LITERACY FOUNDATIONS
INFORMATION AND
COMMUNICATIONS TECHNOLOGY

Curriculum 2010

BRITISH COLUMBIA
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Ministry of
Education

Many people contributed their expertise to Literacy Foundations. The project managers were Shelley Gilmour and Paula Pothier, of the Ministry of Education, assisted by the expertise of Teresa Saunders, ministry secondee in 2007/2008 and revision contractor in 2009/2010, working with other ministry personnel and our partners in education. We would like to thank all who participated in this process.

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INTRODUCTION
Literacy Foundations

The development of this curriculum has been guided by the following principles of learning:

- Learning requires the active participation of the student.
- People learn in a variety of ways and at different rates.
- Learning is both an individual and a group process.

This document also recognizes that British Columbia's schools include individuals of varied backgrounds, interests, abilities, and needs. Wherever appropriate for this curriculum, ways to meet these needs and to ensure equity and access for all learners have been integrated as much as possible into the learning outcomes. In addition, the following First Peoples principles of learning have been affirmed within First Peoples societies to guide the teaching and learning of provincial curricula:

- Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors.
- Learning is holistic, reflexive, reflective, experiential, and relational (focussed on connectedness, on reciprocal relationships, and a sense of place.
- Learning involves recognizing the consequences of one's actions.
- Learning involves generational roles and responsibilities.
- Learning recognizes the role of indigenous knowledge.
- Learning is embedded in memory, history, and story.
- Learning involves patience and time.
- Learning requires exploration of one's identity.
- Learning involves recognizing that some knowledge is sacred and only shared with permission and/or in certain situations.

Because these principles of learning represent an attempt to identify common elements in the varied teaching and learning approaches that prevail within particular First Peoples societies, it must be recognized that they do not capture the full reality of the approach used in any single First Peoples society.

RATIONALE

The aim of Literacy Foundations is to enable adults to develop knowledge and skills in five subject areas (English Language Arts, Mathematics, Science, Social Studies, and Information and Communications Technology) in order to be successful in courses required for graduation in either the Adult Graduation Program or the 2004 Graduation Program. The courses within each subject area of Literacy Foundations are bridging courses and provide standardized, competency-based Prescribed Learning Outcomes to address the literacy development needs of two main groups of adult students:

- **non-graduated adult students** who are functioning below the Grade 11 or 12 level in a given subject area and need to upgrade their skills and knowledge in preparation for entry into a graduation program (Adult Graduation Program or 2004 Graduation Program)

- **graduated adult students** who wish to take a Grade 11 or 12 level course to upgrade their graduation diploma but who are functioning below that level in a given subject area and need to upgrade their skills to enable them to successfully complete the course they have chosen to take

There is no requirement that students must take or that schools must offer any or all of the subject areas and courses within each subject area. Students can work with their school to determine which subject area(s) and course(s) within a subject area would best meet their needs.

Although Literacy Foundations addresses the needs of adult students, school-age students who have significant skill and knowledge gaps in any of the five subject areas of Literacy Foundations and need to upgrade their basic skills in order to be successful in coursework at the Grade 10, 11, and 12 levels may also benefit from some or all of the courses in Literacy Foundations.

REQUIREMENTS AND GRADUATION CREDITS

The Literacy Foundations courses within each subject area are coded as Grade 10 elective courses but are **not** creditable toward graduation. They are bridging courses that build the foundational skills necessary for students to successfully enter a graduation program.

Literacy Foundations courses cannot be considered equivalent to the Ministry Authorized K-9/10 curriculum as the Prescribed Learning Outcomes in the five Literacy Foundations subject areas do not contain all of the Prescribed Learning Outcomes found within the same subject areas of the Ministry Authorized K-9/10 curriculum. Successful completion of Literacy Foundations courses will not grant students equivalency for Grade 10 level Ministry Authorized courses. However, the Prescribed Learning Outcomes in the Literacy Foundations courses are sufficiently aligned with the Prescribed Learning Outcomes in the Ministry Authorized K-9/10 curriculum or the Ministry of Advanced Education's ABE (Adult Basic Education) Fundamentals curriculum to prepare adult learners to be successful in the courses required to obtain a graduation diploma.

Although the Literacy Foundations courses within each subject area are not creditable toward a graduation credential for either adult or school-age students, they are designated as four-credit courses for Ministry of Education reporting and funding purposes. Student achievement in Literacy Foundations courses must be reported in accordance with provincial policy.

There are no prerequisites for Ministry-Developed courses. Educators use their professional judgment in assessing students' ability to demonstrate the skills and knowledge necessary to achieve the Prescribed Learning Outcomes in a specific Literacy Foundations course/level.

SUGGESTED TIMEFRAME

The Literacy Foundations courses within each subject area typically contain 80 to 120 hours of instructional content. This estimate is provided as a suggestion only; when delivering the Prescribed Learning Outcomes, teachers may adjust the instructional time as necessary to meet local school and student needs.

SUBJECT AREAS

Literacy Foundations contains the learning outcomes for the courses within each of the five following subject areas:

*   English Language Arts
*   Mathematics
*   Science
*   Social Studies
*   Information and Communications Technology

To further clarify options and next steps for students as they move through and beyond the courses within the subject areas, introductory information and a diagram showing sample pathways is included in each of the subject areas. In particular, the sample pathways diagrams illustrate the following:

*   suggested options for sequential skill-building as students progressively upgrade their knowledge and skills through the Literacy Foundations course(s) within a subject area (these are indicated by black arrows in the sample pathways diagrams);
*   suggested options for moving from Literacy Foundations courses into courses for credit in either the Adult Graduation Program or the 2004 Graduation Program

The sample pathways are not prescriptive and are not intended to indicate that any course is a prerequisite for another.

However, students whose goals include pursuing post-secondary academic or trades education should be fully informed of specific prerequisite courses required for entry into the post-secondary program of their choice prior to selecting the pathway that will best meet their needs. Detailed information on BC post-secondary programs and requirements can be accessed on the British Columbia Council on Admissions and Transfer (BCCAT) website: www.educationplanner.ca.

PRESCRIBED LEARNING OUTCOMES

The Prescribed Learning Outcomes are the legally required content standards for the provincial education system. They define the required skills and knowledge for Literacy Foundations courses. The Prescribed Learning Outcomes are statements of what students are expected to know and be able to do by the end of each course within a subject area.

In comparison to the organization of the Prescribed Learning Outcomes outlined in the grade levels of provincial K-12 curriculum, the Prescribed Learning Outcomes of Literacy Foundations have been structured with the specific needs of the adult learner in mind. The essential question guiding the development of these Prescribed Learning Outcomes was: What does a student need to know and be able to do at each specific level in order to be successful at the next level?

It is expected that student achievement will vary in relation to the Prescribed Learning Outcomes. Evaluation, reporting, and student placement with respect to the Prescribed Learning Outcomes are dependent on the professional judgment and experience of teachers, guided by provincial policy.

For ease of reference, Prescribed Learning Outcomes are coded alphanumerically within each subject area; however, this arrangement is not intended to imply a required instructional sequence.

Wording of Prescribed Learning Outcomes

All Prescribed Learning Outcomes complete the stem: "It is expected that students will…."

When used in a Prescribed Learning Outcome, the word "including" indicates that any ensuing item **must be addressed**. Lists of items introduced by the word "including" represent a set of minimum requirements associated with the general requirement set out by the outcome. These lists are not necessarily exhaustive, however; teachers may choose to address additional items that also fall under the general requirement set out by the outcome.

Conversely, the abbreviation "e.g.," (for example) in a Prescribed Learning Outcome indicates that the ensuing items are provided for illustrative purposes or clarification, and are **not required.** Presented in parentheses, the list of items introduced by "e.g.," is neither exhaustive nor prescriptive, nor is it put forward in any special order of importance or priority. Teachers are free to substitute items of their own choosing that they feel best address the intent of the learning outcome.

STRATEGIES FOR SUPPORTING LITERACY LEARNING WITHIN THE SUBJECT AREAS

All teachers, at all grades, teaching all subjects are teachers of literacy. Teachers do not just teach content knowledge but also ways of reading, writing, and oral expression specific to that subject area. Language allows students to make connections across many areas of study.

> What is literacy? Literacy is "the ability to understand and employ printed information in daily activities, at home, at work and in the community – to achieve one's goals and to develop one's knowledge and potential."
> - *The International Adult Literacy and Life Skills Survey (IALLS), 2005*

The ability to read is a cornerstone for success in education, work, and life; literacy is the essential skill upon which all other learning depends. It is expected that students enrolled in Literacy Foundations will experience greater success in these courses when there is a focus on reading, writing, and oral language development across all subject areas with the goals of comprehension and understanding.

Reading and Viewing

Oral Language

Writing and Representing
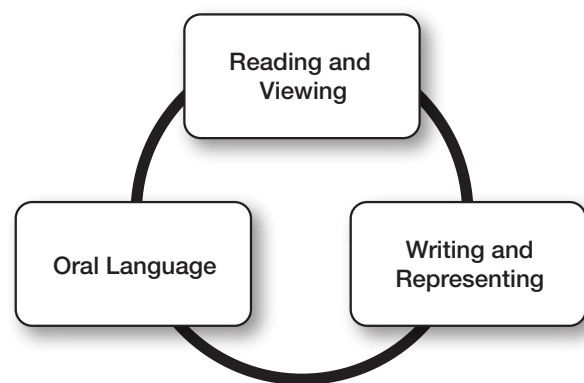
More time for literacy learning does not mean less time for learning other subjects. In fact, literacy learning provides a way into the increasingly complex ideas and texts that students encounter in all subject areas as they advance through the levels and grades. By integrating literacy learning and adapting instruction to respond to the diverse literacy needs of their students, all subject teachers:

- prepare students to read, write, and comprehend subject area–specific material;
- provide students with opportunities to practise and apply literacy skills and strategies in many different contexts; and
- can better support success for all learners.

British Columbia's education system supports the principles of integration, equity, accessibility, and inclusion for students of all backgrounds, interests, and abilities. Literacy challenges should not be a barrier to students; therefore, the Ministry of Education encourages teachers to consider a variety of instructional and assessment strategies that embed and support literacy learning.

The following are examples of strategies that support literacy learning throughout the Literacy Foundations subject areas. They are not grade-specific but rather suggestions that can be adapted to the particular learning situation.

Ways that teachers can support students to develop oral language skills:

- Assign roles for small group discussion (e.g., leader, recorder, timer, mediator, and presenter).
- Teach, model, and reinforce appropriate listening and speaking behaviours.
- Create a variety of situations where students can use oral language to express ideas, information, and emotions (e.g., speeches, storytelling, debates).
- Teach listening strategies designed to focus attention on identifying the main purpose or theme in informational and literary texts.
- Model how making connections to prior knowledge, making predictions, and evaluating ideas are important listening skills.

Ways that teachers can support students with reading and viewing skills:

- Read and identify features of both informational and literary texts (e.g., illustrations, glossary, and table of contents).
- Identify purpose for reading, model "reading-between-the-lines" to make inferences, and use context to find meaning.
- Demonstrate and teach use of graphic organizers (e.g., in Science, use bar graphs, line graphs, pie charts, tables, and diagrams to extract and convey information; in Math, draw pictures to portray a problem or flow charts to outline the steps to solve a problem; in Social Studies, use timelines to illustrate a sequence of events and charts to compare systems).
- Use a variety of reading strategies, including skimming, scanning, rereading, making predictions, and making connections (e.g., in Science, identify main points that support or refute information and bias in an article; in Math, identify extraneous information in a word problem).
- Identify subject-specific vocabulary (e.g., in Information and Communications Technology, perform internet searches using efficient research skills such as use of keywords/vocabulary; in Science, create a dictionary with plain language definitions of common terminology).

Ways that teachers can support students with writing and representing skills:

- Model the writing process: pre-writing (generate ideas, identify purpose and audience), writing (develop and organize ideas, support the main idea), post-writing (edit and revise)
- Teach subject-specific vocabulary for content, skills, and processes (e.g., in Science, use class time to create subject-specific dictionary and provide simple definitions).
- Teach and model conventions of writing such as grammar, punctuation, spelling, content, style, and form (e.g., in Social Studies, develop criteria for essay writing and have students proof and edit their own work).
- Demonstrate strategies to generate ideas, such as brainstorming, discussion, and visualizing, and mapping and other organizers.

- Explore the features and conventions of various forms of writing (e.g., in English Language Arts, students can write letters, travel journals, résumés, or short stories).

Ways that teachers can support students to demonstrate evidence of thinking:

- Model how to ask questions (e.g., in Information and Communications Technology, students can develop questions to assess web content for reliability; in Math, students can develop questions to determine steps to solve a word problem).
- Create space for ambiguity and various points of view (e.g., in Social Studies, students can explore "what-if" or alternative historic scenarios; in English Language Arts, students can read a variety of poems or essays on one theme or topic and compare and contrast the ideas presented).
- Encourage students to think independently and to expand thinking (e.g., in Science, students can apply theories to new problems; in Social Studies, students can study current events and propose approaches to social or civic issues; in English Language Arts, students can select reading materials based on their own goals or interests).

Resources:

The following resources are starting points to learn more about literacy strategies and other considerations that can assist teachers designing educational programs for students:

- English Language Arts integrated resource packages and curriculum
- BC Performance Standards (reading, writing)
- Secondary literacy strategies:
  – *Teaching Students with Learning and Behavioural Differences: A Resource Guide for Teachers*
  – *Students with Intellectual Disabilities: A Resource Guide for Teachers*
  – *Students from Refugee Backgrounds: A Guide for Teachers and Schools*
- Literacy specialist and English Language Arts teachers in your school or district
- *Shared Learnings: Integrating BC Aboriginal Content K-10* (2006)

INCLUSION, EQUITY, AND ACCESSIBILITY FOR ALL LEARNERS

British Columbia's schools include people of varied backgrounds, interests, and abilities. When selecting specific topics, activities, and resources to support the implementation of Literacy Foundations, teachers are encouraged to ensure that these choices support inclusion, equity, and accessibility for all students. In particular, teachers should ensure that classroom instruction, assessment, and resources reflect sensitivity to diversity and incorporate positive role portrayals, relevant issues, and themes such as inclusion, respect, and acceptance.

Government policy supports the principles of integration and inclusion of students taking English as a Second Language (ESL) and of students with special needs. Some strategies may require adaptations to ensure that those with special and/or ESL needs can successfully achieve the Prescribed Learning Outcomes.

Some students with special needs may require program adaptation or modification to facilitate their achievement of the learning outcomes identified in Literacy Foundations.

INFUSING ABORIGINAL CONTENT

The Ministry of Education is dedicated to ensuring that the cultures and contributions of Aboriginal peoples in BC are reflected in all provincial curricula.

Authentic Texts and Resources

In order to present authentic First Peoples content and worldviews, it is important to draw from Aboriginal learning and teaching resources. Authentic First Peoples texts are those that:

- present authentic First Peoples voices, i.e., historical or contemporary texts created by First Peoples (or through the substantial contributions of First Peoples)
- depict themes and issues important to First Peoples cultures (e.g., loss of identity and affirmation of identity, tradition, healing, role of family, importance of Elders, connection to the land, the nature and place of spirituality as

an aspect of wisdom, the relationships between individual and community, the importance of oral tradition, the experience of colonization and decolonization)
• incorporate First Peoples story-telling techniques and features as applicable (e.g., circular structure, repetition, weaving in of spirituality, humour).

Due to the diversity of Aboriginal communities in BC, Canada and the world, and the need to provide a relevant context to classroom instruction and assessment, it is suggested that resource selection focuses primarily on First Peoples texts and resources from the local community wherever possible.

Working with the Aboriginal Community

To address Aboriginal content and perspectives in the classroom in a way that is accurate and that respectfully reflects Aboriginal concepts of teaching and learning, teachers are strongly encouraged to seek the advice and support of local Aboriginal communities. As Aboriginal communities are diverse in terms of language, culture, and available resources, each community will have its own unique protocol to gain support for integration of local knowledge and expertise. To begin discussion of possible instructional and assessment activities, teachers should first contact Aboriginal education co-ordinators, teachers, support workers, and counsellors in their district who will be able to facilitate the identification of local resources and contacts such as Elders, chiefs, First Nations tribal or band councils, Aboriginal cultural centres, Aboriginal Friendship Centres, and Métis or Inuit organizations. In addition, teachers may wish to consult the various Ministry of Education publications available, including the "Planning Your Program" section of the resource *Shared Learnings*. This resource was developed to help all teachers provide students with knowledge of, and opportunities to share experiences with, Aboriginal peoples in BC.

For more information about these documents, consult the Aboriginal Education web site:

www.bced.gov.bc.ca/abed/welcome.htm

LITERACY FOUNDATIONS: AT A GLANCE

The aim of Literacy Foundations is to enable adults to upgrade their knowledge and skills in five subject areas in order to be successful in courses required for graduation in either the Adult Graduation Program or the 2004 Graduation Program. Students can work with their school to determine which courses within the five subject areas outlined below would best meet their needs. There is no requirement that students must take or that schools must offer any or all of the courses within each subject area.

Literacy Foundations English Language Arts

CORE COURSES

- Literacy Foundations English Language Arts Level 1: Core
- Literacy Foundations English Language Arts Level 2: Core
- Literacy Foundations English Language Arts Level 3: Core
- Literacy Foundations English Language Arts Level 4: Core
- Literacy Foundations English Language Arts Level 5: Core
- Literacy Foundations English Language Arts Level 6: Core
- Literacy Foundations English Language Arts Level 7: Core

*COMPANION COURSES

- Literacy Foundations English Language Arts Level 1/2: Companion - Speaking and Listening
- Literacy Foundations English Language Arts Level 1/2: Companion - Reading
- Literacy Foundations English Language Arts Level 3/4: Companion - Reading
- Literacy Foundations English Language Arts Level 3/4: Companion - Writing
- Literacy Foundations English Language Arts Level 5/6/7: Companion - Writing

Companion courses are designed to supplement the Prescribed Learning Outcomes of the Literacy Foundations English Language Arts core courses.

Literacy Foundations Mathematics

COURSES

- Literacy Foundations Mathematics Level 1
- Literacy Foundations Mathematics Level 2
- Literacy Foundations Mathematics Level 3
- Literacy Foundations Mathematics Level 4
- Literacy Foundations Mathematics Level 5
- Literacy Foundations Mathematics Level 6: Apprenticeship and Workplace
- Literacy Foundations Mathematics Level 6: Math Foundations
- Literacy Foundations Mathematics Level 7: Apprenticeship and Workplace
- Literacy Foundations Mathematics Level 7: Math Foundations

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Literacy Foundations Science
COURSES
• Literacy Foundations Science: Biology
• Literacy Foundations Science: Chemistry
• Literacy Foundations Science: Physics
Literacy Foundations Social Studies
COURSE
• Literacy Foundations Social Studies
Literacy Foundations Information and Communications Technology
COURSE
• Literacy Foundations Information and Communications Technology

LITERACY FOUNDATIONS

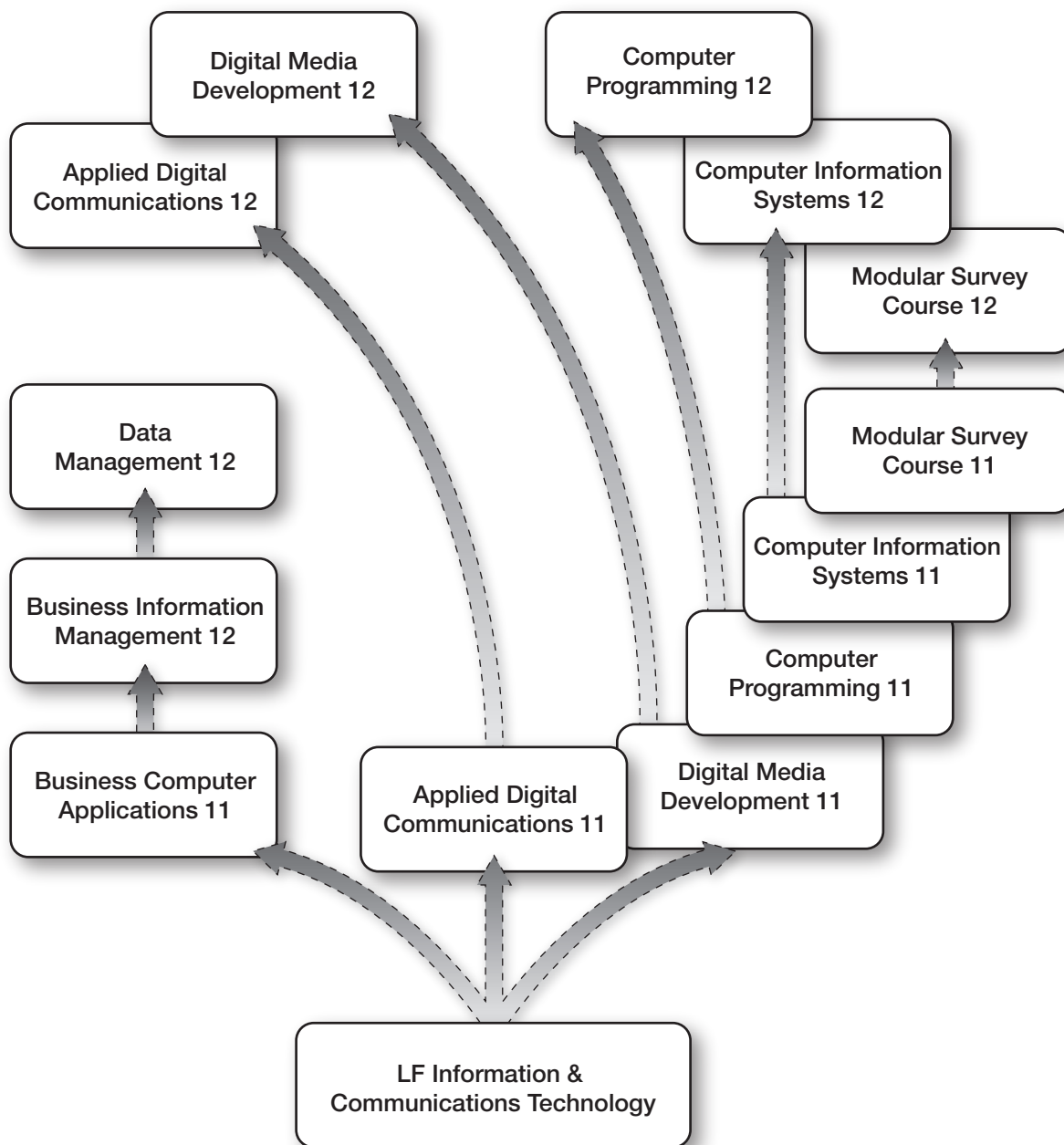*Information and Communications Technology*

INTRODUCTION

Literacy Foundations (LF) Information and Communications Technology comprises one course that is intended for students who have little or no experience with computer operations or keyboarding. The Prescribed Learning Outcomes in this course define the specific knowledge, skills, and attitudes that students are expected to achieve. Curriculum organizers include

- basic knowledge of computers
- keyboarding
- word processing
- internet and electronic communication

The aim of this course is to help students develop the knowledge and skills needed to be successful in a range of Information and Communications Technology courses at the Grade 11 and 12 levels as illustrated in the sample pathways diagram on the following page.

Literacy Foundations Information and Communications Technology Sample Pathways

Literacy Foundations Information and Communications Technology

BASIC KNOWLEDGE OF COMPUTERS

It is expected that students will:

A1   list the basic parts of a computer system (e.g., central processing unit/CPU, monitor, keyboard, mouse, optical disc drive, universal serial bus/USB ports)

A2   start and shut down a computer system using standard protocol

A3   describe the difference between hardware and software applications

A4   demonstrate the use of simple operating system tools, including maximizing and minimizing windows and using the task bar

A5   demonstrate the ability to use various functions available on a mouse, including left click, right click, drag, and scroll

A6   start and close a computer program or application

A7   perform basic functions of an operating system, including copying, moving, deleting, saving, and renaming files

A8   use a basic file management system (e.g., create new folders, organize files within folders, rename folders, delete folders)

A9   search for and locate files and folders on a computer

A10 upload an image or file from an external device to a computer

A11 describe the differences between a school network and a personal computer (e.g., operating systems, programs, drives, privileges)

A12 describe common uses of computers and the ways in which they are used in society

KEYBOARDING

It is expected that students will:

B1   demonstrate the ability to use keyboarding software independently

B2   use correct touch-typing techniques for letters and numbers/symbols

B3   achieve a net keyboarding speed of 15 words per minute

WORD PROCESSING

It is expected that students will:

C1   create a new word processing document

C2   name and save a document to a specific location (e.g., network drive or portable storage device)

C3   retrieve a document from a specific location (e.g., on network drive or portable storage device)

C4   use a variety of text formatting functions (e.g., bold, italic, underline, font, size)

C5   use paragraph and document formatting functions (e.g., alignment, line spacing, bullets, borders, page numbers)

C6   use a variety of editing functions (e.g., cutting, copying and pasting text)

C7   use a variety of document review/proofing tools (e.g., spell check, grammar check, thesaurus)

C8   perform basic print functions (e.g., print preview, page orientation, print)

Literacy Foundations Information and Communications Technology

INTERNET AND ELECTRONIC COMMUNICATION

It is expected that students will:

D1 identify parts of a uniform resource locator (URL), including domain name and domain extension
D2 differentiate between a web browser and a search engine
D3 perform internet searches using keywords
D4 follow hyperlinks in search results and navigate between open web pages
D5 differentiate between post office protocol (POP) and web-based email accounts
D6 use basic web-based email functions (e.g., address line, subject line, send/reply, forward, reply all)
D7 establish a web-based email account
D8 attach files (e.g., text documents, photos) to an email message
D9 use a "favourites" or "bookmarks" function to create a list of frequently accessed web sites
D10 explain the ethics involved when accessing, sharing, and processing information through email and the internet