aesthetics Skills

B1. Performing Salon/Spa Services: perform a variety of salon/spa services that meet industry standards, using appropriate materials, techniques, and equipment safely and correctly

There is no mention of health and safety, safe behaviours, or safe practices in any of the specific expectations in substrand B1. However, with references to “appropriate materials, tools, and products” (B1.1), “working knowledge of products, techniques, and tools” (B1.2), and “in depth ... product analysis” (B1.3), as well as to performing services “to meet the needs of individuals” (B1.4), the specific expectations provide multiple opportunities to address safety issues.

C. Industry Practices, the Environment, and Society

C1. describe the environmental impact of practices and products in the hairstyling and aesthetics industry, and identify safe practices and environmentally friendly solutions to problems

C1. Industry Practices and the Environment

C1.1 identify and explain environmental and health issues related to various products used in the hairstyling and aesthetics industry (*e.g., ... the need for warnings/controls for carcinogenic/toxic ingredients; the need for proper ventilation in salons/spas*)

C1.2 describe and apply practices for the recycling and responsible disposal of waste from salon/spa operations (*e.g., ... techniques for safe handling*) ...

D. Professional Practice and Career Opportunities

D1. apply health and safety standards related to the use of hairstyling and aesthetics equipment, materials, and techniques and the maintenance of a safe work environment

D1. Health and Safety

D1.1 identify and describe key aspects of the laws, regulations, and regulatory/oversight bodies that govern the hairstyling and aesthetics industry (*e.g., the Occupational Health and Safety Act, the Workplace Hazardous Materials Information System [WHMIS], the Apprenticeship and Certification Act [Restricted Skill Sets], the Food and Drugs Act – Cosmetic Regulations; the Canadian Centre for Occupational Health and Safety*)

- D1.2** use safe and sanitary work practices to prevent the spread of pathogens and protect their own and others' health (*e.g., sanitize, disinfect, and/or sterilize implements and equipment; work in a well-ventilated space; wear safety glasses and appropriate clothing; handle products correctly; practise good posture and apply ergonomic principles; wash hands frequently; ...*)
 - D1.3** demonstrate an understanding of procedures to ensure safe and productive work practices in the hairstyling and aesthetics workplace (*e.g., using a checklist to keep track of tools and equipment; developing and following routines/protocols for the correct use of scissors, curling irons, electric cords, waxing heaters, autoclave, glass bead sterilizer, steamer, chemicals*)
 - D1.4** identify emergency situations that might occur in salon/spa settings (*e.g., cuts, burns, electrocution, allergic reactions, epileptic seizures, diabetic shock*) and describe appropriate responses and/or first-aid treatments
- D2. Career Opportunities**
- D2.5** demonstrate an understanding of and apply the work habits that are important for success in the hairstyling and aesthetics industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Hairstyling and Aesthetics, Grade 12, Workplace Preparation (TXJ4E)

B. Hairstyling and Aesthetics

- B4.** demonstrate exemplary practices for maintaining a safe and healthy work environment for students and clients

B4. Maintaining a Safe and Healthy Work Environment

- B4.1** use safe and healthy work practices in performing hairstyling and aesthetics services (*e.g., proper handling of equipment, monitoring of contra-indications and benefits for all treatments and products*)
- B4.2** identify and report potential problems that might lead to an unsanitary, unsafe, or unhealthy work environment (*e.g., problems related to electrical cords, spillage, chemical products, contaminated tools, inadequate ventilation, contact with blood or body fluids, disposal of syringes*)
- B4.3** use ergonomic work practices to reduce health risks for self and clients (*e.g., adjust stools, tables, chairs, aesthetic beds, and/or trolleys to the optimum height*)
- B4.4** demonstrate an understanding of procedures for maintaining a safe and productive work environment (*e.g., develop an inspection routine and a safety checklist for tools and operations*) and engage in professional activities that will keep them informed about the most current health and safety practices and issues in the industry (*e.g., read current professional literature, join professional associations*)

D. Professional Practice and Career Opportunities

- D1.** explain the purpose of legislation related to health and safety in the hairstyling and aesthetics industry

D1. Health and Safety

- D1.1** demonstrate knowledge of health and safety legislation and regulatory/oversight bodies that govern the hairstyling and aesthetics industry, explain their purpose, and describe how they affect the industry (*e.g., the Food and Drugs Act – Cosmetic Regulations, the Occupational Health and Safety Act, the Workplace Hazardous Materials Information System [WHMIS], the Apprenticeship and Certifications Act [Restricted Skill Sets], the Smoke-Free Ontario Act; the Canadian Centre for Occupational Health and Safety*)
- D1.2** use safe and sanitary work practices to prevent the spread of pathogens and protect their own and others' health (*e.g., sanitize, disinfect, and/or sterilize implements and equipment; work in a well-ventilated space; wear safety glasses and appropriate clothing; handle products correctly; wash hands frequently; ...*)
- D1.3** identify health and safety certification and training that are appropriate for the hairstyling and aesthetics industry (*e.g., first aid, cardiopulmonary resuscitation [CPR], Passport to Safety certificate, automated external defibrillation [AED]*) and organizations that offer health and safety information, training, and certification (*e.g., the Workplace Hazardous Materials Information System [WHMIS], the Red Cross, St. John Ambulance*)

HEALTH CARE, GRADES 11 AND 12

Health Care, Grade 11, University/College Preparation (TPJEM)

B. Health Care Skills

- B1.** use health care instruments, equipment, and materials safely and correctly

B1. Instruments, Equipment, and Materials

- B1.1** identify common medical instruments (*e.g., sphygmomanometer, forceps, double-ended explorer*), equipment (*e.g., Hoyer lift, intravenous [IV] pole, weigh scales, microscope, mouth mirror*), and materials (*e.g., wound dressings, bed linens and lift sheets, gloves, protective gowns, eye shields*), and use them safely and correctly
- B1.2** disinfect instruments and equipment, using accepted medical aseptic procedures, to prevent the spread of infection (*e.g., nosocomial infection secondary to contaminated medical equipment/devices*)
- B1.3** prepare, clean, and store instruments and equipment correctly, following standard industry procedures (*e.g., calibrate sphygmomanometer correctly prior to use, prepare instruments for autoclaving, clean pill cutter before and after use*)

- B3.** demonstrate the ability to apply health care skills and techniques safely and to industry standards

B3. Skills and Techniques

- B3.1** demonstrate an understanding of correct hand hygiene procedures (*e.g., knowing when they are required, knowing when to use hand washing rather than antibacterial sanitizers*), and apply as required

- B3.2** perform common caregiving skills and techniques (*e.g., bed making, bed bathing, feeding, toileting, oral care, weighing*) safely and correctly, using baby and/or adult mannequins
- B3.3** perform mobility techniques (*e.g., turning, lifting, and transferring clients; using crutches or walkers and instructing clients in their use*) safely and correctly
- B3.4** perform a range of motion and positioning techniques safely and correctly to prevent the development of decubitus ulcers and contractures in clients
- B3.5** demonstrate an understanding of (*e.g., through role play*) and apply health and safety procedures relating to proper body mechanics and ergonomics (*e.g., base of support, good body posture*)

C. Health Care and the Environment

C1. Health Care and the Environment

- C1.2** identify safe methods for the handling, storage, and disposal of waste and biohazardous materials (*e.g., use of checklists, sharps containers, double wrapping, proper labelling*)

D. Professional Practice and Career Opportunities

- D1.** demonstrate an understanding of and comply with safe working practices and the laws and regulations governing the health and safety of workers in the health care industry

D1. Health and Safety

- D1.1** identify and comply with legislation, regulations, standards, and requirements pertaining to worker safety in the health care workplace (*e.g., Occupational Health and Safety Act [OHSA], Workplace Hazardous Materials Information System [WHMIS]*)
- D1.2** demonstrate an understanding of and apply procedures to ensure safe and productive work practices in the health care workplace (*e.g., use tools and equipment safely as outlined in safety manuals, operating instructions, and institutional requirements; conduct a safety inspection or audit of a facility; use a checklist to keep track of tools and equipment*)
- D1.3** use protective clothing and equipment as required to keep themselves and others safe and free from harm

D3. Career Opportunities

- D3.4** demonstrate an understanding of and apply the work habits that are important for success in the health care industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Health Care, Grade 11, College Preparation (TPJ3C)

B. Health Care Skills

- B1.** use health care instruments, equipment, and materials safely and correctly

B1. Instruments, Equipment, and Materials

- B1.1** identify common medical instruments (*e.g., sphygmomanometer, forceps, double-ended explorer*), equipment (*e.g., Hoyer lift, intravenous [IV] pole, weigh scales, microscope, mouth mirror*), and materials (*e.g., wound dressings, bed linens and lift sheets, gloves, protective gowns, eye shields*), and use them safely and correctly

- B1.2** disinfect instruments, equipment, materials, and surfaces, using accepted medical aseptic procedures, to prevent the spread of infection
- B1.3** prepare, clean, and store instruments and equipment correctly, following standard industry procedures (*e.g., calibrate sphygmomanometer correctly prior to use, prepare instruments for autoclaving, clean pill cutter before and after use*)
- B3.** demonstrate the ability to apply health care skills and techniques safely and to industry standards

B3. Skills and Techniques

- B3.1** demonstrate an understanding of correct hand hygiene procedures (*e.g., knowing when they are required, knowing when to use hand washing rather than antibacterial sanitizers*), and apply as required
- B3.2** perform common caregiving skills and techniques (*e.g., bed making, bed bathing, feeding, toileting, oral care, weighing*) safely and correctly, using baby and/or adult mannequin
- B3.3** perform mobility techniques (*e.g., turning, lifting, and transferring clients; using crutches or walkers and instructing clients in their use*) safely and correctly
- B3.4** perform a range of motion and positioning techniques safely and correctly to prevent the development of decubitus ulcers and contractures in clients
- B3.5** demonstrate an understanding of (*e.g., through role play*) and apply health and safety procedures relating to proper body mechanics and ergonomics (*e.g., base of support, good body posture*)
- B3.6** demonstrate an understanding of and apply safe practices for handling, preparing, and storing food in a real or simulated care environment (*e.g., use proper cooking temperatures to kill bacteria; check that clients' food tolerances, requirements, or restrictions are observed*)

C. Health Care, Society and the Environment

C1. Health Care and the Environment

- C1.2** identify safe methods for the handling, storage, and disposal of waste and biohazardous materials (*e.g., use of checklists, sharps containers, double wrapping, proper labelling*)

D. Professional Practice and Career Opportunities

- D1.** demonstrate an understanding of and comply with safe working practices and the laws and regulations governing the health and safety of workers in the health care industry

D1. Health and Safety

- D1.1** identify and comply with legislation, regulations, standards, and requirements pertaining to worker safety in the health care workplace (*e.g., Occupational Health and Safety Act [OHSA], Workplace Hazardous Materials Information System [WHMIS]*)
- D1.2** demonstrate an understanding of and apply safe procedures for the use of tools and equipment as outlined in safety manuals, operating instructions, and institutional requirements
- D1.3** use protective clothing and equipment as required to keep themselves and others safe and free from harm

D3. Career Opportunities

D3.4 demonstrate an understanding of and apply the work habits that are important for success in the health care industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Health Care, Grade 12, University/College Preparation (TPJ4M)

A. Health Care Fundamentals

A4. demonstrate an understanding of the transmission of disease and methods of preventing it

A4. Disease Prevention and Treatment

A4.1 demonstrate an understanding of disease transmission (*e.g., the chain of infection*) and the role of the health care provider in health promotion and in controlling the spread of infection (*e.g., taking standard infection control precautions, such as following hand hygiene rules, sterilizing instruments and equipment, and keeping client areas clean*)

B. Health Care Skills

B1. Instruments, Equipment, and Materials

B1.1 identify a wide range of tools, equipment, and materials used in the health care industry (*e.g., forceps, sterile dressing trays/packages, centrifuges, autoclaves, reagent strips, glucometers, containers for culture and sensitivity testing*), and use them safely and correctly

B3. demonstrate an understanding of and apply standard practices and procedures used in the health care field

B3. Practices and Procedures

B3.1 demonstrate an understanding of (*e.g., through role play*) and apply standard first-aid (SFA) and cardiopulmonary resuscitation (CPR) procedures (*e.g., emergency scene management; control of bleeding; treatment of sprains, fractures, burns, loss of consciousness, anaphylactic reaction/shock, choking*)

B3.2 use appropriate medical aseptic procedures (*e.g., hand hygiene, gloving, proper use of biohazard waste containers and handling of contaminated laundry waste, steam sterilization of equipment*) to prevent the spread of pathogens

B3.3 use appropriate precautions when handling body substances, as demonstrated through role play and the use of simulated body products (*e.g., blood products, body fluids, human tissue, and materials contaminated with these substances*)

B3.4 demonstrate an understanding of and apply standard industry procedures for handling specimens and administering medications and treatments (*e.g., safely collect, label, store, and transport specimens to prevent contamination and degradation of sample; ...*)

D. Professional Practice and Career Opportunities

D1. demonstrate an understanding of and comply with safe working practices and the laws and regulations governing the health and safety of workers in the health care industry

D1. Health and Safety

- D1.1** explain the principal components of and comply with legislation, regulations, and guidelines pertaining to the safety of the health care workplace (*e.g., Occupational Health and Safety Act [OHSA], Workplace Hazardous Materials Information System [WHMIS]*)
- D1.2** identify potential hazards in the health care workplace (*e.g., biological, chemical, radiological, and physical hazards such as body fluids, soiled linens, cleaning agents, X-rays, combative clients, and sharp objects*)
- D1.3** assess various workplace factors that may lead to short-term or long-term health and safety issues for health care workers (*e.g., long hours on feet, long work shifts, lifting/moving of patients, ergonomic considerations*)
- D1.4** demonstrate an understanding of and apply safe procedures for the use of instruments, materials, and equipment as outlined in safety manuals, operating instructions, and institutional requirements
- D1.5** use protective clothing and equipment as required to keep themselves and others safe and free from harm

Health Care, Grade 12, College Preparation (TPJ4C)

A. Health Care Fundamentals

- A4.** demonstrate an understanding of the transmission of disease and methods of preventing it

A4. Disease Prevention and Treatment

- A4.1** demonstrate an understanding of disease transmission (*e.g., the chain of infection*) and the role of the health care provider in health promotion and in controlling the spread of infection (*e.g., taking standard infection control precautions, such as following hand hygiene rules, sterilizing instruments and equipment, and keeping client areas clean*)

B. Health Care Skills

B1. Instruments, Equipment, and Materials

- B1.1** identify common instruments, equipment, and materials used in the health care industry (*e.g., forceps, sterile dressing trays/packages, centrifuges, autoclaves, reagent strips, glucometers, containers for culture and sensitivity testing*), and use them safely and correctly
- B1.2** prepare, clean, and store instruments, equipment, and materials, following standard industry procedures ...

- B3.** demonstrate an understanding of and apply standard practices and procedures used in the health care field

B3. Practices and Procedures

- B3.1** demonstrate an understanding of (*e.g., through role play*) and apply standard first-aid (SFA) and cardiopulmonary resuscitation (CPR) procedures (*e.g., emergency scene management; control of bleeding; treatment of sprains, fractures, burns, loss of consciousness, anaphylactic reaction/shock, choking*)

- B3.2** use appropriate medical aseptic procedures (*e.g., hand hygiene, gloving, proper use of biohazard waste containers, safe handling of contaminated laundry waste*) to prevent the spread of pathogens
- B3.3** use appropriate precautions when handling body substances, as demonstrated through role play and the use of simulated body products (*e.g., blood products, body fluids, human tissue, and materials contaminated with these substances*)
- B3.4** demonstrate an understanding of and apply standard industry procedures for handling specimens and administering medications and treatments (*e.g., safely collect, label, store, and transport specimens to prevent contamination and degradation of sample; ...*)

D. Professional Practice and Career Opportunities

- D1.** demonstrate an understanding of and comply with safe working practices and the laws and regulations governing health and safety standards for workers in the health care industry

D1. Health and Safety

- D1.1** describe the principal components of and comply with legislation, regulations, and guidelines pertaining to the safety of the health care workplace (*e.g., Occupational Health and Safety Act [OHSA], Workplace Hazardous Materials Information System [WHMIS]*)
- D1.2** identify potential hazards in the health care workplace (*e.g., biological, chemical, radiological, and physical hazards such as body fluids, soiled linens, cleaning agents, X-rays, combative clients, and sharp objects*)
- D1.3** identify workplace factors that may lead to short-term or long-term health and safety issues for health care workers (*e.g., long hours on feet, long work shifts, lifting/moving of patients, ergonomic considerations*)
- D1.4** demonstrate an understanding of and apply safe procedures for the use of instruments, materials, and equipment as outlined in safety manuals, operating instructions, and institutional requirements
- D1.5** use protective clothing and equipment as required to keep themselves and others safe and free from harm

Child Development and Gerontology, Grade 12, College Preparation (TOJ4C)

B. Child Development and Gerontology Skills

B3. Meeting Cognitive and Social-Emotional Needs

- B3.2** evaluate the suitability of a variety of toys, occupational therapy devices, and recreational equipment (*e.g., ... safety of detachable parts, ...*) for children at various stages of development and for older adults experiencing various effects of aging

B4. Care Techniques and Practices

- B4.6** demonstrate the correct use of safety devices (*e.g., grab bars, wheelchair, Zimmer frame, high chair, safety gate, car seat*) when caring for children and older adults

D. Professional Practice and Career Opportunities

D1. demonstrate an understanding of and comply with laws, regulations, and guidelines related to the health, safety, and care of children and older adults

D1. Health and Safety

D1.1 identify and describe laws, regulations, and guidelines related to the health and safety of children and older adults (*e.g., car seat regulations, Daycare and Nursery Act, senior driver's licence requirements, accessible parking permit, Long Term Care Act, Patient Bill of Rights*)

D1.2 identify health and safety standards in workplaces involving child care and geriatric care (*e.g., appropriate safety protocols, including clear walkways, proper lighting, immunization requirements*)

D1.4 identify, on the basis of research, hazards that can affect the safety of children and older adults (*e.g., absence of fire extinguishers and/or fire alarms, lack of information about food or medication allergies, improper household chemical storage, extreme water temperatures*)

D1.5 explain the importance of proper labelling of hazardous materials (*e.g., to protect against ingestion of hazardous products*)

Health Care: Support Services, Grade 12, Workplace Preparation (TPJ4E)

A. Health Care Fundamentals

A4. demonstrate an understanding of the chain of infection and practices for preventing the transmission of infection

A4. Infection Control

A4.2 describe routine practices for preventing the transmission of infection (*e.g., isolation cleaning; droplet precautions; contact precautions; donning personal protective equipment such as gloves, masks, and gowns; disposal of body fluids*) and the indications for implementing them

B. Health Care Skills

B1. identify instruments, equipment, and materials that are commonly used in the health care industry, and use them correctly and safely

B1. Instruments, Equipment, and Materials

B1.1 identify and explain the purpose of common instruments, equipment, and materials used for client care in the health care industry (*e.g., patient lift, commode, intravenous [IV] pole, hospital bed, wheelchair*), and apply correct procedures for their use

B1.2 identify health care problems related to the use of instruments, equipment, or materials (*e.g., spread of infection through a health care facility as a result of the use of contaminated equipment*), and apply proper control procedures (*e.g., hand hygiene protocols, use of personal protective equipment guidelines, proper handling of bed linens*) to prevent their occurrence

B3. demonstrate the ability to apply health care skills and techniques safely and to industry standards

B3. Skills and Techniques

B3.1 demonstrate an understanding of correct hand hygiene procedures (*e.g., knowing when they are required, knowing when to use hand washing rather than antibacterial sanitizers*), and apply as required

B3.2 make an unoccupied and occupied bed correctly, using correct principles of infection control

B3.3 perform mobility techniques (*e.g., turning, lifting, and transferring clients; using crutches or walkers and instructing clients in their use*) correctly and safely

B3.4 demonstrate an understanding of and apply proper body mechanics and ergonomics when performing health care procedures (*e.g., bend with the knees instead of the back, use a wide base of support when lifting or turning*)

B3.5 demonstrate an understanding of and apply safe practices for handling, preparing, and storing food in a real or simulated care environment (*e.g., use proper cooking temperatures to kill bacteria; check that clients' food tolerances, requirements, or restrictions are observed*)

B3.6 demonstrate an understanding of and apply infection control skills in a simulated care environment (*e.g., isolation cleaning; droplet precautions; contact precautions; donning personal protective equipment such as gloves, masks, and gowns; disposal of body fluids*)

D. Professional Practice and Career Opportunities

D1. demonstrate an understanding of laws and regulations governing the health and safety of workers in the health care industry

D1. Health and Safety

D1.1 identify and describe legislation and sources of information pertinent to worker safety in the health care workplace (*e.g., Occupational Health and Safety Act [OHSA], Workplace Hazardous Materials Information System [WHMIS]*)

D1.2 demonstrate an understanding of and apply safe procedures for the use of tools, materials, and equipment as outlined in safety manuals, operating instructions, and institutional requirements

D1.3 describe and apply safe methods for the handling, storage, and disposal of waste and biohazardous materials (*e.g., use of a sharps container*)

D1.4 use protective clothing and equipment as required to keep themselves and others safe and free from harm

HOSPITALITY AND TOURISM, GRADES 11 AND 12

Hospitality and Tourism, Grade 11, College Preparation (TFJ3C)

B. Hospitality and Tourism Skills

B2. Administration and Management Practices

B2.4 demonstrate correct procedures for storing, rotating, and maintaining inventory (*e.g., use of the "first in, first out" [FIFO] method; implementation and maintenance of Hazard Analysis and Critical Control Point [HACCP] systems*)

D. Professional Practice and Career Opportunities

D1. demonstrate an understanding of and compliance with health and safety standards in the various sectors of the tourism industry

D1. Health and Safety

- D1.1** identify the laws, regulations, and regulatory/oversight organizations that govern health, safety, and sanitary standards in the tourism industry (*e.g., Occupational Health and Safety Act [OHSA], Health Protection and Promotion Act [HPPA], Workplace Hazardous Materials Information System [WHMIS] regulations, local health departments*) and explain their importance
- D1.2** demonstrate an understanding of emergency preparedness (*e.g., develop an emergency exit plan, ensure all safety equipment is clearly identified and easily accessible and that equipment lockout rules are posted*) and procedures to be followed (*e.g., regarding equipment power shut-off, the use of fire-suppression equipment*) in the event of an accident or emergency situation
- D1.3** demonstrate the ability to follow health and safety best practices (*e.g., report unsafe work conditions in the school classroom/facility; use the Workplace Hazardous Materials Information System [WHMIS]; know appropriate first aid procedures to be used in the event of an accident such as a burn, cut, or electric shock*)
- D1.4** demonstrate the use of safe food handling and proper sanitary practices (*e.g., prevent cross-contamination of foods; keep their person and uniform clean; wear hair nets; observe good housekeeping practices, safe lifting practices*)
- D1.5** use protective clothing and equipment as required to ensure their own and others' safety in the work environment
- D1.6** identify and describe health and safety issues that must be considered in the workplace (*e.g., issues concerning trip and fall, exposure to chemicals, the effects of fatigue, and long-term ergonomic considerations*)

Hospitality and Tourism, Grade 11, Workplace Preparation (TFJ3E)

A. Hospitality and Tourism Fundamentals

A3. Tools, Equipment, and Facilities

- A3.1** identify and describe appropriate procedures for the safe set-up, use, and maintenance of equipment used in a variety of activities in the food and beverage services sector
- A3.2** describe proper procedures for using a variety of tools commonly used in the food and beverage services sector

B. Hospitality and Tourism Skills

B1. Using Tools and Equipment

- B1.3** maintain tools and equipment related to the food and beverage services sector (*e.g., sharpen a knife, clean a food processor, clean a ventilation system*) safely and correctly

B2. use appropriate techniques for handling, preparing, and presenting food products

B2. Food Handling, Preparation and Presentation

B2.1 apply Health Protection and Promotion Act (HPPA) standards in handling, storing, and preparing food products (*e.g., cook and/or store food at the proper temperature; apply the “first in, first out” [FIFO] method in selecting ingredients*)

D. Professional Practice and Career Opportunities

D1. identify and demonstrate compliance with the health and safety legislation, regulations, and practices that govern the food and beverage services sector of the tourism industry

D1. Health and Safety

D1.1 identify the laws, regulations, and regulatory/oversight organizations that govern health, safety, and sanitary standards and practices in the food and beverage services sector (*e.g., Health Protection and Promotion Act [HPPA], Occupational Health and Safety Act [OHSA], Workplace Hazardous Materials Information System [WHMIS] regulations, local health departments*)

D1.2 identify facilities and equipment in the food and beverage services sector that are required under health and safety legislation and regulations (*e.g., eye wash stations, anti-fatigue mats, hand wash stations, smoke and carbon monoxide detectors, fire-suppression devices, ventilation*)

D1.3 demonstrate appropriate and timely use of safety and sanitary practices (*e.g., washing hands, wearing hair nets, labelling containers, storing perishable items appropriately, monitoring temperature control*) when handling, preparing, and presenting food and beverages

D1.4 identify health and safety issues that must be considered in workplaces in the food and beverage services sector (*e.g., issues concerning trip and fall, exposure to chemicals, the effects of fatigue, and workplace ergonomics*)

D1.5 demonstrate an understanding of emergency preparedness (*e.g., develop an emergency exit plan, ensure all safety equipment is clearly identified and easily accessible*) and procedures to be followed (*e.g., regarding the use of fire-suppression equipment*) in the event of an accident or emergency situation

D1.6 use protective clothing and equipment as required to ensure their own and others’ safety in the work environment

D2. Customer Service

D2.5 explain the importance of uniforms in providing customer service in the food and beverage services sector (*e.g., uniforms help to ensure staff safety and hygiene, ...*)

Hospitality and Tourism, Grade 12, College Preparation (TFJ4C)

A. Hospitality and Tourism Fundamentals

A1. Management Techniques and Strategies

A1.5 describe the role of business, labour, associations, and governments in various sectors of the tourism industry (*e.g., with regard to health and safety, ...*)

B. Hospitality and Tourism Skills

B2. Administration and Management Practices

B2.2 use appropriate inventory procedures to manage stock effectively (*e.g., monitor expiration dates; use the “first in, first out” [FIFO] method in selecting items from inventory*)

B4. Managing an Event or Activity

B4.6 coordinate and stage an event or activity, ensuring that it complies with all health and safety laws and regulations

D. Professional Practice and Career Opportunities

D1. demonstrate an understanding of and compliance with health and safety standards in the tourism industry and the related legislation and regulations

D1. Health and Safety

D1.1 describe the laws, regulations, and regulatory/oversight organizations that govern health, safety, and sanitary standards in the tourism industry (*e.g., Occupational Health and Safety Act [OHSA], Health Protection and Promotion Act [HPPA], Workplace Hazardous Materials Information System [WHMIS] regulations, local health departments*) and explain their importance

D1.2 analyse the health and safety issues that affect workers in the tourism industry (*e.g., issues concerning exposure to harmful chemicals, the effects of fatigue, ergonomics, sanitation, smoke and carbon monoxide [CO] detectors, fire-suppression devices, ventilation*)

D1.3 handle and store a variety of products (*e.g., cleaning chemicals, raw food products, flammable materials*) according to provincial standards

D1.4 take sanitary precautions (*e.g., wear gloves, aprons, hair nets*) when and where appropriate

D1.5 use protective clothing and equipment as required to ensure their own and others' safety in the work environment

Hospitality and Tourism, Grade 12, Workplace Preparation (TFJ4E)

A. Hospitality and Tourism Fundamentals

A3. handle and store foods in compliance with the Health Protection and Promotion Act (HPPA)

A3. Food Handling and Storage

A3.1 demonstrate the use of safe food handling and proper sanitation practices (*e.g., prevent cross-contamination of foods, keep their person and uniform clean, wear hair nets, observe good housekeeping practices*)

A3.2 apply provincial standards for safe food handling when preparing food (*e.g., wear gloves, use different-coloured cutting boards for different foods*)

A3.3 demonstrate professional food storage practices (*e.g., label containers; apply the “first in, first out” method when selecting food products for use*)

A3.5 identify the causes of food-borne illnesses (*e.g., salmonella, Norwalk virus, E. coli*), the associated medical symptoms (*e.g., nausea, stomach cramps, fever*), and methods of prevention (*e.g., store, handle, and cook food appropriately*)

B. Hospitality and Tourism Skills

B2. Food Handling, Preparation and Presentation

- B2.1** apply Health Protection and Promotion Act (HPPA) standards in handling, storing, and preparing food products (*e.g., cook and/or store food at the proper temperature; apply the “first in, first out” [FIFO] method in selecting ingredients*)

D. Professional Practice and Career Opportunities

- D1.** demonstrate an understanding of and compliance with health and safety legislation and regulations and the practices that are essential for a safe and healthy work environment

D1. Health and Safety

- D1.1** describe the laws, regulations, and regulatory/oversight organizations that govern health, safety, sanitation, and workers’ rights in the food and beverage services sector of the tourism industry (*e.g., Health Protection and Promotion Act [HPPA], Occupational Health and Safety Act [OHSA], Workplace Hazardous Materials Information System [WHMIS] regulations, Workplace Safety and Insurance Board [WSIB], local health departments*)
- D1.2** identify and describe health and safety issues that must be considered in workplaces in the food and beverage services sector (*e.g., issues concerning trip and fall, exposure to chemicals, the effects of fatigue, and workplace ergonomics*), and explain how these issues affect working conditions
- D1.3** identify ways of meeting health and safety requirements and recommendations (*e.g., concerning public safety*) in various settings of the food and beverage services sector (*e.g., carry out food inspections; have an emergency preparedness fire/evacuation plan; maintain a clean, hygienic facility; provide separate washrooms for staff and customers; observe municipal by-laws*)
- D1.4** demonstrate the ability to follow health and safety best practices (*e.g., report unsafe working conditions in the school classroom/facility; use WHMIS data sheets and understand WHMIS safety cautions; know appropriate first aid procedures to be used in the event of an accident such as a burn, cut, or electric shock*)
- D1.5** use protective clothing and equipment as required to ensure their own and others’ safety in the work environment

D3. Career Opportunities

- D3.3** identify industry-recognized training and/or certifications (*e.g., ... Safe Food Handling, ...*) that it would be beneficial to have if they are pursuing a career in the food and beverage services sector

MANUFACTURING TECHNOLOGY, GRADES 11 AND 12

Manufacturing Engineering Technology, Grade 11, University/College Preparation (TMJ3M)

B. Manufacturing Technology Skills

- B3.** demonstrate the safe and appropriate use of tools and equipment in the manufacture of a product or the development of a production process

B3. Tools, Equipment, and Manufacturing Processes

- B3.3** demonstrate the safe and proper use of appropriate hand tools, machine tools, and equipment (*e.g., files, wrenches, hack saws, electric drills, engine lathe, milling machine, planer, jointer, drill press, welder*) during a manufacturing process or in the assembly or fabrication of a product

D. Professional Practice and Career Opportunities

- D1.** demonstrate an understanding of and compliance with the health and safety legislation, standards, and practices that are essential to the safe operation of a manufacturing facility

D1. Health and Safety

- D1.1** identify and explain the importance of the specific components of legislation and standards related to workplace safety in the manufacturing industry (*e.g., Occupational Health and Safety Act [OHSA], Workplace Hazardous Materials Information System [WHMIS]*) and the specific responsibilities of the relevant oversight/regulatory organizations (*e.g., Workplace Safety and Insurance Board [WSIB], Industrial Accident Prevention Association [IAPA]*)
- D1.2** demonstrate good housekeeping practices in the work environment (*e.g., cleaning up spills and leaks, keeping areas clean and clear of obstructions, properly organizing tools and equipment*)
- D1.3** handle materials safely and appropriately in compliance with the information included in the Material Safety Data Sheets (MSDS) from the Workplace Hazardous Materials Information System (WHMIS)
- D1.4** demonstrate an understanding of procedures to ensure safe and productive work practices in the manufacturing workplace (*e.g., perform safety inspections and audits that include ergonomic considerations related to workshop layout and set-up, material handling, ease of movement, lighting, workstation set-up*)
- D1.5** demonstrate the safe use of tools and equipment in compliance with safety manuals, instructions, and institutional requirements
- D1.6** use proper ventilation and/or filtration systems to control air quality (*e.g., to minimize the effects of welding fumes, plastic off-gassing, cutting-fluid misting, heat treating of metal*)
- D1.7** use protective clothing and equipment as required to ensure their own and others' safety in the work environment

Manufacturing Technology, Grade 11, College Preparation (TMJ3C)

B. Manufacturing Technology Skills

- B4.** use tools, equipment, and machine processes safely and correctly in the manufacture of a product

B4. Tools, Equipment, and Machine Processes

- B4.2** use appropriate procedures (*e.g., correct machine set-up, operational safety procedures*) when setting up, maintaining, using, and storing tools and equipment used in manufacturing and production processes
- B4.3** demonstrate the correct selection and use of appropriate tools and equipment (*e.g., wrenches, electric drills, grinders, engine lathe, milling machine*) for specific manufacturing tasks
- B4.4** demonstrate the use of various bonding, combining, and/or assembly techniques (*e.g., shielded metal arc welding [SMAW], gas metal arc welding [GMAW], gas tungsten arc welding [GTAW], oxy-acetylene welding, brazing, soldering, use of appropriate fasteners, bonding*) to complete projects

D. Professional Practice and Career Opportunities

- D1.** demonstrate an understanding of and compliance with health and safety legislation, standards, and practices related to the manufacturing industry

D1. Health and Safety

- D1.1** identify and explain the importance of the specific components of legislation and standards related to workplace safety in the manufacturing industry (*e.g., Occupational Health and Safety Act [OHSA], Workplace Hazardous Materials Information System [WHMIS]*) and the specific responsibilities of the relevant oversight/regulatory organizations (*e.g., Workplace Safety and Insurance Board [WSIB], Industrial Accident Prevention Association [IAPA], Construction Safety Association of Ontario [CSAO]*)
- D1.2** demonstrate good housekeeping practices in the work environment (*e.g., cleaning up spills and leaks, keeping areas clean and clear of obstructions, properly organizing tools and equipment*)
- D1.3** handle materials safely and appropriately in compliance with the information included in the Material Safety Data Sheets (MSDS) from the Workplace Hazardous Materials Information System (WHMIS)
- D1.4** demonstrate an understanding of procedures to ensure safe and productive work practices in the manufacturing workplace (*e.g., perform safety inspections and audits that include ergonomic considerations related to workshop layout and set-up, material handling, ease of movement, lighting, workstation set-up*)
- D1.5** demonstrate the safe use of tools and equipment in compliance with safety manuals, instructions, and institutional requirements
- D1.6** use proper ventilation systems to control air quality (*e.g., to minimize the effects of welding fumes, plastic off-gassing, cutting-fluid misting, heat treating of metal*)
- D1.7** use protective clothing and equipment as required to ensure their own and others' safety in the work environment

D2. Career Opportunities

D2.6 demonstrate an understanding of and apply the work habits that are important for success in the manufacturing industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Manufacturing Technology, Grade 11, Workplace Preparation (TMJ3E)

B. Manufacturing Technology Skills

B4. demonstrate a working knowledge of the purpose, characteristics, and safe use of various hand tools, machine tools, power tools, and equipment used in the manufacture of products

B4. Selection and Use of Tools and Equipment

B4.1 demonstrate the correct selection and safe and proper use of hand and power tools and/or equipment (*e.g., lathe, mill, drill press, wrenches, tin snips, shears, rivet guns, foot and hand brakes, rollers, bar folds, punching and notching machines; equipment for shielded metal arc welding [SMAW], gas metal arc welding [GMAW], and gas tungsten arc welding [GTAW]; spot welder, plasma cutter, oxy-fuel torch, soldering gun*) when manufacturing a product

B4.3 demonstrate a working knowledge of preventive maintenance (*e.g., cleaning, lubricating, sharpening*) and proper storage of tools and equipment commonly used in manufacturing

D. Professional Practice and Career Opportunities

D1. demonstrate an understanding of and compliance with health and safety legislation, standards, and practices as they relate to processes, materials, tools, and equipment used in manufacturing

D1. Health and Safety

D1.1 identify and explain the importance of the specific components of legislation and standards related to workplace safety in the manufacturing industry (*e.g., Occupational Health and Safety Act [OHSA], Workplace Hazardous Materials Information System [WHMIS]*) and the specific responsibilities of the relevant oversight/regulatory organizations (*e.g., Workplace Safety and Insurance Board [WSIB], Industrial Accident Prevention Association [IAPA], Construction Safety Association of Ontario [CSAO]*)

D1.2 demonstrate good housekeeping practices in the work environment (*e.g., preventing and cleaning up spills and leaks, keeping areas clean and clear of obstructions, properly organizing tools and equipment*)

D1.3 handle materials safely and appropriately in compliance with the information included in the Material Safety Data Sheets (MSDS) from the Workplace Hazardous Materials Information System (WHMIS)

D1.4 describe health and safety roles, responsibilities, and procedures in manufacturing (*e.g., concerning choice of equipment and materials, maintenance of equipment, storing of materials and equipment, inspection of facilities and equipment, in-service and training*)

D1.5 demonstrate the safe use of tools and equipment in compliance with safety manuals, instructions, and institutional requirements

D1.6 use protective clothing and equipment as required to ensure their own and others' safety in the work environment

D2. Career Opportunities

D2.6 demonstrate an understanding of and apply the work habits that are important for success in the manufacturing industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Manufacturing Engineering Technology, Grade 12, University/College Preparation (THJ4M)

B. Manufacturing Technology Skills

B3. demonstrate the safe and effective use of tools, equipment, and materials in the production of a product or the development of a production process

B3. Tools, Equipment, and Manufacturing Processes

B3.1 demonstrate the skills required to safely operate machine tools and equipment (*e.g., engine lathe, milling machine, drill press; equipment for gas tungsten arc welding [GTAW] and gas metal arc welding [GMAW]*) in the assembly or fabrication of a product

B3.4 demonstrate the safe and proper use of advanced cutting processes (*e.g., plasma, laser, water jet*)

D. Professional Practice and Career Opportunities

D1. demonstrate an understanding of and compliance with health and safety legislation, standards, and practices, including methods to address deficiencies, as they relate to the manufacturing industry

D1. Health and Safety

D1.1 demonstrate an understanding of the specific components of legislation and standards related to workplace safety in the manufacturing industry (*e.g., Occupational Health and Safety Act [OHSA], Workplace Hazardous Materials Information System [WHMIS]*) and the specific responsibilities of the relevant oversight/regulatory organizations (*e.g., Workplace Safety and Insurance Board [WSIB], Industrial Accident Prevention Association [IAPA]*)

D1.2 describe and assess ways to promote safe and productive work practices in the manufacturing workplace (*e.g., develop and use a safety checklist for work practices, tools, equipment, and operations; develop and conduct safety audits and inspections of the school manufacturing facility; design a plan to address health and safety deficiencies; develop an emergency action plan to implement in the event of a spill*)

D1.3 demonstrate good housekeeping practices in the work environment (*e.g., cleaning up spills and leaks, keeping areas clean and clear of obstructions, properly organizing tools and equipment*)

D1.4 handle materials safely and appropriately in compliance with the information included in the Material Safety Data Sheets (MSDS) from the Workplace Hazardous Materials Information System (WHMIS)

D1.5 use proper ventilation and/or filtration systems to control air quality (*e.g., to minimize the effects of welding fumes, plastic off-gassing, cutting-fluid misting, and heat treating*)

- D1.6** demonstrate an understanding of the health hazards and injuries associated with workplace conditions (*e.g., repetitive motion and carpal tunnel syndrome, noise and hearing loss, radiation, pinch points*)
- D1.8** use and maintain protective clothing and equipment as required to ensure their own and others' safety in the work environment

Manufacturing Technology, Grade 12, College Preparation (TMJ4C)

B. Manufacturing Technology Skills

B4. Tools, Equipment, and Manufacturing Processes

- B4.1** demonstrate a working knowledge of the skills required to properly select and safely operate hand tools, machine tools, and equipment (*e.g., wrenches, electric drills, grinders, engine lathe, milling machine*) when manufacturing a product
- B4.2** maintain hand tools, machine tools, and equipment in good and safe working order
- B4.3** perform various manufacturing processes (*e.g., casting, moulding, coating, separating, assembling, cutting*) safely and correctly

D. Professional Practice and Career Opportunities

- D1.** demonstrate an understanding of and compliance with health and safety legislation, standards, and practices, including methods to address deficiencies, as they relate to the manufacturing industry

D1. Health and Safety

- D1.1** demonstrate an understanding of the specific components of legislation and standards related to workplace safety in the manufacturing industry (*e.g., Occupational Health and Safety Act [OHSA], Workplace Hazardous Materials Information System [WHMIS]*) and the specific responsibilities of the relevant oversight/regulatory organizations (*e.g., Workplace Safety and Insurance Board [WSIB], Industrial Accident Prevention Association [IAPA], Construction Safety Association of Ontario [CSAO]*)
- D1.2** describe and assess ways to promote safe and productive work practices in the manufacturing workplace (*e.g., develop and use a safety checklist for work practices, tools, equipment, and operations; develop and conduct safety audits and inspections of the school manufacturing facility; design a plan to address health and safety deficiencies*)
- D1.3** demonstrate good housekeeping practices in the work environment (*e.g., cleaning up spills and leaks, keeping areas clean and clear of obstructions, properly organizing tools and equipment*)
- D1.4** handle materials safely and appropriately in compliance with the information included in the Material Safety Data Sheets (MSDS) from the Workplace Hazardous Materials Information System (WHMIS)
- D1.5** use proper ventilation and/or filtration systems to control air quality (*e.g., to minimize the effects of welding fumes, plastic off-gassing, cutting-fluid misting, and heat treating*)
- D1.7** use and maintain protective clothing and equipment as required to ensure their own and others' safety in the work environment

Manufacturing Technology, Grade 12, Workplace Preparation (TMJ4E)

B. Manufacturing Technology Skills

- B4.** demonstrate the safe and proper use of tools and equipment when producing various projects to meet specifications

B4. Selection and Use of Tools and Equipment

- B4.3** adapt machine tools safely to allow for a variety of uses (*e.g., grinding, drilling, cutting*)

In addressing other specific expectations under this overall expectation, particularly those involving the selection and use of “correct” and “appropriate” tools, teachers have many opportunities to teach and assess health and safety, safe behaviours, and safe practices.

D. Professional Practice and Career Opportunities

- D1.** demonstrate an understanding of and compliance with health and safety legislation, standards, and practices, including methods to address deficiencies, as they relate to the manufacturing industry

D1. Health and Safety

- D1.1** demonstrate an understanding of the specific components of legislation and standards related to workplace safety in the manufacturing industry (*e.g., Occupational Health and Safety Act [OHSA], Workplace Hazardous Materials Information System [WHMIS]*) and the specific responsibilities of the relevant oversight/regulatory organizations (*e.g., Workplace Safety and Insurance Board [WSIB], Industrial Accident Prevention Association [IAPA], Construction Safety Association of Ontario [CSAO]*)

- D1.2** identify and list key ways to promote safe and productive work practices in the manufacturing workplace (*e.g., develop and use a safety checklist for work practices, tools, equipment, and operations; develop and conduct safety audits and inspections of the school manufacturing facility*)

- D1.3** use proper ventilation and/or filtration systems to control air quality (*e.g., to minimize the effects of welding fumes, plastic off-gassing, cutting-fluid misting, and heat treating*)

- D1.4** handle materials safely and appropriately in compliance with the information included in the Material Safety Data Sheets (MSDS) from the Workplace Hazardous Materials Information System (WHMIS)

- D1.6** use and maintain protective clothing and equipment as required to ensure their own and others' safety in the work environment

D2. Career Opportunities

- D2.4** demonstrate an understanding of and apply the work habits that are important for success in the manufacturing industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

TECHNOLOGICAL DESIGN, GRADES 11 AND 12

Technological Design, Grade 11, University/College Preparation (TDJ3M)

D. Professional Practice and Career Opportunities

D1. describe and apply health, safety, and environmental practices related to technological design

D1. Health and Safety

D1.1 describe the importance of health and safety laws, regulations, and standards that apply to technological design (*e.g., regulations and standards from the Occupational Health and Safety Act, Canadian Standards Association [CSA], Ontario Building Code, and Workplace Hazardous Materials Information System [WHMIS]*)

D1.2 adhere to appropriate personal and environmental health and safety standards and procedures with respect to processes, materials, tools, equipment, and facilities throughout the design process and when performing related activities (*e.g., use protective equipment; set tool and equipment guards properly; ensure adequate ventilation and ergonomic seating and other workplace arrangements; follow safe operating procedures; keep work areas clean and organized; store materials and dispose of wastes properly*)

D1.3 use protective clothing, gear, and equipment appropriately (*e.g., dust mask, safety glasses*)

D2. Career Opportunities

D2.6 demonstrate an understanding of and apply the work habits that are important for success in the technological design industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Technological Design and the Environment, Grade 11, Open (TDJ3O)

D. Professional Practice and Career Opportunities

D1. describe and apply appropriate health, safety, and environmental practices and standards throughout the design process

D1. Health and Safety

D1.1 investigate and describe health, safety, and environmental laws, regulations, standards, and agencies that can affect technological design (*e.g., Ontario Environmental Bill of Rights, Clean Water Act, Canadian Standards Association [CSA] standards, Workplace Hazardous Materials Information System [WHMIS]*)

D1.2 demonstrate an understanding of and follow personal and environmental health and safety procedures with respect to processes, materials, tools, equipment, and facilities throughout the design process and when performing related activities (*e.g., use protective equipment; set tool and equipment guards properly; ensure adequate ventilation and ergonomic seating and other workplace arrangements; follow safe operating procedures; keep work areas clean and organized; store materials and dispose of wastes properly*)

D1.3 use protective clothing, gear, and equipment appropriately (*e.g., dust mask, safety glasses*)

D2. Career Opportunities

D2.5 demonstrate an understanding of and apply the work habits that are important for success in the technological design industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Technological Design, Grade 12, University/College Preparation (TDJ4M)

D. Professional Practice and Career Opportunities

D1. describe and apply personal and environmental health and safety standards and practices related to technological design

D1. Health and Safety

D1.1 identify and describe the bodies and agencies that regulate, promote, and test the safety of technological products and/or processes (*e.g., Health Canada, Canadian Society of Safety Engineering [CSSE], Canadian Standards Association [CSA]*), and explain how they work to prevent accidents and enforce standards (*e.g., certification, product recalls*)

D1.2 adhere to and promote personal and environmental health and safety standards and procedures with respect to processes, materials, tools, equipment, and facilities throughout the design process and when performing related activities (*e.g., use protective equipment; set tool and equipment guards properly; ensure adequate ventilation and ergonomic workplace arrangements; follow safe operating procedures and maintain tools and equipment in good working condition; keep work areas clean and organized; store materials and dispose of wastes properly; report safety violations*)

D1.3 use protective clothing, gear, and equipment appropriately (*e.g., dust mask, safety glasses*)

D1.4 describe the rights and responsibilities of employees under the Occupational Health and Safety Act (*e.g., right to know, right to refuse, right to participate*)

D2. Career Opportunities

D2.4 demonstrate an understanding of and apply the work habits that are important for success in the technological design industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Technological Design in the Twenty-first Century, Grade 12, Open (TDJ4O)

D. Professional Practice and Career Opportunities

D1. describe and apply appropriate health, safety, and environmental practices and standards throughout the design process

D1. Health and Safety

D1.1 describe health and safety laws, regulations, standards, and agencies that relate to technological design (*e.g., Ontario Building Code, Canadian Standards Association [CSA], Ministry of Labour*)

- D1.2** adhere to personal and environmental health and safety standard and procedures with respect to processes, materials, tools, equipment, and facilities throughout the design process and related activities (*e.g., use protective equipment; set tool and equipment guards properly; ensure adequate ventilation and ergonomic seating and other workplace arrangements; follow safe operating procedures; keep work areas clean and organized; store materials and dispose of wastes properly*)
- D1.3** use protective clothing, gear, and equipment appropriately (*e.g., dust mask, safety glasses*)
- D1.4** describe the rights and responsibilities of employees under the Occupational Health and Safety Act (*e.g., right to know, right to refuse, right to participate*)
- D2. Career Opportunities**
- D2.5** demonstrate an understanding of and apply the work habits that are important for success in the technological design industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

TRANSPORTATION TECHNOLOGY, GRADES 11 AND 12

Transportation Technology, Grade 11, College Preparation (TTJ3C)

B. Transportation Technology Skills

B1. Engine Service and Repair

- B1.2** use a variety of hand, power, and specialty tools safely and correctly to perform basic maintenance and repair procedures (*e.g., maintenance: oil change, tune up; repair: replace the timing belt, repair a fluid leak*) on several types and styles of engines, to manufacturers' specifications
- B1.3** use a variety of tools and equipment (*e.g., fuel pressure/vacuum gauge, compression tester, coolant pressure tester, stethoscope, manometer*) safely and correctly to diagnose basic engine condition

- B2.** demonstrate the ability to test and repair basic electrical circuits safely and correctly

B2. Electrical Circuit Testing and Repair

- B2.3** perform repairs on electrical circuits (*e.g., terminal repair, wiring repair*) safely and correctly

B3. Service and Repair of Steering/Control, Suspension, Brake, and Body Systems

- B3.2** perform routine and/or scheduled service procedures on steering/control, suspension, and brake systems (*e.g., lubrication, brake service, suspension inspection, belt and track adjustment, tire service, fluid change*) safely and correctly, using appropriate service information

B4. Challenges and Repair Problems

- B4.5** demonstrate the safe and correct use of a variety of soldering, heating, cutting, and welding techniques when performing tasks related to a challenge or repair

C. Technology, the Environment, and Society

C1. Technology and the Environment

- C1.3** describe appropriate actions to be taken in the event of a spill of waste products (*e.g., gasoline, antifreeze*), and demonstrate the ability to safely implement such actions (*e.g., outline the steps described in an emergency action plan and carry them out*)

D. Professional Practice and Career Opportunities

- D1.** demonstrate the use of professional work practices and procedures and compliance with occupational health and safety regulations and standards

D1. Health and Safety

- D1.1** identify and explain the importance of legislation and regulations related to procedures and operations used in transportation technology facilities (*e.g., Occupational Health and Safety Act [OHSA]; regulations and standards outlined in the Workplace Hazardous Materials Information System [WHMIS]; Apprenticeship and Certification Act [ACA]*)
- D1.2** demonstrate good housekeeping and safety practices in the work environment (*e.g., cleaning up spills and leaks, keeping areas clean and clear of obstructions*)
- D1.3** use protective clothing and equipment (*e.g., eye protection, gloves, breathing mask*) as required to ensure their own and others' safety in the work environment
- D1.4** identify potential health risks (*e.g., brake dust, fumes from brake fluid and brake cleaner*) when servicing vehicles or craft, and demonstrate the use of safe procedures to mitigate these hazards (*e.g., use appropriate ventilation and breathing protection*)
- D1.5** describe and demonstrate the ability to follow appropriate safety precautions required for new technologies when working on vehicles, craft, or power equipment (*e.g., precautions regarding high current and voltage, capacitor discharge rate of supplemental restraint systems, extreme temperature of exhaust systems*)
- D1.6** demonstrate an understanding of professional responsibilities in the transportation industry with regard to personal and public safety (*e.g., quality workmanship, integrity, customer service, compliance with manufacturers' standards*)

D2. Career Opportunities

- D2.5** demonstrate an understanding of and apply the work habits that are important for success in the transportation industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Transportation Technology: Vehicle Ownership, Grade 11, Open (TTJ3O)

A. Vehicle Ownership Fundamentals

- A4.** identify and describe the precautions, procedures, and obligations related to roadside emergencies and accidents

A4. Roadside Emergency Precautions and Procedures

- A4.4** identify safe procedures and recommended techniques (*e.g., for jacking, battery boosting, towing*) described in the owner's manual to resolve roadside emergencies (*e.g., flat tire, dead battery, vehicle breakdown*)

B. Vehicle Maintenance Fundamentals

- B2.** identify and describe the components and service requirements of major vehicle systems, and related safety precautions, that an owner should be aware of

B2. Major Vehicle Systems

- B2.3** identify the product information ... and hazards and safety precautions (*e.g., battery explosion – wearing safety glasses*) that an owner should be aware of when servicing vehicle systems

C. Vehicle Maintenance Skills

C2. Engine Service

- C2.1** locate the components of an engine lubrication system (*e.g., oil dipstick, oil filter, oil pan drain plug*) and safely and correctly service the system
- C2.2** locate the components of an engine cooling system (*e.g., cooling fins, radiator cap, radiator hoses*) and safely and correctly service the system (*e.g., perform a freeze point test, system pressure test, boiling point test*)
- C2.3** locate the components of an engine starting system (*e.g., battery, battery cables, starting motor*) and safely and correctly service the system (*e.g., clean battery connections, use booster cables*)

C3. General Vehicle Maintenance and Service

- C3.1** demonstrate the correct use of hand tools and equipment required for basic service and maintenance (*e.g., vehicle jacks, safety stands, wrenches*), store them safely, and maintain them in good working order
- C3.2** locate the components of the electrical system (*e.g., battery, alternator, fuses, light bulbs*) and perform basic diagnostic and repair procedures (*e.g., check fuse, replace bulb, test and charge battery, install a trailer wiring harness*) safely and correctly
- C3.4** perform basic maintenance procedures related to the steering system (*e.g., basic wheel and tire service, changing a flat tire*) safely and correctly

E. Professional Practice and Career Opportunities

- E1.** demonstrate an understanding of and compliance with occupational health and safety regulations and standards related to vehicle maintenance

E1. Health and Safety

- E1.1** identify and explain the importance of legislation and regulations related to procedures and operations used in transportation technology facilities (*e.g., Occupational Health and Safety Act [OHSA]; regulations and standards outlined in the Workplace Hazardous Materials Information System [WHMIS]*)
- E1.2** demonstrate good housekeeping and safety practices in the work environment (*e.g., cleaning up spills and leaks, keeping areas clean and clear of obstructions*)
- E1.3** use protective clothing and equipment (*e.g., safety glasses, hearing protection*) as required to ensure their own and others' safety in the work environment

E2. Career Opportunities

E2.4 demonstrate an understanding of and apply the work habits that are important for success in the transportation industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

Transportation Technology, Grade 12, College Preparation (TTJ4C)

B. Transportation Technology Skills

B2. Service and Repair of Drivetrain Components

B2.2 perform service procedures on drivetrain components (*e.g., replace and adjust clutch, replace universal joints, replace/repack bearings, replace drive seals, adjust belt or chain*) safely and correctly

B3. Service and Repair of Steering/Control, Suspension, Brake, and Body Systems

B3.2 demonstrate proper procedures and the safe use of specialty tools and equipment in the service and repair of steering/control, suspension, brake, and body system components (*e.g., steering/control: tie rod fork, tire balancer; suspension: coil spring compressor; brakes: lathe, dial indicator gauge; body: metal inert gas [MIG] welder*)

B4. Solving Repair Challenges

B4.2 demonstrate the safe and correct use of a variety of soldering, heating, cutting, and/or welding equipment for service repair and modification tasks

C. Technology, the Environment, and Society

C1. Technology and the Environment

C1.2 describe appropriate actions to be taken in the event of a spill of waste products (*e.g., gasoline, antifreeze*) and demonstrate the ability to safely implement such actions (*e.g., implement an emergency action plan to contain and clean up the spill*)

C1.3 identify the procedures required to prevent the release of ozone-depleting materials and other harmful substances (*e.g., electrolyte, antifreeze, gasoline*) during the servicing of vehicle or craft systems

D. Professional Practice and Career Opportunities

D1. demonstrate the use of professional work practices and procedures and compliance with occupational health and safety regulations and standards

D1. Health and Safety

D1.1 demonstrate an understanding of legislation and regulations related to procedures and operations used in transportation technology facilities (*e.g., Occupational Health and Safety Act [OHSA]; regulations and standards outlined in the Workplace Hazardous Materials Information System [WHMIS]; Apprenticeship and Certification Act [ACA]*)

D1.2 demonstrate good housekeeping and safety practices in the work environment (*e.g., cleaning up spills and leaks, keeping areas clean and clear of obstructions*)

- D1.3** identify potential health risks (*e.g., asbestos dust, fumes from brake fluid and cleaners*) when servicing vehicles or craft, and demonstrate the use of safe procedures to mitigate these hazards (*e.g., use appropriate ventilation and breathing protection*)
- D1.4** use protective clothing and equipment (*e.g., eye and hearing protection, gloves, breathing apparatus, hoist, safety stand*) as required to ensure their own and others' safety in the work environment
- D1.5** explain the need for and demonstrate the ability to follow appropriate safety precautions applicable to new technologies when working around or servicing vehicles, craft, or power equipment (*e.g., precautions regarding high current and voltage, capacitor discharge rate of supplemental restraint systems, extreme temperature of exhaust systems, accumulators in hydraulic systems, pressure vessels*)
- D1.6** demonstrate an understanding of professional responsibilities in the transportation industry with regard to personal and public safety (*e.g., good workmanship, integrity, high-quality customer service, compliance with manufacturers' standards*)

Transportation Technology: Vehicle Maintenance, Grade 12, Workplace Preparation (TTJ4E)

B. Vehicle Maintenance Skills

- B1.** perform general service and maintenance on vehicles or small-engine products safely, using the owner's manual, repair manuals, tools and equipment manuals, and identification and information labels
- B1. Service Information**
 - B1.2** locate information in the owner's manual and on the vehicle or small-engine product (*e.g., safety warnings, warning light and icon information, computer trouble codes, specifications such as tire size and recommended pressure, identification labels, graphics*) and apply as required when performing service and maintenance procedures
 - B1.4** demonstrate the correct use of hand, power, machine, and pneumatic tools and equipment required for service tasks (*e.g., tire machine, floor jacks and hoists, safety stands, shop tools*), store them safely, and maintain them in good working order
 - B1.6** demonstrate the safe operation of a variety of heating, cutting, and welding equipment in performing service and maintenance tasks
- B2. Powertrain Systems**
 - B2.1** perform service procedures on an engine lubrication system (*e.g., change engine oil, change oil filter*) safely and correctly
 - B2.2** perform inspection and service procedures on an engine fuel system (*e.g., change fuel filter*) safely and correctly
 - B2.3** perform inspection, testing, and service procedures on an engine cooling system (*e.g., perform pressure test, test freezing/boiling point*) safely and correctly
 - B2.4** perform inspection and service procedures on an engine ignition system (*e.g., replace spark plugs, replace ignition wires*) safely and correctly
 - B2.5** perform inspection, testing, and service procedures on an electrical system (*e.g., test fuses, charge battery, inspect alternator*) safely and correctly

- B2.6** identify drivetrain components (*e.g., transmission dipstick, differential fill plug, transfer case level plug*) and perform drivetrain maintenance and service (*e.g., clutch adjustment, fluid level checks*) safely and correctly
- B2.7** perform inspection and service procedures on an engine exhaust system (*e.g., replace a muffler*) safely and correctly

C. Technology, the Environment, and Society

C1. Technology and the Environment

- C1.3** describe appropriate actions to be taken in the event of a spill of waste products (*e.g., used oil, antifreeze, fuel*), and demonstrate the ability to safely implement such actions (*e.g., outline the steps described in an emergency action plan and carry them out*)

D. Professional Practice and Career Opportunities

- D1.** demonstrate an understanding of and compliance with occupational health and safety regulations and standards

D1. Health and Safety

- D1.1** demonstrate an understanding of legislation and regulations related to procedures and operations used in transportation technology facilities (*e.g., Occupational Health and Safety Act [OHSA]; regulations and standards outlined in the Workplace Hazardous Materials Information System [WHMIS]; Apprenticeship and Certification Act [ACA]*)
- D1.2** demonstrate good housekeeping and safety practices in the work environment (*e.g., cleaning up spills and leaks, keeping areas clean and clear of obstruction*)
- D1.3** use protective clothing and equipment (*e.g., eye protection, breathing apparatus*) as required to ensure their own and others' safety in the work environment
- D1.4** describe and demonstrate the ability to follow safety precautions applicable to new technologies when working around or servicing vehicles (*e.g., precautions regarding high current and voltage, capacitor discharge rate of supplemental restraint systems, extreme temperature of exhaust systems*)
- D1.5** identify potential health risks when servicing vehicles and demonstrate the use of safe procedures to mitigate these hazards (*e.g., preventive measures to minimize airborne particles and fumes*)

D2. Career Opportunities

- D2.3** demonstrate an understanding of and apply the work habits that are important for success in the transportation industry, as identified in the Ontario Skills Passport (*e.g., working safely, ...*)

