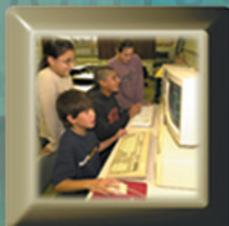




Department
of Education

CANADA



Journey On

Working Toward Communication and
Information Technology Literacy

Grade 6

September 2007 Draft

Preface

The document, *A Journey* (1997), first introduced the general concept of integrating technology into the curriculum at the elementary level in Prince Edward Island. As stated in this earlier document, using information technology in the schools was considered new and largely uncharted territory. We continue a journey into an interesting world of communication and information tools for teaching and learning. *Journey On Grades 1-3* (1999) provided a framework and lesson plans for teachers at the primary level to integrate communication and information technology in their classrooms. *Journey On Grades 4-6* (September 2000) and the document, *Journey On Grades 7-9* (September 2000), continued with the same framework and specific grade level lesson plans intended for teachers in elementary and intermediate schools.

Journey On (2007), provides grade specific curriculum outcomes that have been assigned to core curriculum subjects. This grade 6 document contains specific technology outcomes, instructional considerations, teaching suggestions - activities and assessment strategies, lesson plans, and links to other curriculum areas.

These documents will serve as a guide for teachers. Lesson plans suggest specific exercises for classroom use and will serve as a starting point from which teachers may develop and enhance their own ideas and competencies in the area of communication and information technology (CIT).

Acknowledgements

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The communication and information technology committees were instrumental in providing input for the curriculum outcomes grades 1-12 framework on which *Journey On* (2007) is based. Past and present members of the committees are listed below:

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Vision

Technology education for Atlantic Canada fosters the development of all learners as technologically literate and capable citizens who can develop, implement, and communicate practical, innovative, and responsible technological solutions to problems.

Foundation for the Atlantic Canada Technology Education Curriculum, APEF; Pg. 5

Introduction

Purpose of Document

Journey On is a practical working guide which will provide educators and administrators at all levels, including schools, school boards/districts, and provincial departments, with a reference point for integrating communication and information technologies (CIT) into the Prince Edward Island school curriculum.

Journey On will be the basis for future decisions pertaining to human and physical CIT resources. These decisions will focus on personnel, professional development, instructional techniques, course development, student and teacher access to technology, and hardware and software purchases.

It is recognized that many disciplines have their own specialized technologies and technological processes. Students will have the opportunity to develop skills required to use these specialized technologies within the context of courses such as Computer Science, Science, Career Exploration, Visual Communication, Industrial Arts, and Home

Economics. CIT differs from other technologies because of its vast and far reaching applications in all disciplines.

The purpose of *Journey On* is to focus on how CIT can be used from grade 1-12 and across all areas of the curriculum as part of a more global strategy that will contribute to the development of technologically competent and literate individuals graduating from our school system.

Journey On:

- provides strategies and concrete suggestions for effective integration of communication and information technologies into the Prince Edward Island curriculum in a way that enhances learning
- identifies the communication and information technologies that we wish our students to use
- identifies the knowledge and skills that students need to develop to be considered technologically competent in communication and information technologies

Terminology

Technology

The broad definition of technology includes the tools and processes we use to alter our surroundings, perform a task, discover more about ourselves, and communicate. For the purpose of this document *technology* refers to the tools used to access, gather, process, and share information. These communication and information technologies (CIT) pertain to computers and their peripherals such as scanners, printers, digital cameras, projection devices, and video-conferencing equipment.

Technological Competence

The Atlantic Provinces Educational Foundation (APEF) defines technological competence as “the ability to use a variety of technologies, demonstrate an understanding of technological applications and apply appropriate technologies for solving problems independently.” Individuals competent in information and communication technologies have specialized knowledge and skills that enable them to use technology to access, gather, process, and share information.

Technological Literacy

Technological literacy encompasses technological competence but refers to a higher level of understanding of technology. Individuals literate in the area of CIT think critically about information gained through the use of technology, the application of specific technologies, and the impact of technology on individuals and society when formulating decisions, opinions and courses of action. These individuals apply problem solving strategies and creative thinking skills to independently learn how to use new technologies, or circumvent problems associated with older technologies. CIT literate individuals demonstrate confidence and a positive attitude as they adapt and use technologies for a beneficial purpose.

Philosophy

The use of technology in our educational system is based upon a number of underlying beliefs:

- as educators in Prince Edward Island we are committed to provide for the development of children so that each may take a meaningful place in society
- literacy extends beyond the traditional concept of the ability to read and write print materials to encompass media and information literacy
- technological competence is a requirement for literacy and lifelong learning in today's world
- students today require knowledge, skills and attitudes for dealing with the rapid pace of change and growth of our knowledge base
- technology, when used appropriately, enhances student-centred learning and the teacher's role as a facilitator

Technology Integration

Integrating communication and information technologies into the curriculum is a preferred strategy for developing technologically literate learners. Integration occurs when the technology is used as a tool to achieve existing curricular learning outcomes within the context of a theme or subject. Technology knowledge and skills are not acquired separately in an integrated approach but in the context of learning activities intended to address various outcomes across the curriculum. Integration means that the use of technology as a teaching tool should not be limited to specialist teachers but applies to teachers in all curricular areas.

Advantages of Technology Integration

Integration of technology into the curriculum

- ensures that curriculum is the principle focus, rather than technology
- promotes the development of creative thinking, critical thinking, research, communication, and problem solving skills
- provides access to rich resources and learning experiences that can extend far beyond those offered in traditional classrooms
- motivates students to complete learning tasks and become more readily engaged in their own learning
- supports current research which suggests that people learn in a holistic fashion rather than in a compartmentalized manner
- supports contemporary approaches to education such as cooperative learning, constructivism, resource-based learning and individualized learning
- provides teachers with an additional means to address multiple learning styles
- provides students with the opportunity throughout their school career to expand and reinforce their repertoire of technology skills
- enables the students to acquire a better understanding of how to use technology in meaningful ways
- ensures that all students have the opportunity to develop technological competencies
- prepares students to select appropriate technologies to complete tasks
- provides teachers with an opportunity to model lifelong learning as students witness teachers learning and using new skills for a purpose

ABCs of curriculum

An Outcome-based Curriculum

An outcome-based curriculum is a student-centred design which focuses on expectations of the student as a result of learning. It ensures that each student is provided with the time and assistance to meet his/her potential.

A learning outcome is the result of learning for the student, something that the student *will know, be able to do, or be like*.

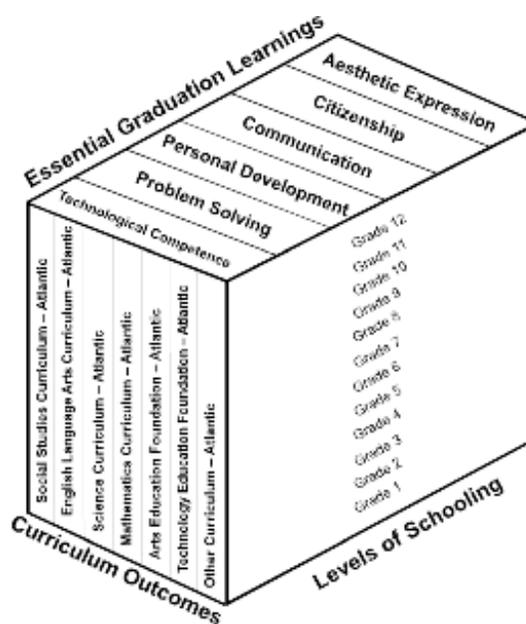
Essential Graduation Learnings (EGLs)

“The essential graduation learnings are statements that describe the knowledge, skills, and attitudes expected of all students who graduate from high school.” (APEF/CAMET) These statements are the framework upon which curriculum for all subject areas is based. The six Essential Graduation Learnings include:

- Aesthetic Expression
- Citizenship
- Communication
- Personal Development
- Problem Solving
- Technological Competence

General and Specific Curriculum Outcomes

General curriculum outcomes are statements that describe what students are expected to know in a curriculum area upon graduation. Specific outcomes are statements that identify what students should know and be able to do at a particular grade level. These are used to guide the teacher in planning day to day activities. Students demonstrate the essential graduation learnings through accomplishing the outcomes.



Other Features of the Curricula

In addition to the six essential graduation learnings, there are a number of underlying concepts and strategies which are interwoven into the 1-12 curricula of Prince Edward Island, and which influence methods of delivery and instruction.

Cooperative Learning and Group Work

Small and large group work provide students with the opportunity to develop language (communication skills) and social skills.

Creative Thinking

“Creative thinking deals with combining elements of reality in novel ways to formulate new perceptions, enriched concepts and new understandings” (Nature of Thinking)

Critical Thinking

Critical thinking involves the analysis of statements or arguments and an evaluation of their worth or validity. Critical thinking skills include identifying and validating sources; determining what is being said, relevancy, and point of view or perspective; detecting bias; recognizing persuasive techniques; and drawing logical, well-supported conclusions.

Diversity/Equity Education

Diversity education encourages the understanding of diversity within our society and promotes a commitment to equity by fostering an awareness and critical analysis of individual and systemic discrimination.

Resource-based learning

Resource-based learning is an educational approach that actively engages the students in carefully structured learning activities that use a wide range of resources, and emphasizes skills and strategies needed to achieve information literacy.

Learning Styles

The Theory of Multiple Intelligences suggests that all people learn differently, with eight identified intelligences. It is essential that educators make students aware of their learning styles and teach using a variety of methods to provide students the opportunity to learn in a number of ways.

Essential Grad
Aesthetic Expression Citizenship
Personal Development

Language Arts

Speaking and Listening

Students will be expected to

- speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences
- communicate information and ideas effectively and clearly, and respond personally and critically
- interact with sensitivity and respect, considering the situation, audience, and purpose

Reading and Viewing

Students will be expected to

- select, read, and view with understanding a range of literature, information, media, and visual texts
- interpret, select, and combine information using a variety of strategies, resources, and technologies
- respond personally to a range of texts
- respond critically to a range of texts, applying their understanding of language, form, and genre

Writing and Other Ways of Representing

Students will be expected to

- use writing and other forms of representation to explore, clarify, and reflect on their thoughts, feelings, experiences and learnings; and use their imaginations
- create texts collaboratively and independently, using a variety of forms for a range of audiences and purposes
- use a range of strategies to develop effective writing and media products and to enhance their clarity, precision and effectiveness

General Curri

Mathematics

Number Concepts/Number and Relationship Operations

- Students will demonstrate number sense and apply number theory concepts
- Students will demonstrate operation sense and apply operation principles and procedures in both numeric and algebraic situations

Patterns and Relationships

- Students will explore, recognize, represent and apply patterns and relationships, both informally and formally

Shape and Space

- Students will demonstrate an understanding of and apply concepts and skills associated with measurement
- Students will demonstrate spatial sense and apply geometric concepts, properties, and relationships

Data Management and Probability

- Students will solve problems involving the collection, display and analysis of data
- Students will represent and solve problems involving uncertainty

Or
Health, Music, Physical Education and Visual Arts
These guides contain general curriculum outcomes

Curriculum Learnings

Technological Competence
Communication Problem Solving

Curriculum Outcomes

Science

Science, technology, society, and the environment (STSE)

- Students will develop an understanding of the nature of science and technology, the relationships between science and technology, and the social and environmental contexts of science and technology

Skills

- Students will develop the skills required for scientific and technological inquiry, for solving problems, for communicating scientific ideas and results, for working collaboratively, and for making informed decisions

Knowledge

- Students will construct knowledge and understanding of concepts in life science, physical science, and Earth and space science, and apply these understandings to interpret, integrate, and extend their knowledge

Attitudes

- Students will be encouraged to develop attitudes that support the responsible acquisition and application of scientific and technological knowledge to the mutual benefit of self, society, and the environment

Social Studies

Citizenship, Power, and Governance

- Students will be expected to demonstrate an understanding of the rights and responsibilities of citizenship; and the origins, functions, and sources of power, authority, and governance

Culture and Diversity

- Students will be expected to demonstrate an understanding of culture, diversity, and world view, recognizing the similarities and differences reflected in various personal, cultural, racial, and ethnic perspectives

Individuals, Societies, and Economic Decisions

- Students will be expected to demonstrate the ability to make responsible economic decisions as individuals and as members of society

Interdependence

- Students will be expected to demonstrate an understanding of the interdependent relationship among individuals, societies, and the environment - locally, nationally, and globally, and the implications for a sustainable future

People, Place, and Environment

- Students will be expected to demonstrate an understanding of the interactions among people, places, and the environment

Time, Continuity, and Change

- Students will be expected to demonstrate an understanding of the past and how it affects the present and the future

Other curriculum guides exist on Prince Edward Island and specific curriculum outcomes.

Effective Use of Technology with

Language Arts

The Foundation for the Atlantic Canada English Language Arts Curriculum (1996) identifies technological advances in our society as a contributing factor to the revision of the concept of literacy. Literacy now encompasses print literacy, visual literacy, media literacy, and other literacies required to use technology in our culture. This APEF foundation guide suggests that students use a range of information retrieval, and information processing technologies to meet their own information needs. Specific examples of student experiences should include

- using a word processor to develop a piece of writing
- constructing simple databases and spreadsheets to organize information
- exploring the applications of interactive CD-ROM software
- using graphic communication software
- producing a variety of desk top publishing texts
- using multimedia
- using e-mail
- using listservs and web browsers
- using appropriate technologies to organize and create complex information with multiple textual and graphic sources
- distinguishing sources which are central, reliable and relevant among the vast number of choices offered by technologies

Adapted from APEF Foundation Guide for English Language Arts Curriculum (1996) page 40

Mathematics

The Foundation for the Atlantic Canada Mathematics Curriculum guide (1996) supports the recommendations of National Council of Teachers of Mathematics (NCTM) curriculum standards to use technology i) to enhance the teaching and learning of mathematics and ii) to relate school mathematics to the world in which students live through developing and interpreting mathematical models. APEF suggests that technology has altered the nature of what mathematics is important to learn and has made possible the development of new problems and innovative ways of investigating these problems. Specifically, it is recommended that technology should be used to

- explore situations with complicated numbers which previously would have been beyond their capabilities
- quickly and easily explore individual or groups of related computations or functions
- create and explore numeric and geometric situations for the purpose of developing conjectures
- perform simulations of situations which would otherwise be impossible to examine
- easily link different representations of the same information
- model situations mathematically
- observe the effects of simple changes in parameters or coefficients
- analyze, organize, and display data

Adapted from APEF Foundation Guide for Mathematics Curriculum (1996) page 39

in the Core Curriculum Areas

Science

The Foundation for the Atlantic Canada Science Curriculum guide (1998) states that technology can be used to facilitate the learning of science and recommends that technology should have a major role in the teaching and learning of science. APEF proposes the following guidelines for the implementation of technologies in the teaching and learning of science

- tutorial software should engage students in meaningful interactive dialogue and creatively employ graphs, sound, and simulations to promote acquisition of facts and skills, promote concept learning and enhance understanding
- simulation software should provide opportunities to explore concepts and models that are not readily accessible in the laboratory (e.g., those that require hazardous materials, unavailable equipment, or more time than is possible in real-time classroom.)
- analog-digital interface technology should be used to permit students to collect and analyse data as scientists do, and perform observations over long periods of time, enabling experiments that otherwise would be impractical
- databases and spreadsheets should be used to facilitate the analysis of data by organizing and visually displaying information
- networking among students and teachers should be encouraged to permit students to emulate the way scientists work and to reduce teacher isolation
- using tools such as the World Wide Web should be encouraged as it provides instant access to an incredible wealth of information on any imaginable topic

Adapted from APEF Foundation Guide for Science Curriculum (1998) page 44

Social Studies

The Foundation for the Atlantic Canada Social Studies (1998) recommends that technology have a major role in the teaching and learning of social studies but, that it enhance, not replace, essential social studies learning. APEF recognizes that Communication and Information Technologies have become important tools for the acquisition, analysis, presentation, and communication of data in ways that allow students to become more active participants in research and learning

- CD-ROMs and the Internet provide teachers and students with quicker and easier access to extensive and current information. Students and teachers should critically analyse such information to determine its validity, accuracy, bias, and interpretation
- students are enabled to directly employ inquiry skills by exposure to first hand information through direct e-mail conversations, student created Web sites, and listservs. These modes of communication provide connections to students and cultures from around the world.
- students can present their learnings to peers within their classroom and beyond in a wide variety of forms (graphics, maps, text, graphic organizers, Web sites, multimedia presentations, etc.) that fit their learning styles.
- technology can provide opportunity for students to become more actively involved in their learning by allowing students control of information gathering, processing, and presentation.

Adapted from APEF Foundation Guide for Social Studies(1998) page 40

Technology Curriculum Outcomes

GENERAL TECHNOLOGY OUTCOMES

(as per APEF Technology Foundation Document)

GTO A- Technology Problem Solving

Students will be expected to design, develop, evaluate, and articulate technological solutions.

GTO B- Technology Systems

Students will be expected to operate and manage technological systems.

GTO C- History and Evolution of Technology

Students will be expected to demonstrate an understanding of the history and evolution of technology and of its social and cultural implications.

GTO D- Technology and Careers

Students will be expected to demonstrate an understanding of current and evolving careers and of the influence of technology on the nature of work.

GTO E- Technological Responsibility

Students will be expected to demonstrate an understanding of the consequences of their technological choices.

Areas

1. **Computer Systems** - In general, a complete, working computer. The computer system includes not only the computer, but also any software, networking, and peripheral devices that are necessary to make the computer function. Every computer system, for example, requires an operating system such as Windows.
2. **Social, Ethical and Health** - General user guidelines for the responsible use of technology .
3. **Internet** - A global network connecting millions of computers. This network carries various information and services such as email, online chat, video, audio, web sites and other documents of the World Wide Web.
4. **Concept Maps** - Visual representations of relationships between ideas. Methods for grouping and organizing information. Visual learning allows new concepts to be more thoroughly and easily understood.
5. **Graphics** - Refers to display and manipulation of images (text, pictures and drawings)
6. **Spreadsheets** - A table of values (text, numeric, dates) or information arranged in rows and columns. Spreadsheets allow the computation of data with formulas and the creation of charts and graphs.
7. **Word Processing** - Using a computer to create, edit, and print documents. A word processor enables you to create a document, store it electronically, display it on a screen, modify it by entering commands and characters from the keyboard, and print it.
8. **Multimedia** -The use of computers to create and present several different media such as text, graphics, video, animation, and sound in an integrated way.
9. **Database** - A collection of data organized in such a way that a computer program can quickly select desired pieces of information from a search request. You can think of a database as an electronic filing system.
10. **Telecommunications** - Refers to all types of data transmission, from voice to video using a variety of media such as copper cable, fibre optics, satellites, wireless technology, etc.
11. **Web Authoring** - The act of developing a web site. Software is available that will generate the required HTML coding for the layout of the particular Web page.

Each skill area of the outcome continuum is identified by grade level and progress as follows:

Awareness - the student is exposed to the technology as it is being used by others.

Guided - the student begins to use the technology with the help of others.

***Summative Assessment**- beyond this grade level, students will be expected to meet the outcome independently.

Independent - the student uses the technology without assistance.

Computer Systems



Awareness



Guided



Independent

	Students will be expected to:		1	2	3	4	5	6	7	8	9	10	11	12
A1.1	make use of help features to independently find solutions to problems													
B1.1	login, open and close a program, open, save and close a file with mouse													
B1.2	demonstrate proper use of login numbers and names, set-up and change passwords, and be aware of implications of multiple logins													
B1.3	begin to work with more than one file open at once (multi-task)													
B1.4	differentiate between "Save" and "Save as..."													
B1.5	be able to identify the common windows components of a given software screen (eg. menu bar, button bar, cursor, insertion point)													
B1.6	have an understanding of file management (drives and folders, rename, select, move, copy, paste, delete, display format, backup, etc.)													
B1.7	understand how to display file properties													
B1.8	understand the difference between software and hardware													
B1.9	identify system specifications and be aware of compatibility issues between the hardware and the software (processor speed and type, RAM, hard drive size, optical drive, connection types, video card, sound card, monitor, network cards)													
B1.10	understand how and when to re-boot (warm boot vs cold boot)													
B1.11	describe networks, file servers, connections (wireless, line types and speeds)													
B1.12	demonstrate proper use of network printing, choose proper printer, recognizes process and purpose of Print Queues													
B1.13	identify computer viruses, how they are transmitted and how anti-virus software is used to protect or clean a computer													
B1.14	identify SPAM, pop-up ads, spyware and other invasive software coding													
B1.15	modify and utilize master pages/templates													
B1.16	import and export files to other formats (.html, .pdf)													
C1.1	identify technologies that are found in everyday life													

Social, Ethical, and Health



Awareness



Guided



Independent

		1	2	3	4	5	6	7	8	9	10	11	12
	Students will be expected to:												
A2.1	identify aspects of an ergonomic workstation (lighting, monitor angle, work placement, keyboard height, seat height, posture, etc.)		Checkered	Checkered	Light Gray								
B2.1	demonstrate proper touch keyboarding techniques (ie: home row, quick key strokes, proper reaches)		Checkered	Checkered	Light Gray								
C2.1	examine current Canadian law governing the use of technology						Checkered	Light Gray					
D2.1	determine the technological requirements for specific career goals				Checkered	Checkered	Light Gray						
E2.1	respect equipment and other student's work		Checkered	Light Gray									
E2.2	work co-operatively at work station		Checkered	Light Gray									
E2.3	adhere to acceptable use agreement for work station/network/Internet		Checkered	Light Gray									
E2.4	use electronic communication etiquette			Checkered	Light Gray								
E2.5	adhere to rules of freeware, shareware and commercial ware					Checkered	Light Gray						
E2.6	adhere to copyright and privacy laws, give credit to sources of information (MLA, APA)					Checkered	Light Gray						
E2.7	identify ethical issues involved with Internet content, awareness of inappropriate use of technology			Checkered	Checkered	Light Gray							
E2.8	demonstrate caution before sending personal information over the internet		Checkered	Checkered	Checkered	Light Gray							
E2.9	follow publishing etiquette (suitable language, no discrimination, etc.). Adhere to the guidelines for school web pages as outlined by PEI Department of Education.			Checkered	Checkered	Checkered	Checkered	Light Gray					

Internet



Awareness



Guided



Independent

	Students will be expected to:		1	2	3	4	5	6	7	8	9	10	11	12
A3.1	demonstrate awareness of the Internet as a source of information													
A3.2	use various tools (search engines and directories) and strategies necessary to carry out research													
A3.3	obtain/download material (text, graphics, files) from Internet													
B3.1	Use the various browser navigation tools (back, forward, history)													
B3.2	manage bookmarks/favorites													
B3.3	distinguish among various file formats (file extensions), required plugins, file compression/decompression utilities													
C3.1	discuss ways in which the Internet is evolving													
E3.1	critically evaluate information and its source based on pre-determined criteria													

Concept Maps



Awareness



Guided



Independent

	Students will be expected to:		1	2	3	4	5	6	7	8	9	10	11	12
A4.1	use brainstorming techniques to generate ideas													
A4.2	create a web (i.e.: literary, concept, character, word, Venn Diagrams, and timelines)													
A4.3	categorize ideas graphically													
A4.4	create links between ideas, re-link or delete links between ideas													
A4.5	elaborate on ideas (i.e. adding notes, annotations, etc.)													
B4.1	add fonts, graphics, sound, and colours to enhance ideas													
B4.2	create hyperlinks to files, web sites, or multimedia content													

Graphics



Awareness



Guided



Independent

		1	2	3	4	5	6	7	8	9	10	11	12
	Students will be expected to:												
A5.1	create illustrations or graphics by using the various drawing tools												
A5.2	apply principles of design												
B5.1	demonstrate various object editing features (ie. select, unselect, resize, crop, area fill, add colour and pattern, size adjustment using the mouse or scale, various erasing techniques, object orientation, changing font and text size, colour or appearance, creating text blocks, change text wrap selection and other text manipulation functions)												
B5.2	carry out various object manipulations (ie. object alignment, creation of graphics in layers, grouping/un-grouping components of an image)												
B5.3	use other graphic creation tools (i.e. clone brush, colour replacements, effects and filters, hexadecimal (RGB and CMYK colour values)												
B5.4	convert various graphic formats between vector (ie: .png, .psp, .cdr) and bitmap images (ie: .wmf, .tif, .bmp, .gif, jpeg, .jpg), import a graphic file from another source												

Spreadsheets



Awareness



Guided



Independent

	Students will be expected to:		1	2	3	4	5	6	7	8	9	10	11	12
A6.1	plan / design a spreadsheet to organize and tabulate data from various sources (to make a schedule, tally/score sheet, solve a mathematical word problem)													
A6.2	correct errors, modify or delete data in a cell													
A6.3	design own formulas incorporating functions {if SUM(B1..D1)>0, @SUM(B1..D1), 0} and absolute / relative cell references													
A6.4	use different types of graphs / charts (line, pie, bar) to visually represent data; label graph components (legend, title, x-y axis, colour, fill pattern)													
B6.1	identify spreadsheet components and terminology (rows and columns, cell addresses, data entry bar)													
B6.2	identify different types of cell data (text, numeric, function, date)													
B6.3	enter data into simple preexisting spreadsheets, auto fill data, data entry bar, sort data													
B6.4	edit spreadsheet layout (insert and delete rows or columns, select a range of cells, alter column widths and row heights, locking row and column headings, lock and unlock cell(s), fixed titles)													
B6.5	enter formulas to perform calculations across columns, rows, cells, move/copy data or formulas from one area of spreadsheet to another													
B6.6	format numbers (decimal places, currency, etc.), format text (font, colour, size)													
B6.7	create links [between notebooks (tabs or sheets), external files, graphs, charts, website]													

Word Processing



Awareness



Guided



Independent

		1	2	3	4	5	6	7	8	9	10	11	12
	Students will be expected to:												
A7.1	create and edit data files and form documents to perform a merge												
A7.2	identify examples of desktop publishing (i.e. newspaper, catalogue, ads, brochure)												
B7.1	use a grade level appropriate wordprocessor to create and edit written work												
B7.2	locate characters on a keyboard and identify functions of word processing (ie. cursor, insertion point, enter key, space bar, upper case, backspace, shortcut key)												
B7.3	use editing tools to revise work (i.e. spell check, thesaurus, find and replace)												
B7.4	change font, size, colour, style (ie. bold, italics, underline, insert special characters, drop capitals)												
B7.5	format text (ie. justification, line spacing, outlines and bullets, text wrap)												
B7.6	format documents (ie. using margins, tab rulers, indents, page center, border, watermark)												
B7.7	insert a graphic and manipulate, (ie. resize, add borders and fill, create text art)												
B7.8	insert and format tables and text boxes (ie. lines, fill, columns, rows, borders, alignment)												
B7.9	format multi-page documents with headers, footers, page numbers, page breaks and keep text together function, change page orientation/size (ie. text presentation features)												
B7.10	insert automated features (ie. date and file stamp)												

Multimedia



Awareness



Guided



Independent

	<i>Students are expected to:</i>		1	2	3	4	5	6	7	8	9	10	11	12
A8.1	apply planning strategies, (storyboards, scripts, graphic organizing, brainstorming)													
A8.2	create an age/grade appropriate slide show presentation that may contain one or more of the following objects (text, graphics, images, animations, audio and video)													
A8.3	describe situations where streaming video and audio is appropriate													
A8.4	create graphics, audio and video special effects (animation, virtual reality, panorama)													
A8.5	select appropriate medium to convey a message (be conscious of file size, formats and storage location)													
B8.1	navigate multimedia resources such as slide shows, online resources or CD rom interactive educational activities													
B8.2	use multimedia creation and editing tools (screen captures, scanner, sound recording, digital image editing software: still and video)													
B8.3	convert file formats for a particular application (.jpg, gif, .bmp, mp3, wav, avi, mpeg, mov, etc.)													
B8.4	use proper tools and procedures to enhance product quality. (Microphones, lighting, camera movement, instrumentation, teleprompters, assign various responsibilities to a production team.)													

Database



Awareness



Guided



Independent

		1	2	3	4	5	6	7	8	9	10	11	12
	Students will be expected to:												
A9.1	use an existing database (CD ROM, Microcat, Dynex, Internet search engine) to find information (sign up for Provincial Library Card - Abbycat)												
A9.2	perform searches on a database file using logical and Boolean operators (understands commands, scope, filters, and conditions)												
A9.3	design/plan a database to use as a method of organizing information												
A9.4	create and modify a form (add graphics, and error checking routines)												
A9.5	use databases to analyze data and look for trends												
B9.1	enter data into a pre-existing database, edit data, and use automated text												
B9.2	create fields and with variable field types (numeric, text, date) and properties (color, width, font, etc.)												
B9.3	restructure database (add / delete fields, change field width)												
B9.4	sort records alphabetically, numerically and by multiple fields												
B9.5	create a report from the entire database or selected records												
B9.6	create a report with automated summaries and calculations (understand logic, date and summary field types)												
B9.7	bring database information into a word processing environment ie: (Mail Merges)												
B9.8	distinguish between the two general types of database management systems (flat and relational)												
E9.1	examine functions and implications of database driven websites (ie: online purchasing, searching, and password secured sites)												

Telecommunications



Awareness



Guided



Independent

		1	2	3	4	5	6	7	8	9	10	11	12
	Students will be expected to:												
	Email:												
B10.1	send messages												
B10.2	open messages												
B10.3	manage mail/folders												
B10.4	manage address books												
B10.5	use distribution lists												
B10.6	send and open attachments												
B10.7	create signatures												
B10.8	apply filters and rules												
B10.9	use calendar features such as appointments, tasks, reminder notes/memos												
	E-Learning/Collaborative tools:												
	Students will be expected to:												
A10.1	collaborate using software: (ie. whiteboard, slideshow, application sharing, chat, messaging, send and receive files, photos, group file sharing, resource sharing (links), online content creation and sharing, assignment drop box, video and audio, discussion forums, journal.)												
B10.10	use the organizational features of collaborative tools such as scheduling, calendaring, and interactive syllabus												

Web Authoring



Awareness



Guided



Independent

		1	2	3	4	5	6	7	8	9	10	11	12
	Students will be expected to:												
A11.1	identify web page creation possibilities												
A11.2	create appropriate text and image file formats												
A11.3	create an interactive webpage. (online surveys, forms, interactive database, polls)												
B11.1	examine html tags												
B11.2	create a basic web page (may include backgrounds, images, hyperlinks, tables)												
B11.3	indicate where file or page is hosted (server, web server, hosting service)												
B11.4	apply website file management and transfer files to and from web servers (ftp), edit pages online												
B11.5	use special features (image maps, cascading style sheets, frames, rollovers, layers)												
B11.6	embed objects (audio, video, pdfs, animation, Flash, Java Script Applet,)												
E11.1	describe standards which guide web based publication (W3C accessibility guidelines)												

How to Use this Document

Paper Document

The first section of the document includes background material, definitions, philosophy, advantages of technology integration, an overview of the APEF curriculum, and grade 1-12 general outcomes for information and communication technologies.

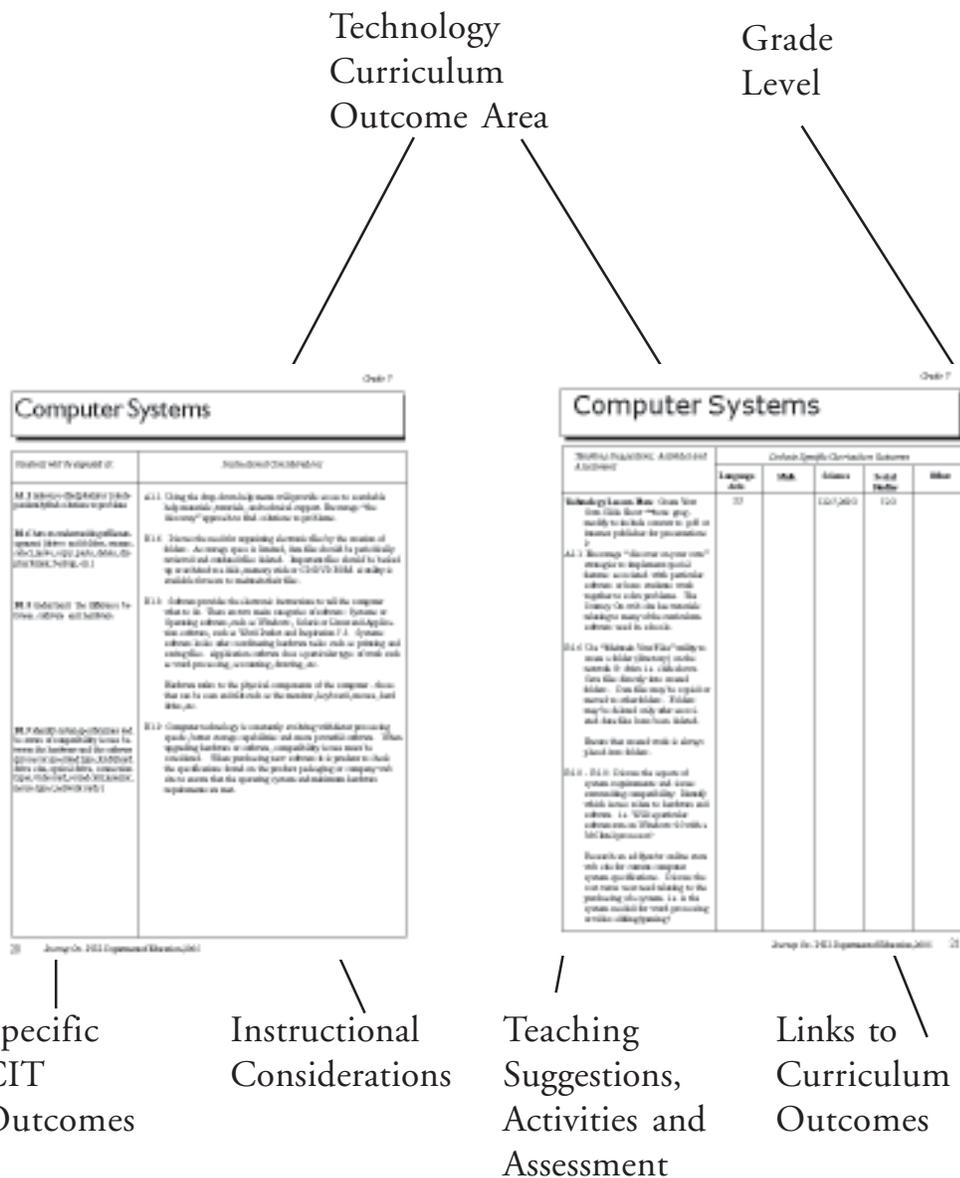
The remainder of the document addresses the level and defines specific knowledge and CIT skills expected of students as they work toward technology competency. Practical considerations are given for incorporating CIT into the curriculum and accompanying lesson plans. The information is presented in a two-page layout as outlined on the following pages.

On-line Document

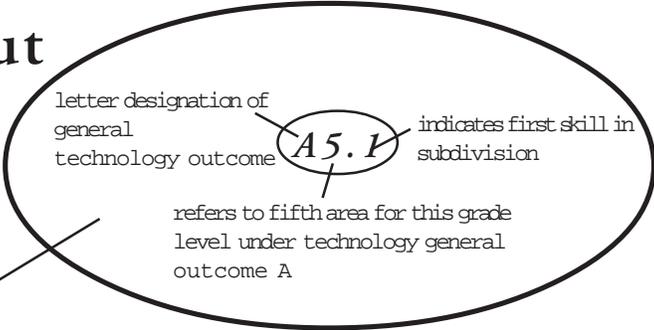
An on-line version of this document will be developed. Having a document on-line has a number of advantages. It enables teachers to easily cross-reference material in the document with on-line help manuals and curriculum documents. It can encourage a greater level of collaboration among all educational partners. An on-line document can be easily revised and updated without having to copy and redistribute. It is our intent to revise, modify, and add new materials in the future only to the on-line version of *Journey On* (www.edu.pe.ca/journeyon).

Two Page-Layout

Four major sections are found on these pages as you go from left to right: 1) specific CIT outcomes, 2) instructional considerations, 3) teaching suggestions or names of grade specific lesson plans, and 4) links to curriculum outcomes. The applicable technology curriculum outcome area is found in a box at the top of each page along with the grade level.



Two Page-Layout in Detail



Specific Outcomes

- are steps towards accomplishing the general technology outcomes and lettered as subdivisions of GTOs

Grade 7

Computer Systems

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
<p>A1.1 make use of help features to independently find solutions to problems</p> <p>B1.6 have an understanding of file management (drives and folders, rename, select, move, copy, paste, delete, display format, backup, etc.)</p> <p>B1.8 understand the difference between software and hardware</p>	<p>A1.1 Using the drop-down help menu will provide help materials, tutorials, and technical "discovery" approach to find solutions</p> <p>B1.6 Discuss the need for organizing electronic files. As storage space is limited, duplicate files reviewed and outdated files deleted. Files are backed up or archived to a disk, memory stick or CD/DVD ROM. A utility is available for users to maintain their files.</p> <p>B1.8 Software provides the electronic instructions to tell the computer what to do. There are two main categories of software: Systems or Operating software, such as Windows, Solaris or Linux and Application software.</p>

Instructional Considerations

- useful information for teachers on terminology and/or purpose and background of specific technologies

Teaching Suggestions, Activities and Assessment

- readiness considerations
- may be suggestions for activities or name of lesson plan

Links to Curriculum Outcomes

- letters and numbers representing curriculum outcomes as defined in other APEF (CAMET) documents

<i>Teaching Suggestions and Activities</i>	<i>Links to Specific Curriculum Outcomes</i>		
	Language Arts	Math	Science
<p>Grade 2 Language Arts Theme: <i>New Perspectives</i> Lesson Plan: <i>Through a Bug's Eyes</i></p>	<p>A1, A3, A4, D1, B3, E1, E1.3, E1.5, G1, G1.1, G2, G2.1, G2.2, G3, G3.1</p>		
<p>Grade 3 Language Arts Theme: <i>Vanishing Animals</i> Internet Sites:</p>	<p>A1, A3, A4, D1, B3, E1, E1.3, E1.4, E1.5, G1, G1.1, G2, G2.1, G2.2, G3, G3.1, H2, H, J5</p>		

Computer Systems

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
<p>A1.1 make use of help features to independently find solutions to problems (Guided)</p> <p>B1.2 demonstrate proper use of login numbers and names, set-up and change passwords, and be aware of implications of multiple logins (Independent)</p> <p>B1.5 be able to identify the common windows components of a given software screen (Independent)</p> <p>B1.6 have an understanding of file management (Guided*)</p> <p>B1.7 understand how to display file properties (Guided)</p>	<p>A1.1 Using the drop-down help menu will provide access to searchable help materials, tutorials, and technical support. Encourage the “discovery approach” to find solutions to problems.</p> <p>B1.2 One network account is provided. If a user tries to log into a second computer while already in the network the second login will fail. Applications at school do not permit the changing of passwords. Users at home may have access to programs which allow for the creation and changing of passwords. When creating passwords they should be composed of alphabetic and numeric characters so that they cannot be easily guessed. To prevent data loss, always exit programs and log out of the network properly.</p> <p>B1.5 Most application programs follow a common interface layout (i.e. menu bar, button bar, cursor, insertion point). Terminology, layout and functions follow a similar pattern. Consistency of function and location of these features has allowed for easier transfer of skills.</p> <p>B1.6 File space on the server is limited. Users should be reminded to clean up their work space. File folders should be created to keep files organized. Files can be deleted or archived (saved on CD, memory stick or floppy disk). A utility is available for users to maintain their files.</p> <p>B1.7 Files have properties such as associated program, physical location, size, date created, last modified and accessed, and attributes. Associated program indicates the software with which the file may be opened. Physical location refers to the drive and folder where the file is stored. Attributes are security settings such as read-only, hidden and archive that the user may change. Access to file properties, using right mouse click, for student and teacher level accounts is restricted.</p> <p>On occasion, an email will be received with an attachment with an association property that the computer does not recognize. A dialogue box will appear asking the user to “open”, “save” or “view”. If “open” is selected the user will be asked to select the appropriate program. This information is then added to the files’ property.</p>

Computer Systems

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
<p>Technology Lesson Plan: Understanding Math Plus pg. 96</p> <p>Virtual Circuits pg. 93</p> <p>A1.1 Encourage “discover on your own” strategies to implement special features associated with particular software or have students work together to solve problems.</p> <p>B1.2 Teachers have access to all student logins and passwords. It is advisable to have a list of these available should students forget.</p> <p>B1.5 Use proper terminology when discussing aspects of computer work. Insist that students do the same.</p> <p>B1.6 Insist that work be organized into folders. Categories may be selected by subject, theme, or assignment. File management skills may be part of the assessment for a task.</p> <p>B1.7 Explain situations where a read-only or hidden file attribute would be useful. Read-only is used for a final copy of a document or for templates to which further changes should not be made. Read-only will prevent files from being accidentally deleted. Hidden files may be used, for example, to provide security for confidential information stored on CD/DVD or other removable storage media.</p>		<p>see page 116 for a list of correlations</p>	<p>207-2,303-23, 303-24</p>		

Computer Systems

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
<p>B1.8 understand the difference between software and hardware (Guided)</p> <p>B1.9 identify system specifications and be aware of compatibility issues between the hardware and the software (Awareness)</p>	<p>B1.8 Software provides the instructions to tell the computer what to do. There are two main categories of software: Systems software, such as Windows, Solaris or Linux and Application software, such as Word Perfect, Inspiration 7.5 and Ultimate Writing Creativity Center. Systems software looks after coordinating hardware tasks such as printing and saving files. Application software does a particular type of work such as word processing, accounting, drawing, etc. Hardware refers to the physical components of the computer - those that can be seen and felt such as the monitor, keyboard, mouse, hard drive, etc.</p> <p>B1.9 Computer technology is constantly evolving with faster processing speeds, better storage capabilities and more powerful software. When upgrading hardware or software, compatibility issues must be considered. When purchasing new software it is prudent to check the specifications found on the product packaging or company web site to ensure that the operating system and minimum hardware requirements are met (processor speed and type, RAM, hard drive size, optical drive, connection types, video card, sound card, monitor, mouse types, network cards).</p>

Computer Systems

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
<p>B1.8 Use display items such as CD ROM, floppy disk, and computer components to demonstrate the difference between hardware and software. (A CD ROM and floppy disk can be seen and touched but contain the software, the digital code that provides instructions to the computer)</p> <p>B1.9: Discuss the aspects of system requirements and issues surrounding compatibility. Identify which issues relate to hardware and software. i.e. Will a particular software run on Windows 98 ?</p>					

Computer Systems

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
<p>B1.12 demonstrate proper use of network printing, choose proper printer, recognizes process and purpose of Print Queues (Guided*)</p> <p>B1.13 identify computer viruses, how they are transmitted and how anti-virus software is used to protect or clean a computer (Awareness)</p> <p>B1.14 identify spam, popup ads, spyware and other invasive software coding (Awareness)</p>	<p>B1.12 During the login process users are asked to select a printer. Sometimes there is a delay between the time a user orders a print job and when the printer responds. Never print a task more than once as this delays printing for others and is a waste of resources. All print jobs pass through a software utility called a print queue. Should a number of users request printing at the same time, the first job is printed and the others will be processed in order received. Teachers may monitor the printing queue and delete any unnecessary print jobs.</p> <p>B1.13 Programs designed to damage the data on a computer or disrupt its use fall into one of the following categories:</p> <p>Virus: a program that spreads from computer to computer by attaching itself to an executable file. When this file is activated the virus supplies instructions to the computer. These instructions can range from a mere nuisance (eg. a message on your monitor) to the very destructive (eg. erasing the hard drive).</p> <p>Worm: a program that is written in segments and spawns copies of itself in the computer's memory until eventually it causes a crash.</p> <p>Trojan horse: a program disguised as a game or useful application but when executed destroys information on the computer, or gives access or control of the computer to another.</p> <p>Care must be exercised when installing files or opening e-mail. The best methods for prevention are: (a) to only accept programs from reliable sources and (b) to install a reputable virus checker on the system which scans all imported data files, diskettes and CD's for possible viruses.</p> <p>B1.14 Spyware is coding that transmits information to external parties about a users' browsing habits. Spyware and popup screens may also take control of the browser and automatically redirect a user to an unwanted website.</p>

Computer Systems

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
<p>B1.12 Users have access to a utility that shows print jobs that are pending for the network printer. This utility provides information about a print job, such as file name, user, and time sent. These print jobs can be deleted. Encourage students to wait for the printer and not send the same print job more than once.</p>					
<p>B1.13 Ensure that files transferred from home are virus checked. School email attachments are automatically scanned for viruses. Precautions must be taken at home when using private email services such as Yahoo or Hotmail which may not scan attached files.</p>					
<p>B1.14 Inform teacher should spyware or popups occur. Close the offending popup and should the computer continue to automatically visit the offending page consider having the computer re-imaged. Should a site be considered a threat or contain unacceptable information contact the Service Centre at IT Shared Services to have the site blocked. Help the user refine search terms.</p>					

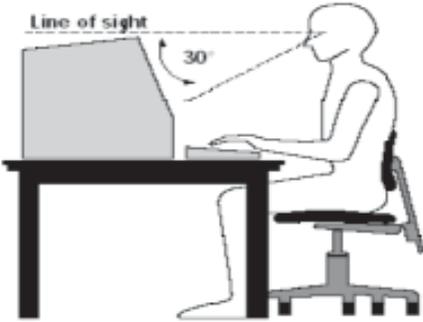
Computer Systems

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
<p>B1.15 modify and utilize master pages/templates (Independent)</p> <p>B1.16 import and export files to other formats (Awareness)</p>	<p>B1.15 Master pages and style templates allow the user to setup a document layout that will be applied to all like sections in a publication. This makes the document uniform and consistent in appearance and saves time producing the work. Master pages allow for automated page numbering and document page setup.</p> <p>Many types of software provide templates and examples in the “Help” menu or online. Users may create templates for frequently used activities.</p> <p>B1.16 Many programs allow the exporting of files to other formats. Word Perfect files, for example, may be converted to portable document format (.pdf). This allows users who do not have the WordPerfect program to view the file with a free reader program from Adobe Systems. Word Perfect files may also be exported into hypertext markup language (.html) format so that they may be read using a web browser. The import feature allows data created in one program to be opened and manipulated in another program. The method and file formats used will vary from program to program.</p>

Computer Systems

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
<p>B1.15 Create a WordPerfect document to serve as a template for commonly used documents such as cover pages or reading logs.</p> <p>In Word Perfect select “File” - “New From Project”. A variety of templates exist for creating greeting cards, certificates, brochures, newsletters, etc.</p>					
<p>B1.16 Demonstrate the conversion of a completed slide show to .pdf or web compatible format so that people who do not have Presentations 9 can view the content. Adobe Reader is a free software that is used to view .pdf files. It is available on school networks or it may be downloaded from the Internet. Web compatible formats allow the show to be viewed with a web browser.</p>					

Social, Ethical and Health

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
<p>A2.1 identify aspects of an ergonomic workstation (Guided)</p>	<p>A2.1 Ergonomics or the relationship between people and their work is a science with a growing body of evidence. Applying ergonomics by adjusting your chair, work surface, monitor, keyboard, mouse, lighting and modifying your work habits with lifting techniques all have reduced the risk of injury at our workplaces. Furthermore, it increases productivity. (Occupational Health and Safety Manual, Draft 2004)</p> <p>Teaching young children to position themselves properly at the computer and using good posture is essential to prevent the future development of serious injury.</p>  <p>To prevent eye strain, encourage students to look away from the screen every few minutes to rest their eyes. Stretching and shaking their hands at regular intervals are also good habits.</p>

Social, Ethical and Health

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
<p>Technology Lesson Plans: E-mail pg.80</p> <p>Personal Safety on the “Net” pg.101</p> <p>A2.1 Perform a visual inspection of work station. Position the top of your monitor at or slightly below eye level. Place documents that are to be keyed close to the monitor. Keep computer screen clean and dust-free to minimize glare. Arrange lighting to minimize glare and reflections. Reduce eye strain through changing focus. (Glance across the room or out the window every fifteen or thirty minutes to look at an object at least twenty feet away). Increase your font sizes. This discourages one from hunching forward into the monitor to read things, putting pressure on nerves and blood vessels in the neck and shoulders.</p> <p>See appendix for a diagram of an ergonomic workstation. (Occupational Health and Safety Manual, 2004)</p> <p>Discuss and demonstrate good posture and work habits required to reduce the risks of computer associated injury.</p> <p>Observe position at the computer and provide feedback to users. Create a checklist or rubric for assessment.</p>	1.2, 3.3 10.3				Health: (draft) W-6.9, W-6.10 R-6.6

Social, Ethical and Health

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
B2.1 demonstrate proper touch keyboarding techniques (Guided)	B2.1 Young children often use the hunt-and-peck method. Beginning typists must practice using proper fingering and home row position. Encourage students to use the piano position (arms at right angles and wrists flat) when they can. Initially, students will key very slowly using proper keyboarding techniques. After practice students will be able to key much faster than they can write with pen or pencil.
C2.1 examine current Canadian law governing the use of technology (Awareness)	C2.1 Many changes to Canadian laws governing technology use are “reactive” in nature as new technology and applications are developed. Extensions to laws have been made related to Electronic Contracts; Copyright; Trademarks; Internet Consumer Protection; Internet Advertising; Personal Information Protection; Criminal Law and Securities Law.
D2.1 determine the technological requirements for specific career goals (Awareness)	D2.1 Technology competence is identified as an “Essential Skill” by Human Resources and Skills Development Canada. Statistics Canada has identified technology skills as important as numeracy and literacy to career success. “Earning potential of persons possessing numeracy, literacy, and technological skills is five fold higher than those who have equivalent numeracy and literacy skills.” (Murray, T. Scott. <i>Statistics Canada. A Presentation To Cabinet, Charlottetown, PE. January 28, 2005</i>)
E2.4 use electronic communication etiquette (Guided*)	E2.4 Establishing connections with classrooms in different parts of Canada or the world can be a powerful tool for the classroom teacher in all subject areas. Student assignments take on another level of authenticity when they are shared with other classes via telecommunications.
E2.5 adhere to rules of freeware, shareware and commercial ware (Awareness)	E2.5 Programs that are available on the Internet may be easily attainable but are not always free (Also remember that these programs can be the most common source of computer viruses). Software programs referred to as freeware are free. Often there are limitations to the term “free” and these are usually defined in a “read me” file that comes with the program or appears before you download it. Shareware, on the other hand is NOT free. It is often very inexpensive, but to use it, you are required to send the authors a fee after a trial period.
E2.6 adhere to copyright and privacy laws, give credit to sources of information (Guided)	E2.6 Most materials on the Internet are copyright protected. Ideas or quotes must be properly cited and authors’ permission must be obtained for the use of graphics or images taken from online sources.

Social, Ethical and Health

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
<p>B2.1 Encourage students to coach or monitor each other's position at the computer. Use the reproducible keyboard diagram in the appendix to illustrate the proper home row finger positions. These may be posted on the walls near the computer monitors. For proper keyboarding skills, Typing Pal Junior keyboarding software is available in all elementary schools</p>					
<p>C2.1 Visit sites such as IT.Can Web resources (http://www.it-can.ca/en/resources.html). Discuss a particular area of law that requires revision because of advances in technology. Debate the merit of these changes made to Canadian law.</p>					
<p>D2.1 Brainstorm a list of occupations using concept mapping software. Identify occupations which require use of technology and those that don't.</p>					
<p>E2.4 Use e-mail accounts or collaborative software to communicate among students in a class, school or the world. There are also sites to facilitate establishment of e-mail contacts between classes for particular projects. Use carbon copy cc. to monitor and assess sent e-mail and process. Browse discussion forum threads or collaborative workspaces to ensure that etiquette is being followed.</p>					
<p>E2.6 Provide reference sources to give credit for information obtained.</p>					

Social, Ethical and Health

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
<p>E2.7 identify ethical issues involved with Internet content, awareness of inappropriate use of technology (Guided*)</p> <p>E2.8 demonstrate caution before sending personal information over the Internet (Independent)</p>	<p>E2.7 Placing student work on the Internet takes publishing to whole new level and can be a tremendous motivator. At the same time teachers must be cognizant of not compromising the privacy or safety of students. Parents have to be informed and give permission before their children's names, photos and work are published on the Web.</p> <p>General guidelines for finding accurate information on the Web: Be cautious of sites created by unknown individuals or organizations. Be aware of bias, tone and stereotyping as well as accuracy. Compare information obtained to that of other sources. URL's with the title (name) in the address indicate authorship of a private person. Sites created by government or national institutions are often the most reliable.</p> <p>The following domain abbreviations are helpful to identify authorship: com = commercial organization* edu = educational institution gov = government institution org = organization* mil = military ~ = (tilde) personal website</p> <p>*.com and .org can now be used by any type of site</p> <p>E2.8 Do not submit any personal identifying information when publishing on the Internet.</p>

Social, Ethical and Health

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
<p>E2.7 Discuss the topic of privacy. Students should be made aware of situations when they should report to and ask adults for help. If students happen to open an objectionable site they should: Immediately click on the Back button to take them out of the site. Immediately contact the adult in charge. If the first doesn't work, (and it sometimes won't) turn off the monitor and immediately contact the teacher. The Media Awareness Network (www.media-awareness.ca/) offers resources for teachers to use with students on Internet safety and ethics. This Professional Development Resource is available in all school libraries on CD.</p>					
<p>E2.8 Internet personal safety guidelines for students: Never give out any personal information (personal details, phone number, address, etc.) about yourself, family or friends without permission. Tell an adult if something you see or read on the Internet or in e-mail gives you the "NO" feeling. Tell an adult if someone you meet on the Internet suggests that you meet him /her in person. Teachers may want to incorporate these guidelines in Personal Safety units in the grades 4-6 Health curriculum.</p>					

Social, Ethical and Health

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
<p>E2.9 follow publishing etiquette Adhere to the guidelines for school web pages as outlined by PEI Department of Education. (Awareness)</p>	<p>E2.9 Consider the following:</p> <ul style="list-style-type: none"> Do not type email messages in upper case since this is the equivalent of "shouting". Take credit for your work, sign your e-mail messages and do not send a message using someone else's account. Do not compose e-mail that contains objectionable language or content. Do not send e-mail messages that contain large graphics or other components that take a long time to download. Always include a meaningful subject description in the subject line. Do not send junk mail to people. Remember that e-mail is not private. Do not send confidential information via e-mail. Use correct grammar and spelling. The use of chat programs and text messaging has given rise to emoticons such as ;>) and three letter abbreviations such as lol (laughing out loud). Consider the intended audience and whether they understand or appreciate their use. <p>The Journey On website (http://www.edu.pe.ca/journeyon/tech_support_pages/GuidelinesforSchoolWebPages.html) provides many suggestions and guidelines for online publishing. Note that pictures and full student names should never appear together in an online document. Parent and student release forms must be signed for student names, pictures or works to appear in an online document. Release forms may be downloaded from the Journey On site. Etiquette refers to suitable language, no discrimination, etc.</p>

Social, Ethical and Health

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
E2.9 Discuss with students the criteria for publishing content and have them apply these standards. Ensure that all published work meets the “Guidelines For School Web Pages” from the Journey On website.					

Internet

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
<p>A3.1 demonstrate awareness of the Internet as a source of information (Guided*)</p> <p>A3.2 use various tools and strategies to carry out research (Guided)</p> <p>A3.3 obtain/download material from Internet (Guided)</p>	<p>A3.1 Users have access to a vast amount of information and resources provided by a number of organizations.</p> <p>A3.2 Regardless whether one searches a database, the Internet, a digital encyclopedia or similar digital containers of information, the quality of information will be contingent upon the formulation of the query. This observation gives rise to the consideration that “new age intelligence” does not depend upon the knowledge of a particular piece of information but instead depends upon the skill with which one can obtain required information.</p> <p>A3.3 Information may be obtained from the Internet in a variety of ways. Material may be copied from a webpage and pasted into a word processing document. Graphics may also be saved to the local computer by right-clicking on it and specifying where to save the graphic.</p>

Internet

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
<p>Technology Lesson Plans: Do anti-smoking ads really work? pg. 91</p> <p>Biography of a Canadian Astronaut pg. 95</p> <p>A3.1 Constructivist and resource-based approaches encourage the use of multiple sources of information. The location and independent use of these resources require higher level thought processes from Bloom's Taxonomy.</p> <p>Visit five topic related web sites to gather pertinent information. Note the various types of information that is available on the topic.</p> <p>A3.2 Search engines, such as Google, Yahoo!igans, and Ask Jeeves will provide links to sites. Key the search term. Possible links to thousands of sites related to each word will be returned.</p> <p>Narrow the search by determining key words closely related to your chosen topic and place quotation marks around these. Look in the search engine results for ideas on other search terms.</p> <p>A3.3 When obtaining information from the Internet it is advisable to check that the material is free for educational use or contact the author for permission.</p>	<p>8.1, 9.1, 10.3</p> <p>9.1, 10.1, 10.2, 10.3</p>		<p>107-12</p>		<p>Health (draft): W-6.7, L-6.3</p>

Internet

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
<p>B3.1 Use the various browser navigation tools (Guided*)</p> <p>B3.2 manage bookmarks/favorites (Guided*)</p> <p>B3.3 distinguish among various file formats, required plugins, file compression/decompression utilities (Guided)</p>	<p>B3.1 Be familiar with navigation, hotlinks and the Back, Forward and Home buttons in the browser. For example, a student may follow any given links to a destination several pages or sites removed from the original starting point. At some point in time the student may realize that the followed links are not leading to the desired results and they wish to return to the original starting point. They could use the back button in the browser and return, page by page, to the original site. A faster way to return, however, is to use the "Home" feature in the menubar. Click on "Home", listed at the top of the browser page. There is also a History button for recently visited sites. By clicking on the original site in the list, the user automatically returns to that site rather than retracing steps through all of the visited sites with the use of the Back button.</p> <p>B3.2 It is possible to record the address of a Web site that has been visited as a favorite (Internet Explorer) or bookmark (Firefox, Netscape). This enables the user to easily visit a favourite site again and again without retyping the address of the site.</p> <p>B3.3 Plug-ins are external browser enhancement programs which allow the user to enable file types to load automatically within a web browser. When using media which may require a plug-in it is a good idea to provide a link to the website where it may be obtained. Common plug-ins include Acrobat Reader, QuickTime, Shockwave Flash, Real Player, Windows Media Player and Java Runtime environment.</p> <p>Hypertext markup language is used to format web pages. The extension at the end of the filename is .html or .htm. Gif, .png and .jpeg are the main graphics file formats for web publishing. .jpeg is used for realistic graphics (photographs, art, images with shadows and shading) and .gif for graphics with a few colours. To reduce download times for video/ audio, compression-decompression utilities (codec) are used to get the smallest graphic size possible.</p>

Internet

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
<p>B3.1 Using a search engine, such as Yahoo!igans, practice navigating among websites with the Back, Forward, Home and History buttons.</p> <p>Observe difficulties encountered by students while navigating sites and provide specific feedback.</p> <p>B3.2 Save a web page URL for future reference, click on “Favorites” in the menu bar. To organize websites folders may be created. Add the website to the appropriate folder by selecting it and pressing “OK”. Sites and complete folders may be deleted when no longer needed by selecting “Organize” from the “Favorites” menu.</p> <p>B3.3 Visit a website that links to a .pdf document and observe that another application must launch to display or run the file. Repeat for Quicktime, Real Player and Windows Media Player files.</p>					

Internet

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
<p>C3.1 discuss ways in which the Internet is evolving (Guided)</p> <p>E3.1 critically evaluate information and its source based on pre-determined criteria (Guided)</p>	<p>C3.1 Many Internet tools such as Gopher and Veronica, for example, that were once important for accessing information are less important today. The means by which we access information has been and continues to be simplified. Search engine technology has become more powerful and comprehensive. Commerce such as online merchandising, stock trading and online banking/bill payment are widespread. Educational/business tools such as whiteboards, discussion forums, chat rooms, audio/video access, file sharing and e-mail allow for collaborative opportunities. New concepts are constantly being developed while others are replaced. ie. blogs, wikis, IRC, ICQ, online entertainment, streaming radio, etc.</p> <p>E3.1 Most print publications such as magazines, journals, and books go through an editing or peer review process. Internet publication does not require individuals to meet these requirements. Therefore, users of Internet content must critically evaluate a site for the authenticity and quality of information and its source.</p> <p>The Media Awareness Network website (http://www.media-awareness.ca) provides teaching suggestions, activities and lesson plans. The Media Awareness Network Workshop, “Fact or Folly: Authenticating Online Information” which can be found in your school library on CD, contains information for teachers on how to critically evaluate information found on the Internet.</p>

Internet

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
<p>C3.1 Brainstorm new or novel uses for the Internet. Survey family members regarding how they use the Internet at work or at home.</p> <p>E3.1 As it is easy to publish information on the Web, it is essential to critically evaluate information found on the Web. Take note of the following features based on Kathy Schrock's Guide for Educators: Critical Evaluation Survey: Elementary School Level (http://school.discovery.com/schrockguide/evalelem.html):</p> <p>Does the page title tell what the page is about?</p> <p>How many graphics are there? Are they big? Are they slow to load?</p> <p>Is the author's name or name of organization and e-mail address available?</p> <p>Is there a date page created? When was the page last updated?</p> <p>Does the information that is obtained from the site help answer my questions?</p> <p>Would another source have been better?</p> <p>How does it differ from other sources such as books, CD-ROMs, magazines, etc.?</p>					

Concept Maps

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
<p>A4.1 use brainstorming techniques to generate ideas (Guided*)</p> <p>A4.2 create a web (Independent)</p> <p>B4.1 add fonts, graphics, sound, and colours to enhance ideas (Guided*)</p> <p>B4.2 create hyperlinks to files, web sites, or multimedia content (Guided*)</p>	<p>A4.1 Concept mapping software exists to assist users in developing ideas resulting from a brainstorming activity.</p> <p>A4.2 The visual nature of a web (literary, concept, character, word, venn diagram, timeline) allows students to see patterns and relationships from ideas. Visual learning helps students strengthen critical thinking, comprehension and writing skills across the curriculum. Students may build graphic organizers to represent concepts and relationships.</p> <p>B4.1 Learners are able to differentiate among ideas with colors, shapes, patterns, shadows, fonts and styles. Audio also supports multiple learning styles.</p> <p>B4.2 Gather and present information from multiple sources, including documents, by hyperlinking to any file. Create web pages with URL hyperlinks through the HTML export function. JPEG and GIF images can be inserted or copy/pasted into a concept map.</p>

Concept Maps

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
<p>Technology Lesson Plans: Space...What's out there? pg. 87</p> <p>Personal Safety on the "Net" pg. 101</p> <p>A4.1 Inspiration 7.5 is available on all school computers and teachers may use this as a useful tool for organizing group discussion and prompting students for input.</p> <p>A4.2 Rearrange data and experiment with relationships by using webbing, mapping, and timeline strategies. Provide a rational explanation for the way in which data was combined.</p> <p>B4.1 Express design creativity through the use of graphics, font, sound and color. Critique aesthetic qualities of the completed activity.</p> <p>B4.2 Link supporting detail or documentation to the graphic organizer that was created. Explain reasoning for the selection of particular documents used to support the concept.</p>			105-1 301-21		Health (draft) W-6.9, W-6.10 R-6.6

Graphics

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
<p>A5.1 create illustrations or graphics by using the various drawing tools (Guided*)</p> <p>A5.2 apply principles of design (Awareness)</p> <p>B5.1 demonstrate various object editing features (Guided*)</p> <p>B5.2 carry out various object manipulations (Guided)</p> <p>B5.3 use other graphic creation tools (Awareness)</p>	<p>A5.1 Graphic programs can be used as an alternative learning strategy to explore and experiment with geometric shapes and relationships. The computer provides a highly interactive environment for the learner in which precise geometric shapes can be created and then altered with respect to their size, orientation, colour and position.</p> <p>A5.2 The appearance of a document can be greatly influenced by the font, text size and layout of the text as well as the choice of graphics and the layout of the graphics on the page. There are certain basic rules of effective page design which are easy to implement and which can have a huge impact on the appearance of the final product. For a document, use a consistent font size and style for body text. Titles can be from a different font family and larger in size. It is advisable to use no more than three font styles per document.</p> <p>B5.1 Graphics programs provide the user with on screen tools (ie. select, unselect, resize, crop, area fill, add colour and pattern, size adjustment using the mouse or scale, various erasing techniques, object orientation, changing font and text size, colour or appearance, creating text blocks, change text wrap selection and other text manipulation functions) that can be used to design and create illustrations, slide presentations, diagrams, timelines, graphs, maps, and charts of various sorts. In addition to original works, students can import images acquired from a scanner, digital camera or the Internet and incorporate these images into their projects.</p> <p>B5.2 Students can make precise geometric shapes and then change the size, orientation, colour, and perspective of the shape. Manipulations may be applied to several objects at the same time.</p> <p>B5.3 Creators must consider the medium being used when designing web pages, print publications, etc. Special tools(i.e. clone brush, color replacements, effects, and filters) allow the selection of formats that are particular to the final product. For example, RGB (Red, Green, Blue) format is used to view colour on a computer screen with the use of light. CMYK (Cyan, Magenta, Yellow and Black) are pigment colours that provide all colour combinations in printed publications. Not all colours that may be produced in RGB on the computer screen can be reproduced using pigments when printing.</p>

Graphics

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
<p>Technology Lesson Plans: Diversity of Life: Adaptations pg. 99</p>	9.1, 10.3		204-1 301-15		
<p>Do anti-smoking ads really work? pg.91</p>	8.1, 9.1,10.3				Health (draft) W-6.7, L-6.3
<p>A5.1 A tutorial regarding Appleworks 5 graphics tools may be found at http://www.edu.pe.ca/journeyon/pro_d_pages/awgraphics/awgraphics.htm Individual lesson plans may contain downloadable files composed of preformatted objects.</p>					
<p>A5.2 Prepare an assessment rubric relating to guidelines for graphics as follows: graphic selection, incorporates visual elements, fonts clear, text colour and background agree, consistency, spelling, etc.</p>					
<p>B5.1 Create patterns with 2D and 3D shapes with various attributes such as size, colour, line thickness, etc. Alternatively, the objects found in the downloadable files may be manipulated using a variety of tools. Ensure that students use a variety of techniques to modify objects.</p>					
<p>B5.2 Align or combine objects created from B5.1 using layering, alignment, grouping features. Demonstrate.</p>					
<p>B5.3 Experiment with tools such as “dropper” to match foreground color to an area of the image. “Clone brush” one area of the image to another space.</p>					

Spreadsheets

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
<p>A6.1 plan/design a spreadsheet to organize and tabulate data from various sources (Guided*)</p> <p>A6.2 correct errors, modify or delete data in a cell (Awareness)</p> <p>A6.4 use different types of graphs/charts to visually represent data; label graph components (Guided*)</p> <p>B6.1 identify spreadsheet components and terminology (Guided*)</p> <p>B6.2 identify different types of cell data (Awareness)</p>	<p>A6.1 Spreadsheets are designed to facilitate the manipulation of data in the form of words, numbers, or graphics. It is important that learners have an understanding of the various types of data (i.e: schedule, tally/score sheet, solve a mathematical word problem) which can be stored and manipulated using the spreadsheet. You can enter numbers, text, or formulas into your spreadsheet. Once the student has an understanding of the types of data which can be entered into the spreadsheet, they are better able to design a spreadsheet which will meet their needs.</p> <p>A6.2 Students should be made aware of how spreadsheets simplify the task of calculating by immediately recalculating when data is modified. Emphasize the importance of entering data correctly and estimating the expected result. This is a necessary skill to detect an incorrectly entered formula.</p> <p>A6.4 By entering data into a spreadsheet students are then able to make a variety of charts and graphs (i.e:line, pie, bar). Labels such as legend, title, xy axis can be created. Students will be better able to interpret charts and graphs after having created their own using spreadsheet software.</p> <p>B6.1 Spreadsheets are formatted as tables that consist of rows and columns. Each row is identified by a number, while each column is identified by one or more letters. Each box in the table is referred to as a cell. The row and column that intersect at the cell provide the cell with its address. The address consists of the letter representing the column followed by the number representing the row.</p> <p>B6.2 It is important to have an understanding of the various types of data which can be stored and manipulated using a spreadsheet. Numeric: Consists of the numbers 0 through 9, and the minus sign (-) for negative numbers. Numeric data may be sorted, or it can be used for calculations or to produce charts. Dates and Times: Consists of dates entered as numbers (for example, 8/24/95) and times entered as numbers in either 24-hour clock format (for example, 17:20) or 12-hour clock format (5:20 PM). Dates and times may be sorted and different formats selected. Text: Consists of all letters, numbers, and symbols. Text may be sorted alphabetically, but calculations can not be performed. Formula: Consists of a set of instructions that the spreadsheet follows to produce a value for a cell. i.e. =sum(A1..A10) will provide a total of all numbers in cells A1 to A10 in the current cell (the cell where the formula is entered)</p>

Spreadsheets

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
<p>Technology Lesson Plan: Electrical Energy Consumption and Conservation pg. 83 Prince Edward Island Economy over Time pg.103</p> <p>A6.1 Discuss situations where the use of a spreadsheet is desirable. The spreadsheet is better suited for reoccurring situations where the user wants to record numeric data and perform calculations. ie. attendance, growth chart, milk sales, etc. Demonstrate the purpose of a formula by inserting two numbers and entering a formula to add them together to provide a sum.</p> <p>A6.2 To delete an entry, click on the cell to activate and tap the Delete key. To add data, click to activate the cell. Data will appear in the formula bar. Press enter to place the data in the cell.</p> <p>A6.4 For access to the graphing capabilities of the AppleWorks spreadsheet, the user must enter data into the spreadsheet. Once the data is entered, select the data which is to be graphed and click on Options/Make Chart. This will open the Chart Options window.</p> <p>B6.1 Introduce spreadsheet terminology and insist that this terminology be used.</p> <p>B6.2 Enter three dates into a spreadsheet i.e. birthdays, special events, holidays. Change the display format of selected dates. Sort dates by ascending or descending order.</p>			108-5, 303-30	(draft) 6.4.1, 6.4.4	

Spreadsheets

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
<p>B6.3 enter data into simple pre-existing spreadsheets, auto fill data, data entry bar, sort data (Independent)</p> <p>B6.4 edit spreadsheet layout (Guided)</p> <p>B6.5 enter formulas to perform calculations across columns, rows, cells, move/copy data or formulas from one area of spreadsheet to another (Awareness)</p> <p>B6.6 format numbers and text (Guided*)</p>	<p>B6.3 Students are first introduced to pre-created spreadsheets that allow them to record simple data. This data may result from activities such as a class survey. Pre-entered formulas allow the student to recognize that spreadsheets can perform a calculation function.</p> <p>B6.4 Once the spreadsheet is created in draft form there will be many occasions for revision. These types of editing changes are easily carried out with AppleWorks but it is important for students to understand the implications of these changes. Any formulas or calculations carried out on the inserted/deleted rows or columns will be effected by these revisions. Cells may be added, deleted, locked or unlocked in a spreadsheet by clicking on "Calculate/Insert or Delete cells" and "Options,Lock or Unlock" and selecting the necessary range of cells to move or lock.</p> <p>B6.5 Formulas may calculate down columns or across rows and may be entered manually or a "speed sum" feature may be invoked from the task bar. Formulas may also be replicated for cells where similar results are required. When this is done the formula will adjust automatically for the new cell. i.e. a formula =sum(A1..A10) replicated from cell A11 to B11 will automatically change to =sum(B1..B10) Formulas may also be copied and pasted from one cell to another.</p> <p>B6.6 When using a spreadsheet, it is often necessary to format the data entered. Numbers may require a certain format ie. number of decimal places, currency or percentage. There are several preset forms in AppleWorks to allow the user to display data in the format appropriate for their particular situation.</p>

Spreadsheets

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
<p>B6.3 Activity files are provided with lesson plans. These files contain the structure to organize data. Assist students with initial procedures and monitor progress.</p>					
<p>B6.4 When data becomes too large for the cell, simply drag the cell border to the right. Alternatively, select “Format” from the pulldown menu and “Column Width” or “Row Height” option to adjust all cells in the spreadsheet. To insert a column or row select “Calculate” from the pulldown menu and “Insert Cells” option. Demonstrate adding a row by creating space in the example lesson plan file (ie. pocket change) for a title.</p>					
<p>B6.5 Randomly enter two columns of five numbers each. Create a formula using “Auto Sum” to add the first column. Copy and paste that formula to sum the second column. “Auto Sum” the total of row 1 in cell C 1. Select C 1 to C 6 with the mouse and “Calculate” from the pull-down menu and “Fill Down” option. Formulas should appear in the empty cells and should have updated themselves to reflect the address of the cells to their left.</p>					
<p>B6.6 Select “Format” from the pulldown menu and “Number” option. Currency, percent, decimals, date, time, etc. may be applied to the data in a cell. Apply currency, 2 decimal places (dollar signs) to the total row in the example lesson plan file.</p>					

Word Processing

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
B7.5 format text (Guided*)	B7.5 Word processing is one strategy to develop effective writing. Using a word processor can help students develop new skills in rearranging sentence structures and sequencing of events. Publication of projects can develop more of a professional appearance by introduction to more advanced stylistics (i.e., justification, columns, line spacing, outlines, text wrap, and bullets).
B7.6 format documents (Guided*)	B7.6 Pages may be formatted by inserting page numbers, changing margins, tab rulers, and creating borders, headers and footers. Single pages may be centered vertically. A watermark is text or graphics that appear in the background of each page. An image may be placed as a background of a story or poem.
B7.7 insert a graphic and manipulate (Independent)	B7.7 Graphics may be manipulated in either a graphics program, such as Paintshop Pro, or in the word processor. Images may be imported, acquired from a scanner, digital camera or from the Internet. Many word processors come with a clipart library or a text art feature that allows text to be created as a graphic. i.e. templates for placing text in arcs, circles, waves, 2D or 3D format, and in different colors.
B7.8 insert and format tables (Guided)	B7.8 The presentation of data may be enhanced by placing it into a table. Individual cells in the table may contain their own formatting attributes. Text may be aligned, border lines added or removed, thickness adjusted and pattern, colour or shading added.
B7.9 format multipage documents with headers, footers, page numbers, page breaks, and keep text together function, change page orientation/size (Awareness)	B7.9 Headers, footers and page numbers may be formatted to appear automatically on each page. A page break is a code that places the insertion point at the top of the next unused page without needing to use many “Enter” commands. Page breaks may be inserted with the use of the “Ctrl” + “Enter” key in WordPerfect and using the “Format” pull-down menu and “Page Break” in Appleworks. “Keep Text Together” allows the user to specify how many lines of a paragraph may be placed between the bottom of one page and the top of the next. In Word Perfect, select the text that must remain together and click “Format” and “Keep Text Together” and “Widows and Orphans” to specify how many lines maybe left at the bottom or top of a page.
B7.10 insert automated features (Awareness)	B7.10 A date and/or time code may be inserted in a document so that the current date and/or time is obtained from the computer system. The folder and file name of a document (and other information) may be automatically placed on that document through the use of a “File Stamp”. Select “Insert” from the pull-down menu and “Other” from the sub-menu.

Word Processing

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
<p>Technology Lesson Plans: Diversity of Life: Adaptations pg. 99</p> <p>Biography of a Canadian Astronaut pg.95</p> <p>The outcomes related to word processing can be taught when using the computer in any curriculum area. Teachers are encouraged to introduce one or two word processing skills in each lesson.</p> <p>B7.5 to B 7.10 The design needs of a document will determine the appropriate use of these features. Following are suggested activities which may incorporate some or all of these outcomes. Create a story by providing a starting sentence and students take turns by adding a sentence. Create a class story to provide a model for writing. Write a group story or report. Each student can have the responsibility for a section which can be combined into one publication. Create an on screen book or presentation. Create a new story by revising a story read in class.</p>	<p>9.1, 10.3</p> <p>9.1, 10.1, 10.2, 10.3</p>		<p>204-1 301-15</p> <p>107-12</p>		

Multimedia

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
<p>A8.1 apply planning strategies (Guided)</p> <p>A8.2 create an age/grade appropriate slide show presentation that may contain one or more of the following objects: text, graphics, images, animations, audio and video (Guided*)</p> <p>A8.3 describe situations where streaming video and audio is appropriate (Awareness)</p> <p>A8.5 select appropriate medium to convey a message (Guided)</p> <p>B8.2 use multimedia creation and editing tools (Awareness)</p>	<p>A8.1 Time devoted to pre-production planning (i.e: storyboards, scripts, graphic organizing, brainstorming) with paper and pen or software tools will result in a better quality product and save time in the long run. Should group work be involved in the production process, this planning will help to organize and coordinate individual activities.</p> <p>A8.2 A slideshow allows curriculum to be presented using new media in fun and interesting ways. This can be very motivating for the student. Use existing multimedia resources or create multimedia components using equipment available in schools.</p> <p>A8.3 Multimedia files may be viewed by downloading or streaming them from the Internet. “Downloading” involves placing a hyperlink on a web site whereby the whole file is downloaded to the users computer before it becomes viewable. This may involve a long wait depending on the file size and line speed. “Streaming” allows the media to commence playing after partial download and is appropriate for very large files. There are several formats for the creation of streaming video (Windows Media Macromedia, Real Media, Quicktime, MPEG-4) Streaming is also used in the delivery of “live events” through web casting.</p> <p>A8.5 Choice of media may include slideshow, web page, brochure, newsletter, report, etc. Every media has its particular strengths. The choice of media would depend upon the intended audience and the activity. Be conscious of file size, formats and storage locations.</p> <p>B8.2 Hardware resources such as digital cameras (that can capture still as well as video/audio footage), video cameras, web cams, microphones, and scanners are reasonably priced and widely available. Graphics programs allow the user to capture screen shots from the computer monitor, edit digital pictures, create animations and combine graphics and text. Video/audio editing capability is available on Windows XP computers. Home computer systems are now being marketed with multimedia features and software that appeal to the multimedia consumer.</p>

Multimedia

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
<p>Technology Lesson Plan: A Backward Glimpse of Prince Edward Island pg.85</p> <p>A8.1 Use Inspiration 7.5 software as a planning, brainstorming, organizational tool. Submit or present a plan for the activity.</p> <p>A8.2 Use Appleworks or Corel Suite to create a presentation about a research project or topic. Depending upon the project, groupwork may be assigned with individuals being responsible for different aspects of the presentation ie. graphics, text, spreadsheet graph, sound, etc.</p> <p>A8.3 Visit the Kidzonline multimedia and lesson plan resource (http://www.kidzonline.com) to view streaming and downloadable video resources.</p> <p>A8.5 Discuss project possibilities and mediums. Front Page Express (web authoring), Appleworks (newsletters, brochures, slideshows), Presentations 9 (slide shows), Ultimate Writing and Creativity Center (newsletters, reports), Word Perfect, Inspiration 7.5 (web pages, images) software may be used.</p> <p>B8.2 Review one or more of the following multimedia creation tools to support an activity. Use Paintshop Pro to capture a screen image. A microphone may be used to create a 30 second audio file with Inspiration 7.5. Scan a source document and change its size. Take a digital photograph or video and edit it.</p>				(Draft) - explain the historical contributions of one individual associated with P.E.I history - portray an understanding of the impact of history and culture on present day P.E.I. lifestyle	

Multimedia

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
<p>B8.3 convert file formats for a particular application (Awareness)</p>	<p>B8.3 Multimedia technologies have been developed by a number of companies and have evolved over time. Therefore, there is not one file format or standard for the different multimedia components. Software utilities allow for conversion of the more widely used applications from one format to another (i.e.: .jpg, .gif, .bmp, .mp3, .wav, .avi, .mpeg, etc). This allows users to view multimedia content that has been created in another format with their specific software and hardware configuration. File formats may need to be converted to allow for presentation in a particular media such as on a web site or on a CD/DVD.</p>

Multimedia

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
<p>B8.3 Completed media must be compatible with the equipment available to the intended audience.</p> <p>Test media early in project cycle to anticipate any challenges.</p>					

Database

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
<p>A9.2 perform searches on a database file using logical and boolean operators (Guided)</p> <p>A9.3 design/plan a database to use as a method of organizing information (Guided)</p> <p>A9.4 create and modify a form (Guided)</p>	<p>A9.2 The primary purpose of any database file is to store information so that it can be retrieved quickly and accurately. A database query can range from the simple (eg. Show all the records which are located in Charlottetown) to the complex (eg. Show all the records located in Charlottetown, who are younger than 35 and are females only). The second example demonstrates the use of logic operators (less than, less or equal to, greater than, greater than or equal to, not equal and equal) as well as the use of Boolean operators (AND, OR, NOT, AND NOT).</p> <p>A9.3 The selection of database fields, field types and the format that information is entered has an effect on the information that can be retrieved when the database is complete. For this reason it is important that students have some practice in the practical application of database principles. Proper understanding of a particular problem and the types of questions to be answered from the data will make the design and use of the database more efficient.</p> <p>A9.4 A data input form may be designed to house fields that will allow users to enter data for a particular record i.e. reading log with fields for title, author, date, genre, and response. Graphics, text and colour may be added to this form. Data must be entered consistently and accurately for later data retrieval. If spelling errors occur, search strategies will not be reliable. Some databases have features that help reduce the occurrence of errors such as drop-down menu choices i.e. Mr., Mrs., Ms. or a rule that will check to make sure that data is not outside a certain range i.e. age is not over 100. Terminology: All data about a particular topic is known as a file or database (i.e. all books); data is grouped into records (all data concerning one book); records are divided into fields (individual pieces of data about a book such as title, author, etc).</p>

Database

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
<p>Technology Lesson Plans: Bridge to Terabithia Character Sketch pg.89</p> <p>A9.2 Visit a search engine (www.altavista.com) which is a very large database. Practice searching for statistics for PEI using Boolean operators in the “advanced search” area. eg. pei “lobster OR shellfish”, pei tourism NOT guide, pei AND rockets.</p> <p>A9.3 A database provides a way to record independent reading. Brainstorm fields that will be required to provide useful information. Identify the field types necessary.</p> <p>A9.4 Create the data input form for the activity in A9.3. Add a graphic relating to reading, a title such as “Independent Reading Log” and colours for the field data entry box. Identify fields for which drop-down or error checking routines may be applied. i.e.: pull-down menu for genre and error checking for date falling within 1900-2005 range, “field cannot be empty” or “field must be unique” i.e.: Dewey Decimal number</p>	8.1, 9.1,10.3				

Database

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
A9.5 use databases to analyze data and look for trends (Guided)	A9.5 Databases created in Appleworks use query techniques. Layouts may be created that contain specified fields. Records may be sorted into ascending or descending order. Particular records may be searched through the “find”, “match records” or “omit” features. See the Journey On online tutorial relating to Appleworks databases (http://www.edu.pe.ca/journeyon/tech_support_pages/help_manual/database/default.html)
B9.2 create fields with variable field types and properties (Guided)	B9.2 Fields are assigned a “data type” which will allow the program to store data in a particular format. i.e. date will allow options for specifying information display as day, month, year or month, day, year or year, month, day, etc. Numeric fields allow calculations to be performed with the data in reports.
B9.3 restructure database (Guided)	B9.3 No matter how well the database is planned, there will be times when certain elements of the database must be changed. There may be a need to add a field that was omitted, delete a field that is no longer required, change the size of the field to allow for more information etc. In all cases, the information in the database will also have to be modified manually. For example, if a field is added to the database where there are already 100 records, then each piece of information that goes into the new field will have to be added for each of the 100 records. Also, when deleting fields, data contained in the field to be deleted will also disappear. For this reason, it is important to be careful when making changes to an existing database as the consequences could be the inadvertent loss of data.
B9.4 sort records alphabetically , numerically and by multiple fields (Guided)	B9.4 In the What are you Reading example, the records may be sorted by “Author” as key one. Should two authors have the same last names a second key “first name” sort can be specified.

Database

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
A9.5 Refer to the lesson plan “What are You Reading”. Review the chosen fields for this database. Under “Suggestions For Further Activities” a number of questions are provided. Use these as an assessment or as a resource to brainstorm further questions/trends.					
B9.2 Assign field types to match the data that will be placed in the fields i.e. number, text, date. Change text colour and font. Provide any prompts for the user as to the format in which data should be entered.					
B9.3 Add a new field to the database ie: International Standard Book Number (ISBN); Remove this field from the database.					
B9.4 Once students have entered data records for the lesson plan activity demonstrate multiple field sorting with the following examples: sort the data by title, genre, rating, etc					

Database

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
<p>B9.5 create a report from the entire database or selected records (Awareness)</p>	<p>B9.5 Users may create a report from the database. These reports will contain parts of the information arranged in some particular fashion. To create a report, a layout containing the necessary fields is prepared. Once this layout has been created, and sort and match criteria specified, the report can be printed in this format. Alternatively, the information can be cut and pasted into another wordprocessor as part of a larger written report or presentation.</p>
<p>E9.1 examine functions and implications of database driven websites (Guided)</p>	<p>E9.1 Database software is the most widely used business application. It is used to track inventory, customer information, supplier information, sales and banking data, etc. Electronic commerce (e-business) has required that databases be connected to Internet web sites to provide specific information to customers or to collect information from them. Special Internet security features must be built into these online database systems to prevent identity theft, fraud and to protect credit card transactions.</p>

Database

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
<p>B9.5 Create a report from the data in the lesson plan. Create a new layout and select the fields for the second sort from B9.4 -author, title, genre . From the pull-down menu select “Layout” - “New Layout” - “Columnar Report” . Enter a name for the report i.e. Favorite Books. Set the field order as author, title, genre . To sort the records for this report select “Organize” - “Sort Records” . Move the author, title, genre field names into the sort order box and specify ascending or descending. Click OK.</p> <p>Observe progress and check that records are in specified sort order.</p> <p>Specify records to be included in the report by selecting “Organize” - “Show All Records” and “Layout” - “Find” and specify the field data you would like.</p> <p>E9.1 Visit an online business site such as Veseys Seeds (http://www.veseys.com) and search for a product. Identify the features that are associated with a database application.</p>					

Telecommunications

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
<p>A10.1 collaborate using software (Awareness)</p>	<p>A10.1 Within the classroom, collaborative tools (ie. whiteboard, slideshow, application sharing, chat, messaging, send and receive files, photos, group file sharing, resource sharing [links], online content creation and sharing, assignment drop box, video and audio, discussion forums, journal.) make it possible for students and teachers to work together in a virtual workspace. This is particularly useful when students are involved in groupwork outside of class time and live a distance apart. These tools may also make it possible for students with illness to stay in touch with peers and class activities.</p> <p>Establishing connections with classrooms in different parts of Canada or the world can be a powerful tool for the classroom teacher in all subject areas. Student assignments take on another level of authenticity when they are shared with other classes via telecommunications.</p>
<p>B10.3 manage mail/folders (Guided)</p>	<p>B10.3 Mail messages that a user wants to save for future reference may be organized into separate folders. i.e. friends, projects, teacher, family, etc. Storage space is limited, therefore, users must periodically review mail messages and delete those that are no longer useful.</p>
<p>B10.4 manage address books (Guided)</p>	<p>B10.4 An address book maintains the email addresses of correspondents. When composing new mail messages, the address book may be accessed to provide the correct user. With Netmail, all students will be listed in the main address book area. Multiple personal address books may be created and outside or frequently used addresses may be added. i.e. friends, family, project group, team, etc.</p>

Telecommunications

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
<p>Technology Lesson Plan: Email pg. 80</p> <p>A10.1 Use of collaborative tools expands the resources available to the classroom. The teacher and students can communicate with each other regarding questions from discussion in class. Teachers can model the information process by accessing online experts. This demonstrates that teachers, just like students, do not have all the answers but have the skills to find out. During an author study, students may correspond with the author by e-mail. Questions concerning the publication could be directed to the author and the response reported</p> <p>B10.3 Create folders to organize received email. Transfer mail messages into created folders.</p> <p>B10.4 Create an address book for classmates. Add individual addresses to this book.</p>	1.2, 3.3, 10.3				

Telecommunications

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
<p>B10.5 use distribution lists (Guided)</p>	<p>B10.5 A distribution list allows a user to send a single message to many recipients without having to type individual addresses. i.e. the teacher may want to send the same message to everyone in a particular class. To create a distribution list, the user adds individual addresses and saves the “group” with an identifiable name. eg. grade 4 class. This distribution list or “group” is saved in a particular address book.</p>
<p>B10.6 send and open attachments (Guided)</p>	<p>B10.6 Files may be sent “attached” along with an email. There are file size restrictions on attachments sent through providers such as Sympatico. Should an attachment exceed the limit the email will be undeliverable. The school email system scans and filters email for viruses. Any suspect files will be filtered and deleted. Program and other files with particular extensions are automatically filtered. (For a complete listing of these file extensions please see http://www.edu.pe.ca/sats/standards/update/blocked_attachments.pdf)</p> <p>Emails with attachments that are stored in the inbox or a mail folder take up mailbox storage space. Attachments should be saved to a local drive location and the email deleted.</p>
<p>B10.7 create signatures (Guided)</p>	<p>B10.7 A signature is an automatic message that is placed at the bottom of a sent email. In business, signature information will often contain the company name, individuals’ name, phone/cell/ fax numbers, email address, mailing address, web site URL, etc. With Netmail, there is no automated signature feature. Students who wish to add a signature will have to type it in at the bottom of every message.</p>
<p>B10.8 apply filters and rules (Awareness)</p>	<p>B10.8 A rule defines a set of conditions and actions to be performed when an email meets those conditions. For example, email from a particular source may be identified in a rule and sent directly to the trash or a particular email folder. (instead of being displayed in the inbox).</p> <p>A filter allows for the searching of an email by a number of criteria. This is useful when a large number of emails exist or the user forgets in which folder the email was placed.</p>

Telecommunications

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
<p>B10.5 Divide students into small groups. Each student creates a distribution list for the members in their group. Save the distribution list in the address book created in B10.4 with an identifiable name. Send a message to all members in the group by placing the distribution list name in the TO: field from the address book.</p> <p>B10.6 Assign a peer editing activity in which one student composes a story in a word processor. A second student is sent the file as an attachment and suggests improvements. (designate whether this might be spelling, punctuation, sentences, etc.) The file with suggested changes is returned by email.</p> <p>B10.7 Choose a short quotation from a selected reading activity that has personal meaning. Setup this quotation as an email signature.</p> <p>B10.8 Create an email folder called "Rules". Set up a rule to automatically redirect mail from a classmate to this folder.</p> <p>To utilize the filter feature email messages must be present. Discuss the usefulness of this feature.</p>					

Web Authoring

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
<p>A11.1 identify web page creation possibilities (Guided*)</p> <p>A11.2 create appropriate text and image file formats (Awareness)</p> <p>B11.2 create a basic web page using a WYSIWYG editor (Awareness)</p> <p>B11.3 indicate where file or page is hosted (Awareness)</p>	<p>A11.1 Many opportunities exist within the grade six curriculum for publishing class activities. This may be a method of celebrating the completion of a theme or unit. It provides a means for parents to see their child's work or activities. Many PEI Elementary school websites contain numerous completed activities that may be used as examples.</p> <p>A11.2 Use a maximum of two fonts. Use one font for text passages and one for accents such as titles, buttons, etc. Use common fonts on web pages as speciality fonts are replaced when viewed on the users' computer. Designers can provide the font for download, however, they must be aware of copyright for the fonts. Most people will leave a site rather than download the font as it takes time and they often are concerned about downloading files. A second consideration is that each installed font will consume computer memory.</p> <p>Gif, .png and .jpeg are the main graphics file formats for web publishing. To reduce download times, use the smallest graphic size possible (file size not physical size) Use .jpeg for graphics (photographs, art, images with shadows and shading). Use .gif for graphics with a few colours and transparency.</p> <p>B11.2 "What you see is what you get" web editors are much like a word processor that will display to the screen exactly the way it is keyed. They automate many functions, such as linking, inserting graphics and making tables, which results in huge time savings.</p> <p>B11.3 The anatomy of a URL demonstrates the entire site structure. The initial section after http:// is the server address (eg. www.edu.pe.ca) Folders and subfolders are separated by a forward slash (www.edu.pe .ca/journeyon/). Individual files finish the URL with a file extension (eg. .htm, .asp, .php, .jpg, .avi, etc.) www.edu.pe.ca/journeyon/pd.htm</p> <p>Files are initially created and the structure is maintained locally on the users' computer system. This structure is transferred to a web file server. The web file server is owned by the department of education, but they pay a fee to the Internet Service Provider (ISP) to connect to the Internet.</p>

Web Authoring

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
<p>Technology Lesson Plans: Personal Safety on the “Net” pg.101</p> <p>A11.1 Visit numerous sites to identify their characteristics</p> <p>A11.2 Identify criteria and create a rubric or checklist to critique sites for effective/non-effective use of media. Save a graphic file in various formats (.gif, .jpg, .bmp) and note the size vs image quality. Create text in a graphics program, such as Paintshop Pro, and save as a .gif file. Insert this into Front Page Express or another web editor for use as a heading. Save as an .html file and view in a browser.</p> <p>B11.2 Create a basic webpage relating to a curriculum topic. Provide criteria.</p> <p>B11.3 Draw the file structure, using Inspiration 7.5, for the following URL: http://www.edu.pe.ca/journeyon/pro_d_pages/frontpage/class_webpage_exercise.htm The structure of a web URL is [server], [folder], [subfolder], [file]. The server address (www.edu.pe.ca) would be found at the top level of an organizational chart structure.</p>					Health(draft) W-6.9, W-6.10 R-6.6

Web Authoring

<i>Students will be expected to:</i>	<i>Instructional Considerations</i>
B11.6 embed objects (Guided)	<p>B11.6 An embedded object is multimedia content or simply a file (.pdf) created with one application and placed into a webpage with HTML coding. Embedding the object, ensures that the object retains its original format. Video that is included on a site must include information about its size so that users can decide whether or not they want to wait the time required to view the media. Provide a link to a plugin source for a downloadable file (e.g. Quicktime). Never incorporate the automatic downloading of a video/audio file into the loading of a page. Audio must be produced on the best quality sound equipment the user can obtain. Reeves and Nass (1996) found that users will tolerate poor video but are very affected by poor audio. Care must be taken not to overload the user with competing visual and audio information. People have difficulty reading text and listening to unrelated audio at the same time.</p>

Web Authoring

<i>Teaching Suggestions, Activities and Assessment</i>	<i>Links to Specific Curriculum Outcomes</i>				
	Language Arts	Math	Science	Social Studies	Other
<p>B11.6 Free sound and moving graphic files may be downloaded from the Internet. Web pages may be enhanced by displaying stylized text, images, and video.</p> <p>Embed or link audio, video, animation or data files (.pdf, .wpd, etc.). Remember to describe the contents of the linked files as well as their file size.</p>					

Lesson Plan Layout

Curriculum Outcomes

Activity Resources,
Instructions and Suggestions

Lesson Plan: Illustrating Stories	
Outcomes	Activity
<p>Technology (Awareness) E2.9, A5.1, A 11.1, E8.1</p> <p>Language Arts: 10.4 (Easy), 9.1 (Transitional) 10.4 (Transitional)</p> <p>Visual Arts 2.1.1, 2.8.1, 2.7.2</p>	<p>Students can use computer graphics to illustrate stories, poems, journal entries and reports. Any graphics program can be used for this exercise; Color Magic, AppleWorks, or Windows Paint Brush. Ultimate Writing Creativity Center is also a very useful program which allows the students to add graphics to their stories. Graphic programs are a great way to assist students in developing hand-eye co-ordination and enhance mouse skills. Young children quickly learn by exploration to use the different graphic tools and adapt very readily to expressing themselves using this medium.</p> <p style="text-align: center;">Resources</p> <p>art materials graphics software Ultimate Writing Creativity Center</p> <p style="text-align: center;">Instructions</p> <ol style="list-style-type: none"> 1. There are several ways to approach this activity. Students can have the story prepared first and then illustrate it, or they can create a drawing and then write a story based on the drawing (see sample at end of exercise). You may wish to fit the written work and illustrations into a theme that you are currently exploring in your class. 2. Let students explore the medium. If using a program such as Color Magic, limit the amount of clip art (stamps) used and encourage as much freehand drawing as possible. Students may need to be reminded that pictures are created with shapes and briefly (2-5 minutes) show how to create different shapes, erase an object or page, and add color to an object. Having a volunteer in your classroom, pairing novices with more experienced users, or having student computer mentors may help you with this aspect, especially if you have a one-computer classroom. 3. Students can save their work if they haven't completed it by the end of their allotted time, and come back to it at a later date. When they have completed their work, have each student print out a hard copy.

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Lesson Plan: E-Mail

Outcomes	Activity
<p>Technology: (Awareness) A10.1 (Guided) B1.6, B2.1, E2.4, E2.7, B10.3 B10.4, B10.5, B10.6 (Independent) E2.8</p> <p>Language Arts 1.2, 3.3, 10.3</p>	<p>Electronic mail is an important component of communication and information technology. E-mail is an instant, free, “no stamps required” form of communication. This activity introduces students to the basics of electronic mail.</p> <p style="text-align: center;">Resources</p> <ul style="list-style-type: none"> • Netmail • Class list of e-mail addresses <p style="text-align: center;">Instructions</p> <p>Sending a message (Netmail):</p> <ol style="list-style-type: none"> 1. In the toolbar, click compose.  2. Click Address Book to add recipients in the To, CC, and BC boxes. or Type a recipient’s address in the To, CC, or BC box. The address can be a GroupWise user ID, GroupWise full name, or external e-mail address. Separate each address with a comma. 3. Type a subject and message. 4. You can include Web site locations or addresses (URLs) in both the Subject and Message boxes. 5. Attachments(Optional): Click Attach to attach files to the message. For each file you want to attach, do the following: Click “Browse” to locate the file to attach. Select the file, then click “Open”. Click “Add”. When finished, click “O.K.” 6. Click Send. <p>For further information on Netmail, visit the following site: http://www.edu.pe.ca/journeyon/pro_d_pages/netmail/index.html</p>
<p style="text-align: center;">Suggestions</p> <p>A Classroom Discussion: Why??</p> <p>Students should be reminded that e-mail is not secure but should be thought of as a postcard. This means that anyone who receives an email message can read it. Currently, teachers are using Novell Groupwise Web Access at: mail.edu.pe.ca All students have access to Netmail which has the “look and feel” of Groupwise. Address is: mail.edu.pe.ca (Netmail for students)</p>	

Lesson Plan: E-Mail

Instructions

The teacher, or designated student, can e-mail on-line “experts” with questions from discussion in class. The responses can be shared with classmates. Accessing resources allows teachers to model the information process and demonstrates that teachers, just like students, do not have all the answers but have the skills to find out. On-line “experts” also allow for discussion on the importance of the credibility of the source when using the Internet as a learning resource.

To create a group in Netmail:

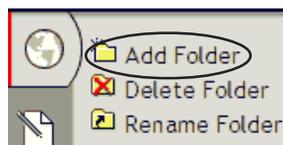
1. Click Address Book.
2. Search out each individual that you want to be a member of your group and click the “To:” button so that all the people you want to be part of your group appear on the right hand side of the address book window.
3. Click the “Compose” button so that all of the email addresses of these people appear in the “To:” box of a new message window.
4. Highlight all the email addresses that appear in the “To:” box of the new message window and hold the CTRL key and the C key at the same time to copy these addresses.
5. Go back into the address book and under the heading “Personal address book”, click the “Create” button. (Maximize the window first)
6. In the “First Name” or “Last Name” field, provide a name for your personal group.
7. Click in the “Email address” field, hold down the CTRL key and the V key at the same time to paste all the email addresses you just copied into the “Email address” field box.
8. Click “O.K.”
9. The personal group now appears in your personal address book. When you select a personal group as the recipient for a message, all the individuals in the group receive the message.
10. You can search for your group by the name you gave it when you were adding it to your personal address book.

Lesson Plan: E-Mail

Instructions

Adding folders to manage your mail:

1. In the Mailbox folder list, click “Add Folder”.

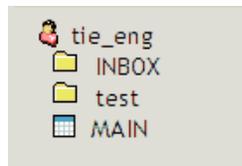


2. Type the folder name in the “Folder Name” field. In this case, the “Type” would be “Mailbox”.

3. From the “Create In” list, select the folder where you want to create the new folder.



In this case, a folder named “test” has been created at the mailbox root level which is “tie_eng”.



Lesson Plan: Electrical Energy Consumption and Conservation

Outcomes

Technology: (Awareness) A 6.2, B 6.2, B 6.5
(Guided) A 6.1, A 6.4, B 6.1, B 6.4, B 6.6

Science: 108-5, 303-30

Activity

The grade 6 science program's unit on Electricity has a component which deals with energy consumption and the need for conservation of energy. The purpose of this activity is to assist students in being aware of just how much electricity is being consumed within their own home.

Resources

Appleworks Spreadsheet
Internet

Instructions

Have students each choose 5 different types of appliances.

Research on the Internet, home, stores, how many kilowatt hours each appliance uses.

An example of a useful internet sites could be: www.maritimeelectric.com

This site contains an energy calculator that will give you an approximate kilowatt hour figure for many household appliances.

Also, Natural Resources Canada has an Energuide Appliance Directory that gives kilowatt figures on major appliances. This can be found at the following site: <http://oee.nrcan.gc.ca/english/index.cfm?attr=4>

Open Appleworks Spreadsheet and in the data entry bar for cell A1, type the word "Appliance" and press the "enter" key.

Click to highlight cell B1 and type in "Yearly Kilowatt Hours" and press "enter".

In cell A2 through A6, type in the name of your appliance. In cell B2 through B6, type in the yearly kilowatt hours. Your spreadsheet should look something like this.

	A	B
1	Appliance	Yearly Kilowatt hours
2	oven	784
3	television	850
4	washer	779
5	dryer	916
6	refrigerator	514

A formula will be used to find the total of kilowatt hours used by each of these appliances.

In cell A7 type in the word "total" and press enter. In cell B7, enter the following formula: =SUM(B2...B6). You are telling the spreadsheet program to add all the numbers from B2 to B6.

By clicking on the "Format" button, column width, row height, text size, color, can be changed. By clicking on "Number" in the Format menu, numbers can be changed, date and time may also be added.

Lesson Plan: Electrical Energy Consumption and Conservation

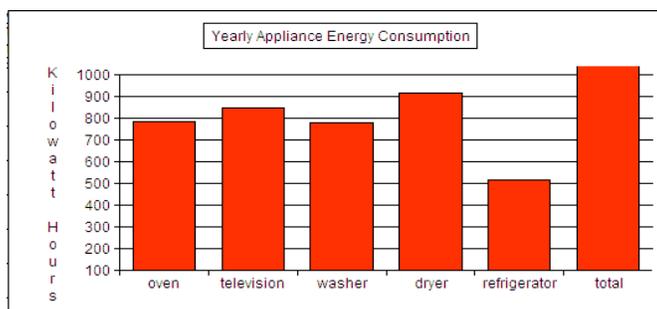
Instructions

Your spreadsheet should now look like the image below.

B7		fx	X	✓	=SUM(B2..B6)
	A	B			
1	Appliance	Yearly Kilowatt hours			
2	oven	784			
3	television	850			
4	washer	779			
5	dryer	916			
6	refrigerator	514			
7	total	3843			
8					

Create a chart giving a visual representation of the collected data.

To do this, highlight with your mouse the data that you wish to chart. Click on "Options", and in the drop-down menu, "Make Chart". There you will be given a number of chart options. In this example, a bar graph with all the data has been created.



For more information on Appleworks Spreadsheet, please visit the following website:

http://www.edu.pe.ca/journeyon/pro_d_pages/appleworks.htm

Once students have some data, a number of questions could be asked.

1. Of the appliances chosen, which ones are absolutely essential to a home?
2. From your research, are there more energy efficient brands of appliances?
3. Are there some things that students could do to reduce the amount of energy consumption of these appliances?
4. How will reducing the energy consumption of these appliances help the environment?

Lesson Plan: A Backward Glimpse of Prince Edward Island...

Outcomes

Technology:(Awareness) B8.2,B8.3
(Guided) B1.7, E 2.6, A3.1, B3.1,
B3.2, A 3.3, B3.3, A8.1, A 8.2, A 8.5

Social Studies:(Draft) explain the historical contribution of one individual associated with PEI History

portray an understanding of the impact of history and culture on present day PEI lifestyle

Activity

Students will research, using the Internet as a tool, information on one or more influential historical figures. Students will create a multimedia slideshow outlining the contributions that these historical figures have had on the economic, social and cultural life of the people of Prince Edward Island.

Resources

Internet
Corel Presentations

Instructions

There are many figures that have contributed to the rich history of PEI and teachers have a choice. For the purposes of this lesson plan, reference will be made to the following figures:

Grand Chief Henri Membertou
Jean Pierre De Roma
Robert Harris

Using a search engine such as Google (www.google.ca), students will type in each of the above names in the database search field to find websites with accurate information. Refer to page 40 of this document for domain abbreviations to help identify authorship.

Also remember the 5Ws of Internet searching:

1. Who is the source of information?
2. What are you getting?
3. When was the site created?
4. Where is the site hosted?
5. Why are you here?

Have the students bookmark (add to Favorites) the sites that they will be using.

Make sure also that students cite where they researched their information and give credit to the authors.

Once the students have enough information, start Corel Presentations. Using the tools within the program, the students will create a 4 slide presentation on their historical figure.

Students will want to decide beforehand what information is going to be on each slide. Where are the graphics coming from? Because students have a limited amount of space in their accounts, they have to be aware of file size, graphic size and format of graphic. To help them determine size of graphic, one way could be to copy/paste the graphic into Paintshop Pro. The size of the file can be seen in the lower right hand corner of the screen. File size can also be changed in this program by using some of the available tools such as image resize or decreasing color depth.

For more information on Paintshop Pro, visit the following site:

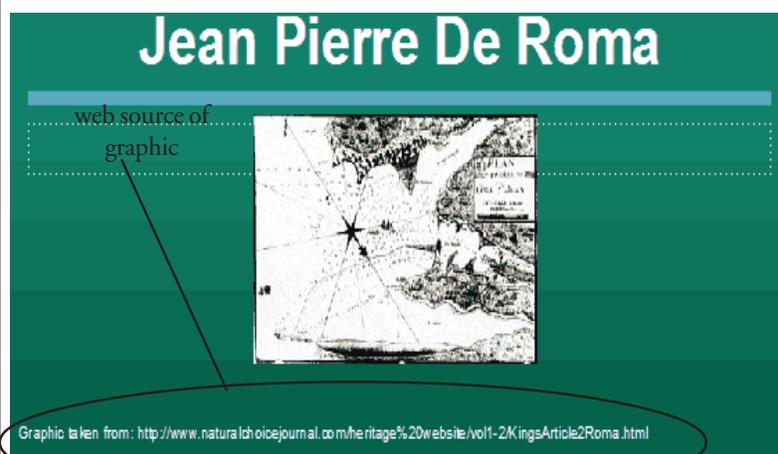
http://www.edu.pe.ca/journeyon/pro_d_pages/using_psp/using_psp6/index.htm

Lesson Plan: A Backward Glimpse of Prince Edward Island

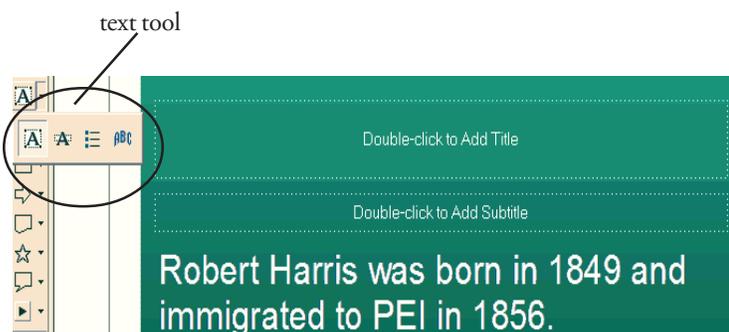
On the first slide, double click on the title box on the screen and type in a title.



An image can be inserted from a file, or copy/paste from the Internet. Be aware of copyright issues when using Internet files.



Click on the text button , format the size of text that is required and type in the information from the research.



Assessment of this activity could be in either the form of an oral presentation or as a demonstration of the slideshow.

For more information on Corel Presentations, please visit the following website:
http://www.edu.pe.ca/journeyon/pro_d_pages/corel.htm

Lesson Plan: Space...What's out there?

Outcomes

Technology: (Guided) A3.1, B3.1, E3.1, A3.2, A3.3, A4.1, B4.1, B4.2

Science: 301-21, 105-1

Activity

Students will examine the challenges of space exploration. By brainstorming ideas, researching information, and presenting their findings, students will better understand the issues involved with space exploration. Space Exploration is currently a grade 6 Science unit. Curriculum links to the grade 6 Language Arts Anthology "Space, Stars and Quasars" could be made.

Resources

Inspiration 7.5
Internet

Instructions

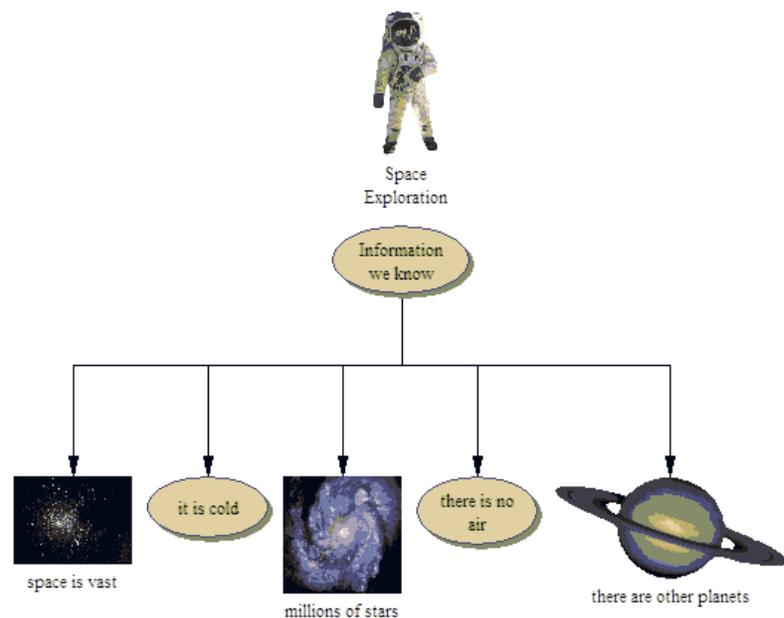
Individually or as a class, using Inspiration 7.5, students will brainstorm ideas on space exploration.

To guide the initial discussion, the following question might be used:

1. What do we know so far about space?

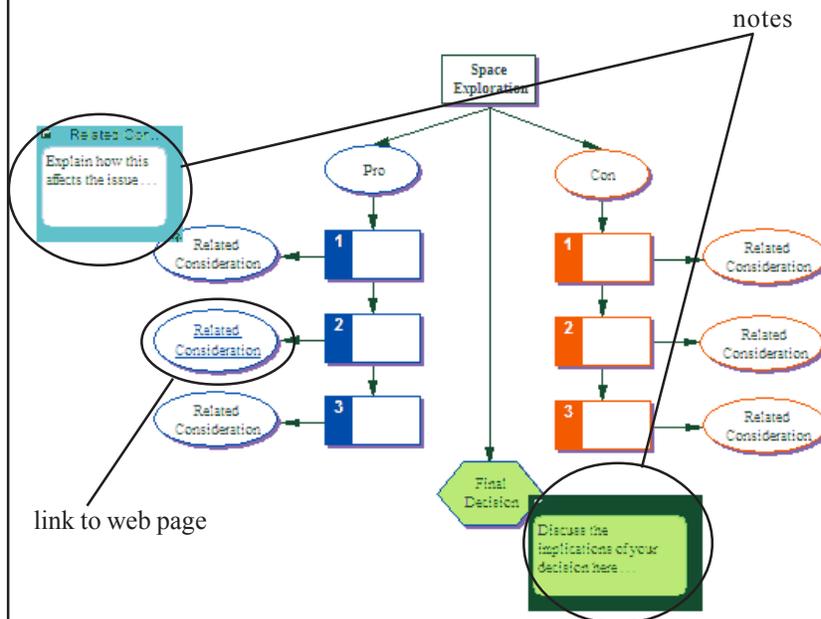
Once the students have organized their ideas, they can then begin to research further information.

By using a search engine such as Google (www.google.com), and typing in the word "NASA", sites such as <http://www.nasa.gov/> may be found.



Lesson Plan: Space...What's out there?

If students wish to use Inspiration 7.5 as part of their presentation, it is possible to add notes and link to web pages directly to their Inspiration file. A template is available for students to directly add information.



Further information on Inspiration 7.5 may be found at the following site:
http://www.edu.pe.ca/journeyon/pro_d_pages/Using_Inspiration/inspiration7.htm

If an oral presentation is used as part of the assessment for this assignment, an assessment rubric example is given below.

Oral Presentation Evaluation Form

Name _____ Date _____
 Class _____

	Exceptional	Admirable	Acceptable	Amateur
Content				
Coherence and Organization				
Creativity				
Material				
Speaking Skills				
Audience Response				
Length of Presentation				

COMMENTS:

This assessment rubric may be modified if the student is handing in a typed report.

Lesson Plan: Bridge to Terabithia Character Sketch

Outcomes

Technology: A9.2, B9.2, A9.3, B9.3, A9.4, B9.4, A9.5, B9.5, E9.1

Language Arts: 8.1, 9.1, 10.3

Activity

Students will use a database to list the characters and descriptions from the novel "Bridge to Terabithia". As the students read the novel, they will add information about the character into the database.

Resources

Appleworks Database
Database file: **charsket.cwk**

Instructions

Teachers may use the database file provided as a template and modify it to their class, or they may create one with their students.

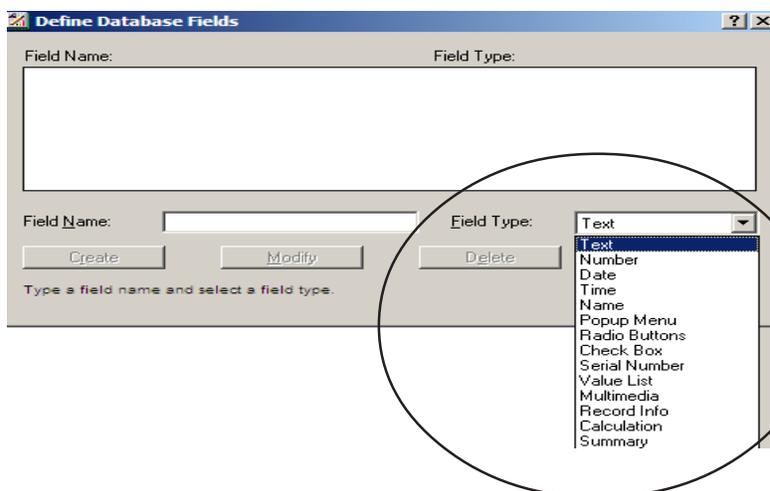
Suggested field names for the database are as follows:

Title
Author
Name of character
Adjective to describe
Reason for choice
Evaluation of character

Title	<input type="text"/>
Author	<input type="text"/>
Name of Character	<input type="text"/>
Adjective to describe	<input type="text"/>
Reason for choice	<input type="text"/>
Adjective to describe	<input type="text"/>
Reason for choice	<input type="text"/>
Adjective to describe	<input type="text"/>
Reason for choice	<input type="text"/>
Evaluation of Character	<input type="text"/>

Lesson Plan: Bridge to Terabithia Character Sketch

The suggested field types are all text fields. Other field types are available and depending on the information to be stored, students may select different types of database fields.



Once the students have records of all the characters from the novel, records can be sorted, matched, and reports can be generated. Students may also wish to add graphics and change the size of the fields. By clicking on “Layout” and in the drop-down menu, clicking on “Layout” again, the size of the field can be changed. Under the “File” menu, the “Library” contains many graphics that can be used.

As an assessment activity, a comparative essay may be completed on any of the two characters in the novel. Because the students already have some of the characteristics in their database, it is simply a matter of referring to it for information for their essay.

Students may copy and paste their information from the database to the Appleworks word processor and add to it.

To further assist the students in understanding the usefulness of a database, a search engine such as “Google” could be used. Most search engines have “Advanced search” whereby key words/phrases can be entered. When this type of search is used, time can be saved by not having to go through the numerous websites listed when you do a general search.

Online purchasing sites such as ebay are very popular and contain a large database of articles for sale.

For more information on Appleworks Database, visit the following website:
http://www.edu.pe.ca/journeyon/pro_d_pages/appleworks.htm

Lesson Plan: Do anti-smoking ads really work?

Outcomes

Technology: (Awareness) B8.2, B8.3
(Guided) A1.1, A3.2, A3.3, B3.1,
E3.1, A5.1, B5.1, B5.2,

Health: (Draft) W-6.7, L-6.3

Language Arts: 8.1, 9.1, 10.3

Activity

Each year an enormous amount of money is spent on advertising campaigns that discourage youth from smoking. The question remains as to how effective these ads are. Students will critique some of these ads and, using technology, design an effective ad for anti-smoking.

Resources

Internet
Word Perfect word processor

Instructions

Class discussion could begin with students' awareness of the anti-smoking ad campaigns. An example could be the following website:

http://www.hc-sc.gc.ca/hl-vs/tobac-tabac/res/media/camp/index_e.html

Students should critically evaluate websites for their usefulness as a source of information.

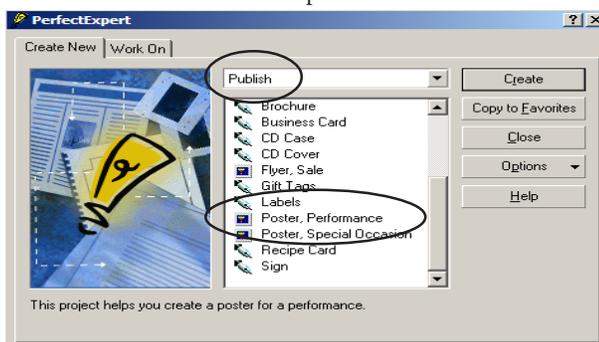
The following questions might be asked during this activity:

1. How does the ad make you feel? Why?
2. What is one good point about the ad?
3. What is one bad point about the ad?
4. Does this ad deter people from smoking? How?
5. What age group do you think is being targeted?

Following this discussion, students will design a poster using a WordPerfect template.

In the following example, Word Perfect 9 will be used to create a poster with a theme.

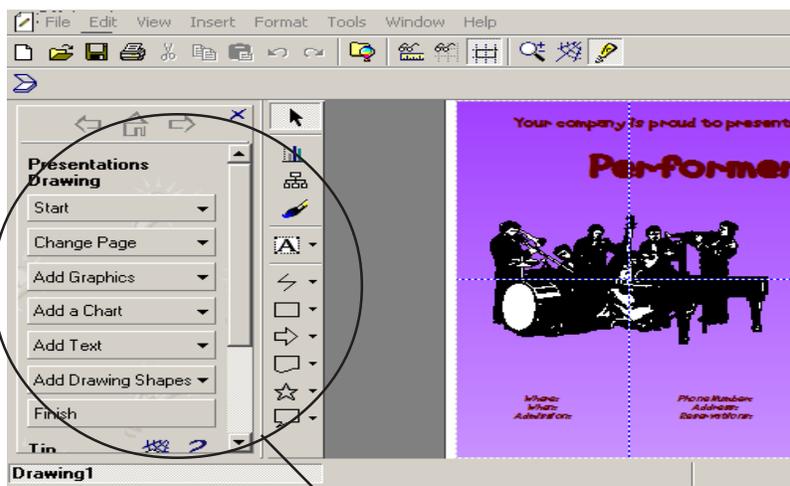
Open Word Perfect 9, click on "File" and in the dropdown menu, "New from Project". In the "Perfect Expert" window, click on the top dropdown menu button and click on "Publish". Scroll down and you will see choices for "Poster". Have the students choose a template.



Lesson Plan: Do anti-smoking ads really work?

Instructions

Once a template has been selected, click on “Create” and the following template will be made available.



Students can then use the various tools within the program and make changes to the template.

Encourage the students to use the “Help” menu. In this menu, there is a section called “Ask the PerfectExpert”. Students will ask their “How do I...” question in the search field.

The following website provides information on WordPerfect:

http://www.edu.pe.ca/journeyon/pro_d_pages/corel.htm

Graphics for students may come from a variety of sources. Currently, there is a network drive (R:Drive) used for WordPerfect graphics.

If a student wishes to obtain a graphic from a source such as the Internet, there may be copyright issues involved and permission has to be granted in order to use a particular graphic.

Images from the Internet may be copy/pasted, saved as a file or “captured” using the program Paintshop Pro. For more information on how to do a screen capture, visit the following site:

http://www.edu.pe.ca/journeyon/pro_d_pages/using_psp/using_psp6/index.htm

Assessment of this activity could be as a product. In this way, students could be assessed on understanding, originality, organizational skill, and success in meeting the criteria for the poster (i.e: how many graphics, title, how much information given, is the message clear, etc).

Lesson Plan: Virtual Circuits

Outcomes

Technology:(Awareness) B1.9, B1.13
E2.5, C2.1

(Guided) B1.6, B5.2
(Independent) E2.8

Science: 303-23, 207-2, 303-24

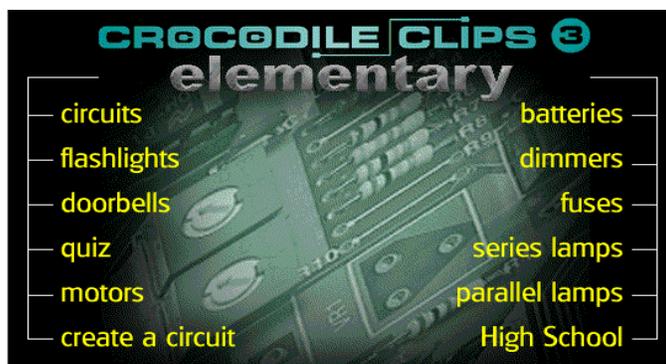
Activity

This activity involves the use of a software program available in all elementary schools that will enable the students to create various electrical circuits to support the grade 6 Science unit “Electricity”. By using this as a planning/testing tool, students will better understand how to construct electrical circuits using real materials.

Resources

Crocodile Clips software

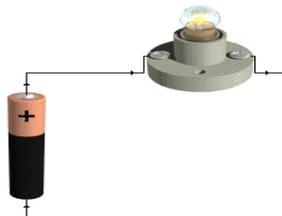
Instructions



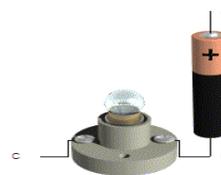
When you open the program, the above graphic appears. By clicking on one of the terms, a completed example will appear. For example, when you click on the word “circuits”, the following graphic will appear. The same window will open when you click on the “Home” icon.

Electricity is a very useful type of energy. The beauty of electricity is that it can be generated in one place and used in another place. For example, the lamps in your house could be lit by electricity generated by solar panels on the top of a hill.
Electric current can flow along metal wires. This is because metal conducts electric current. Luckily, lots of materials, like air and most plastics don't conduct electric current. These materials are called insulators.
Electric current can only move around circuits (loops) like the chain moves on a bicycle. This is why batteries have two terminals. Current flows out of the positive terminal and into the negative terminal. If there is a break in the circuit then current cannot flow.

1. Is electric current flowing in this circuit?



2. Why is the lamp off?



3. If A is connected to B, does the lamp turn on?

4. What would happen if you connected A to C?

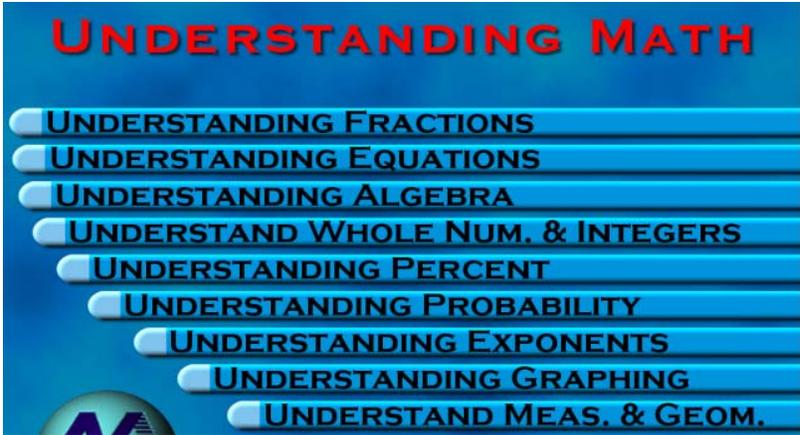
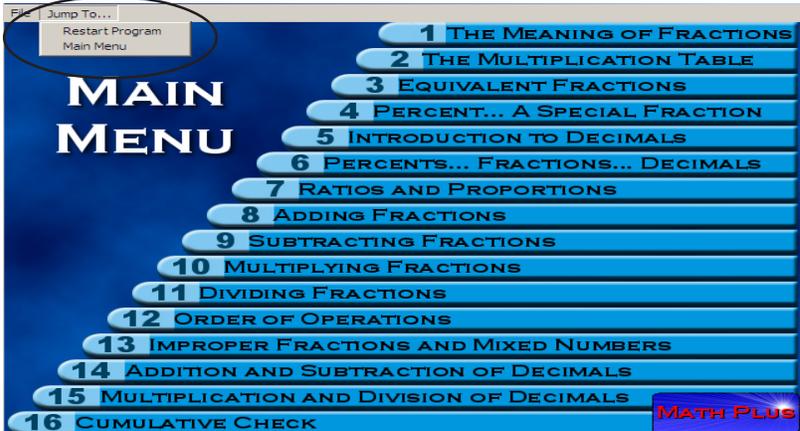
5. If A is connected to C, does current flow clockwise?

Within this graphic, there are questions that the student can answer as part of an assessment.

Lesson Plan: Biography of a Canadian Astronaut

Outcomes	Activity
<p>Technology: (Awareness) D2.1, B7.9, B7.10 (Guided) A2.1, B2.1, E2.6, A3.1, B3.1, E3.1, A3.2, A3.3, B7.5, B7.6</p> <p>Science: 107-12</p> <p>Language Arts: 9.1, 10.1, 10.2, 10.3</p>	<p>As part of the the grade 6 Science unit on Space, students will research information on Canadian Astronauts. Curriculum links can also be made to the language arts anthology “Space, Stars and Quasars”.</p> <p style="text-align: center;">Resources</p> <p>Internet Word Processor such as Appleworks, Word Perfect EBSCO Research Database</p> <p style="text-align: center;">Instructions</p> <p>Using a seach engine such as Google (www.google.ca), students may enter into the search field the terms “Canadian Space Agency”. By using these specific search terms, they may find websites such as: http://www.space.gc.ca/asc/eng/default.asp</p> <p>Here the students will be able to find information about Canadian Astronauts such as:</p> <p>Marc Garneau Roberta Bondar Steve MacLean Chris Hadfield Robert Thirsk Bjarni Tryggvason Dave Williams Julie Payette</p> <p>Questions concerning their experience, why they wanted to become an astronaut, training, use of Canadian technologies used, meeting basic human needs in space, effects of weighlessness, etc, could be incorporated into the report.</p> <p>When searching for and using information, students should cite the sources and be aware of copyright laws and plagiarism.</p> <p>When entering information into the word processor, teachers may want students to properly format their documents (ie: line spacing, indents, page center, date, etc) and to use proper keyboarding techniques.</p> <p>Proper posture and other ergonomics should be demonstrated.</p> <p>Assessment could take the form of an “I learned” statement which could either be included as part of the written report, or as a separate piece of text. The final product may be assessed by using a rubric.</p> <p>EBSCO is a tool purchased by the Department of Education for schools.</p> <p>In the address window of your browser, type the following: http://search.ebscohost.com login: peiebsco password: level1</p> <p>Kids Search contains information that would be appropriate for students at the grade 6 level.</p>

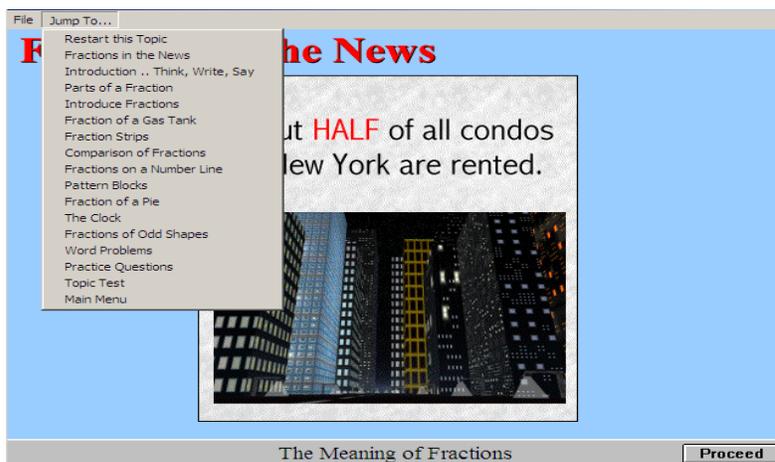
Lesson Plan: Understanding Math Plus

Outcomes	Activity
<p>Technology: (Guided) A1.1, B1.8, B1.12 (Independent) B1.2</p> <p>Math: For a complete listing of correlations to the grade 6 math curriculum, see page 116.</p>	<p>The purpose of this activity is to provide an overview of the software “Understanding Math Plus” which is available in all elementary schools. This software closely matches the math outcomes for grade 6.</p> <p style="text-align: center;">Resources</p> <p>Understanding Math Plus software</p> <p style="text-align: center;">Instructions</p> <p>Understanding Math Plus is actually a bundle of 9 separate math programs. When you click on the icon, you will get the following screen.</p>  <p>By clicking on one of the sections, a specific window focussing on the chosen area. In this case, Understanding Fractions was chosen. There is an introductory page that teachers may go through with their students the first time. By clicking on the “Jump to” drop-down menu, at the top of the page and clicking “Main Menu”, the following page can be viewed.</p> 

Lesson Plan: Understanding Math Plus

Instructions

If you choose topic 1 “The Meaning of Fractions” for example, there are a number of activities including a practice and a topic test. By clicking on the “Jump To “ menu again, you will be able to access all the activities that go with the topic.



The student must interact with the program in order to proceed. Students must also answer every question. Hints are provided. When a student is ready to take a “Topic Test”, they will be asked if they have ever taken a test in “Understanding Fractions” before. The first time, they will answer “NO” and be required to provide a login name and password. Make sure that the student remembers the login/password as they will need it for every topic test within the Understanding Fractions program. Once you provide the required login/password, an information window concerning the test will appear.

Topic Test Information

- You will be given 10 questions.
- Use paper and pencil to work through each question completely.
- Key in your answer and then press <Enter> or <Return>.
- You can leave the "Topic Test" section at any time by selecting another section from the "Jump To..." menu.
- Your place will be [saved if you exit or restart the section](#).
- If you select "Start Test" from the pulldown menu during a test, [your current test will be lost](#).
- Always quit the program by selecting [Quit](#) from the File menu. Otherwise, [your current test will be lost!](#)

Lesson Plan: Understanding Math Plus

Instructions

The results from the test are tracked using the Teacher Tracking Utility. The test results may also be printed using the network printer and stored in a student file. The test may be used by the teacher as formative or as part of summative assessment.

For more information on the Teacher Tracking Utility, please refer to the “Understanding Math Plus” manual that is available in all elementary schools. Also more information is included on the company website at:

<http://www.neufeldmath.com>

The correlations between the program and the grade 6 math curriculum can be found also in this document on page 116.

Lesson Plan: Diversity of Life: Adaptations

Outcomes

Technology: (Guided) E2.6, A5.1, B5.2, B7.5, B7.6, B7.8

Science: 204-1, 301-15

Language Arts: 9.1, 10.3

Activity

Using the grade 6 science unit, "Adaptations and Natural Selection", students will research and report on the relationship between the structure and features of an organism and its environment.

Resources

Internet

Word processor such as Appleworks, Word Perfect, Ultimate Writing Creativity Center

Instructions

Choose a common animal.

Select a specific characteristic of that animal (features for movement, obtaining food, protecting itself), and make it into a question to research: e.g. Why does a rabbit hop?

Discuss and hypothesize why that animal has that particular characteristic.

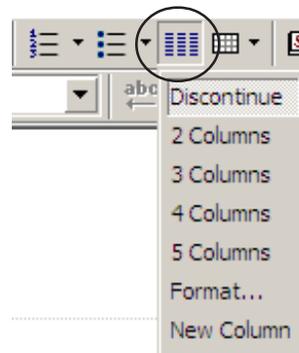
Use an Internet search engine such as YahooKids (<http://kids.yahoo.com>) to discover more about the animal, and why the animal has adapted that way.

Search for other closely related animals in other parts of the world, and theorize why they have adapted in different ways. As always, when obtaining information from the Internet, make sure to give credit to the source of the information.

Once you have gathered your information, create a two or three columned newsletter with text and graphics, using Ultimate Writing and Creativity Center, AppleWorks or WordPerfect. Write a few short articles from different perspectives. For example, it could be a letter to the editor of a newspaper, a scientist with specialty in that animal, a student doing research, etc. Use some of the graphics provided in the programs, or create your own.

Following are graphics from each of the 3 programs mentioned on how to format the document for a newsletter.

Word Perfect

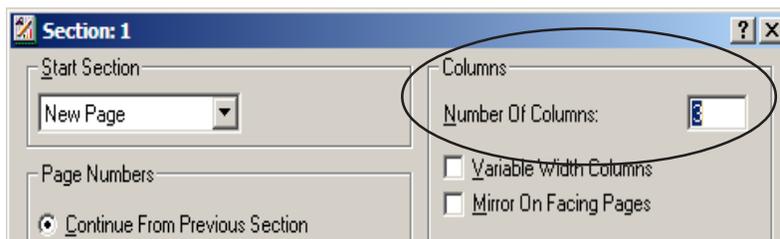


Lesson Plan: Diversity of Life: Adaptations

Instructions

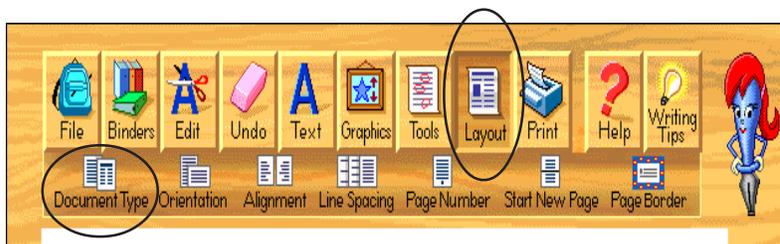
Appleworks

Click on “Format” in the drop-down menu and select “Section”. There will be a space to enter the number of columns for the page.



Ultimate Writing Creativity Center

Click on “Layout” and “Document Type”. This will give you a drop-down menu with the type of document format needed.



Assessment for this lesson could take the form of a KWL. Students make their hypothesis on the why an animal has a particular structure (Knowledge). Research done should find what they need to know (Wish to know). Final product can be used to assess what learning has taken place (Learned).

For more information on the software, please visit the following site:
<http://www.edu.pe.ca/journeyon/pd.htm>

Lesson Plan: Personal Safety on the “Net”

Outcomes

Technology:(Awareness) C2.1, A11.2, B11.2, B11.3
(Guided) E2.4, E2.7, C3.1, A4.1, B4.1, B4.2, B11.6

Health: (draft) W-6.9, W-6.10, R-6.6

Activity

Though the PEI school system has filtering safeguards that prevent access to inappropriate content, students are now using the Internet in a variety of environments outside of school. While there may be sufficient adult supervision, it is important that students understand how to be responsible and to stay safe while using the Internet.

This activity is designed to make students aware that the Internet has great positive potential. It also is designed to help students be safe while online.

Resources

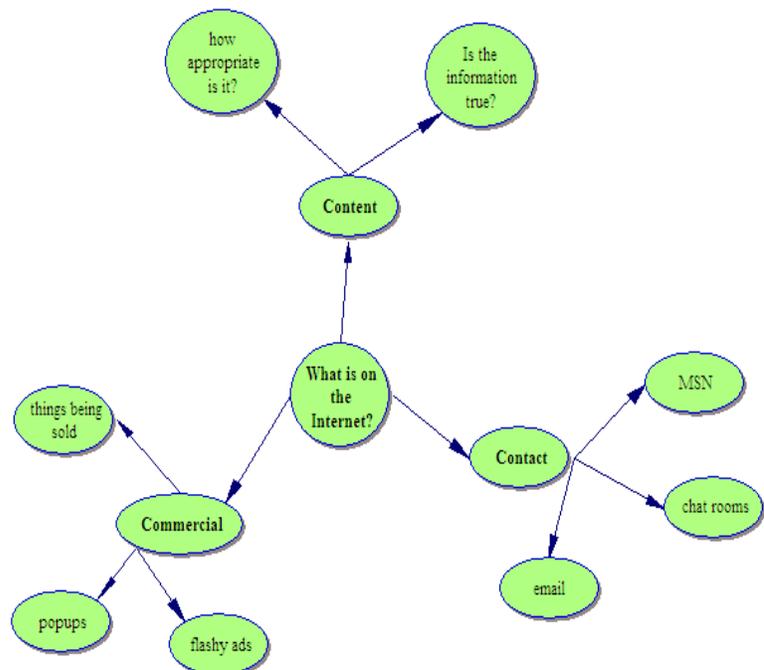
Inspiration 7.5
Web editor such as Front Page Express

Instructions

Using Inspiration 7.5, have the students brainstorm the type of content that would be on the Internet. Discussion could be guided to the following areas.
Content: What information is actually being communicated on a particular website?

Contact: What are the sites where students can actually communicate with other people?

Commercial: How much advertising is on a page, and does it contain pop-ups, viruses?



Lesson Plan: Personal Safety on the “Net”

Students should understand the meaning of private information. Questions could be asked such as: “What are some examples of private information?” Answers may range from full name, home address, name of school, school address, E-mail address, phone number, passwords, your parent's place of work, photos of yourself, etc.

Discuss the importance of not giving out private information without permission of a parent or guardian.

Discuss what information is safe to place on a webpage. Some answers may include free graphics from the Internet, links to interesting websites, etc.

A good number of students have personal webpages. There are sites such as myspace.com and facebook.com that allow open discussion. Sites such as piczo.com have easy to use templates that the students can fill with information. Using Front Page Express, students will create a dummy “personal web page”. Students will place information on this page. Graphics may also be embedded into the web page.

After the student has completed the page, it will be presented to the rest of the class.

Peer assessment will be used to determine whether or not the student has provided any personal information or clues to their identity on the web page. It should be noted that the files created by the students are not intended to be published on the Internet and should be deleted or the content removed.

School web pages are hosted on the school server and paid for by the Department of Education. Hosting sites such as piczo.com are paid for by selling advertising to companies.

There are guidelines governing the content of school web pages but the guidelines for public hosting sites are not always clear.

For information on guidelines for school webpages, visit the following site:
http://www.edu.pe.ca/journeyon/tech_support_pages/GuidelinesforSchoolWebPages.html

Lesson Plan: How Times have changed!

Outcomes

Technology: (Awareness) B6.2
(Guided) A6.1, A6.4, B6.1, B6.4

Social Studies:(draft) 6.4.1, 6.4.4

Activity

This activity gives the students a visual overview of how the economy of Prince Edward Island has changed over time. Students will use data provided to construct a circle graph to represent the different sectors of the economy on PEI and how each sector has contributed to the economic growth of the province over time.

Resources

Appleworks Spreadsheet

Instructions

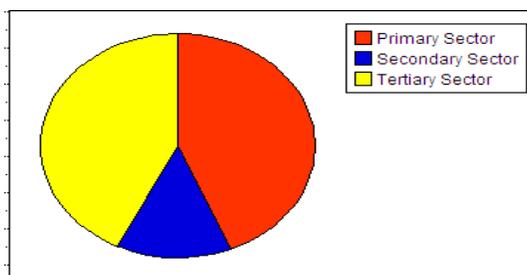
Using the data for each of the 3 economic sectors, students will create circle graphs for each of the following years: 1951, 1971, 1991.

Open up Appleworks Spreadsheet to create the following spreadsheet file.

	A	B	C
1	Primary Sector	Secondary Sector	Tertiary Sector
2	43.7	13.6	42.6
3			

The above figures are taken from the 1951 data on the PEI economy. Once the data has been entered and the file saved ("Save As" the first time), highlight the data by holding down your mouse button and moving the mouse over the data.

At the top menu bar, click on the "Options" button and in the drop down menu, click on "Make Chart". Here you will be given a number of chart options, including "Pie" (circle) graph. When you click on "Pie", this is what you will get.



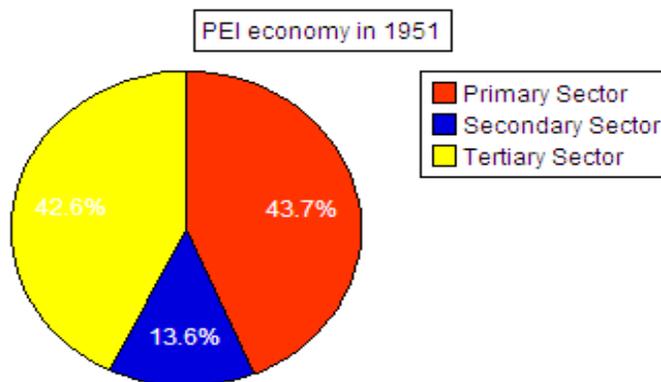
You will notice that as yet, there are no labels other than the sectors identified by different colors.

To place the percentage data on each of the colors, "right" click on this graphic and select "chart options". Click on "Series" to bring up the following window.

Lesson Plan: How Times have changed!



To label the data, click on the “Label data” box and select “% in slice”. This will give you the percentages in each of the circle graph components.

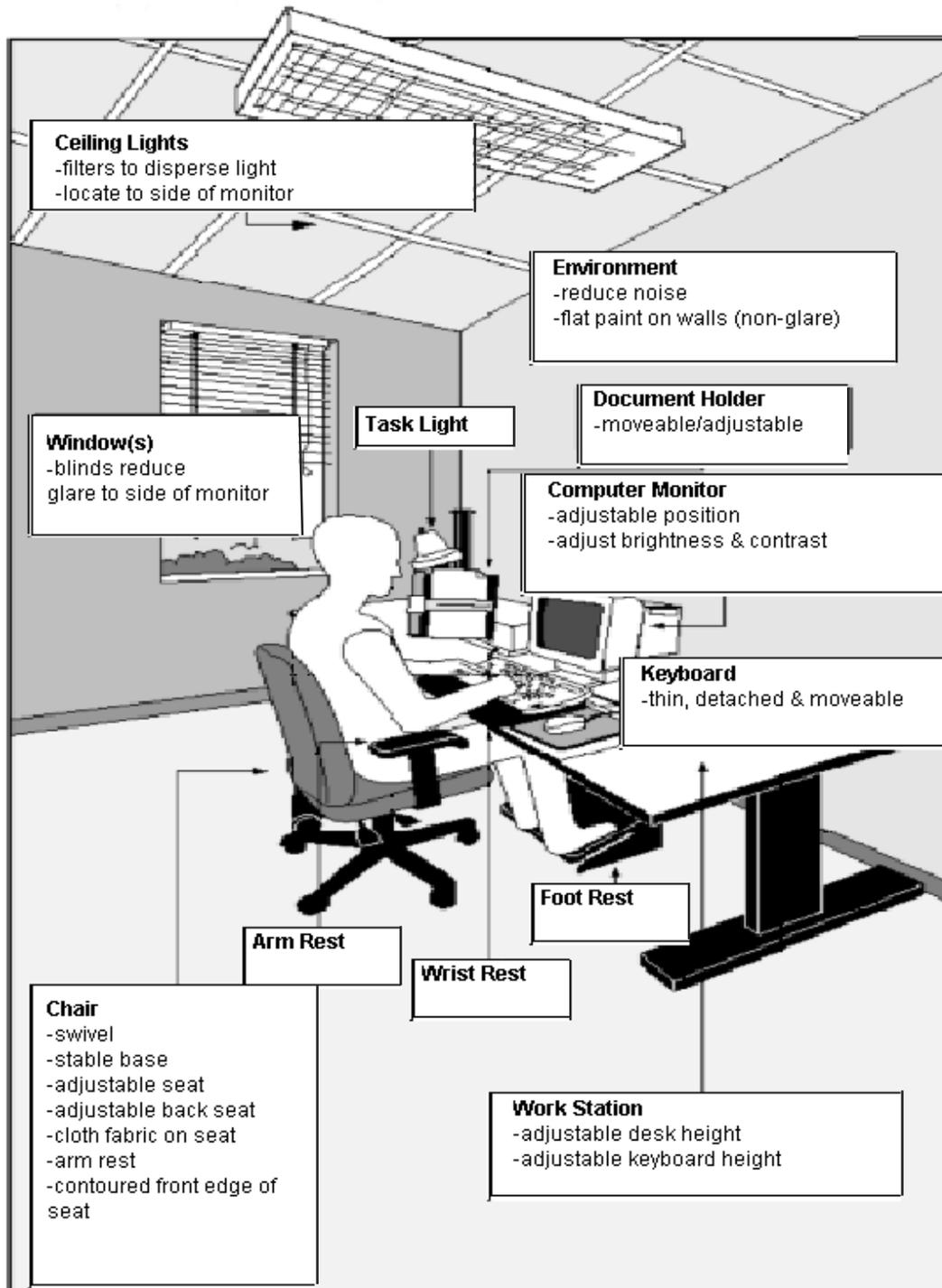


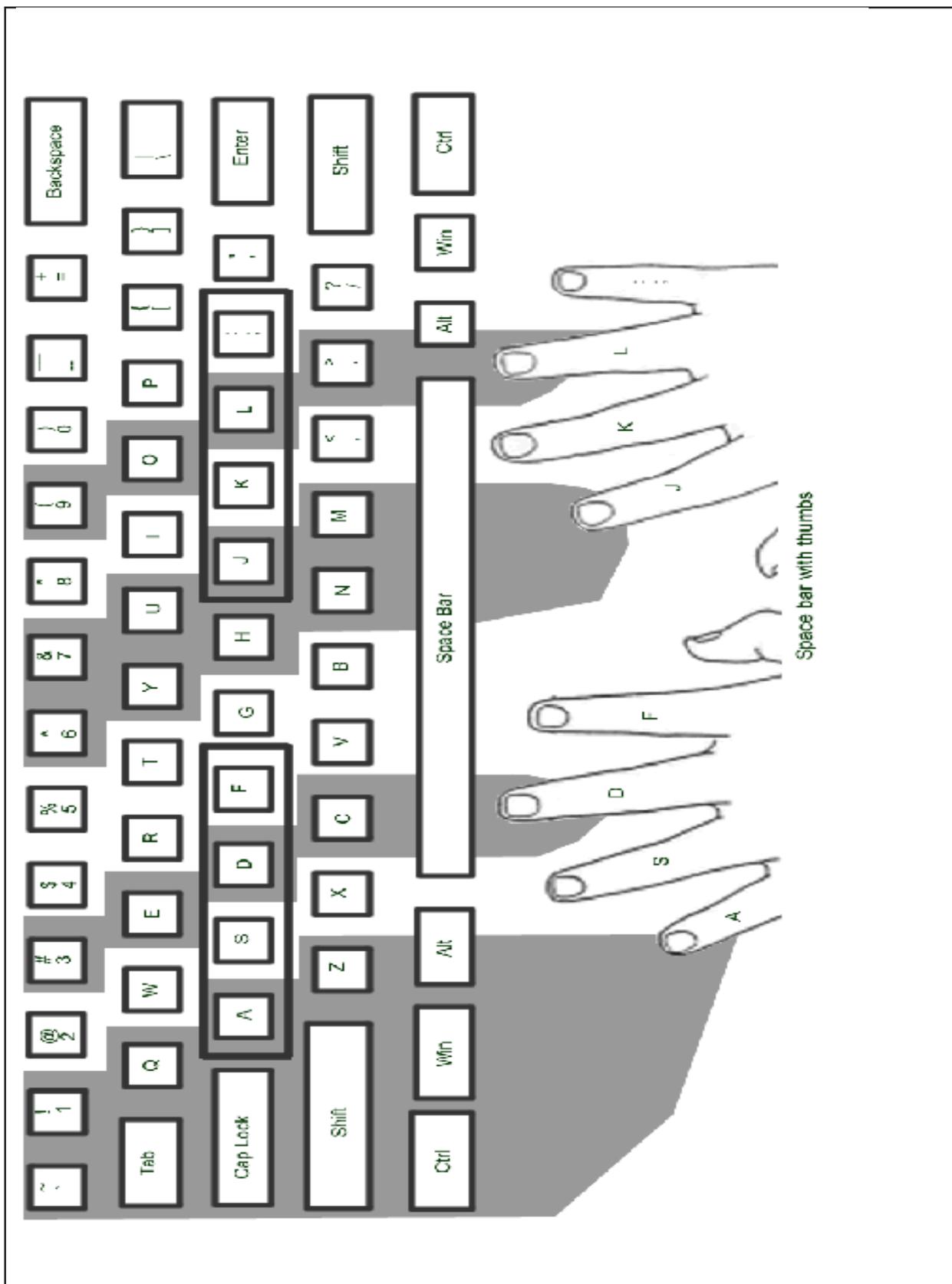
A title can be given to the graph by clicking on “Labels” and in the title field, type a title for the graph.

For further information on how to create charts using Appleworks, visit the following site: http://www.edu.pe.ca/journeyon/pro_d_pages/appleworks.htm
As a possible assessment tool, have the students create circle graphs for each of the following years: 1951, 1971, 1991. The students can copy/paste these graphs into either an Appleworks document or a WordPerfect document. By having a visual representation of the data, the following questions may be asked.

1. What sector has experienced the greatest decrease?
2. What sector has experienced the greatest increase?
3. From the data, can you predict what sector will continue to grow and what sector will continue to shrink?
4. What might some possible reasons be for this trend?

The Ergonomic Workstation





WHAT CAN I DO TO ADAPT THE COMPUTER TO MEET THE NEEDS OF ALL STUDENTS?

Listed below are some quick, easy, no cost strategies that teachers can use to make the computer more accessible to students of all needs. Most of the suggestions below are options that are available through Windows, the computer's operating system. Teachers may request the assistance of the School Technical Contact or your school's technician to implement these strategies. The following strategies have been divided into four areas for clarification; however, they may apply to many situations.

Most of the strategies listed below are available on Windows XP, while only some of them are available on Windows 98. In Windows XP, the strategies can be activated through the Accessibility Wizard (Start-Programs-Accessories-Accessibility-Accessibility Wizard). In Windows 98, they can be activated through the Control Panel: the Mouse, Keyboard and Display icons

It is important to note that if any of the following strategies are implemented on a particular computer, these settings will be enabled for all users of that computer.

Visual

- Windows Magnifier - Windows XP
- Increase size of monitor (17 inch or larger)
- Lower the screen resolution (ex. 800 x 600) - Windows XP and 98
- Enlarge icons - Windows XP and 98
- Enlarge the mouse, change its color, and assign mouse pointer trails - Windows XP and 98
- Change the speed of the mouse pointer - Windows XP and 98
- Slow down the cursor blink rate - Windows XP and 98
- Customize the size of font on desktop and menu bars - Windows XP
- Maximize the window to fill the screen - Windows XP and 98
- Customize the colour of screen, font and window title bars - Windows XP and 98
- Increase the size of the scroll bars and window borders - Windows XP

Hearing

- Display captions for speech and sounds - Windows XP
- Play sounds when you press CAPS lock, NUM lock or SCROLL lock. - Windows XP
- Make sure all students are facing you when giving instructions in the computer lab
- Use of personal headphones

Mobility

- Changing the response rate of the keyboard so that letters will not be repeated if the student holds down too long on a key - Windows XP and 98
- Ensure that the mouse is on the appropriate side of the computer depending on the dominant hand of the student. For left handed users, change the left and right mouse click buttons so that it matches with the students left hand. - Windows XP and 98
- On Screen keyboard - Windows XP
- Use sticky keys - this enables a user to press key combinations like CTRL+ALT+DEL that usually have to be held down at the same time to press them one keystroke at a time. - Windows XP
- Use keystrokes to perform mouse functions ie. use the numeric keypad to move the mouse up and down and to the left and right. - Windows XP

Other

- Develop peer support programs or buddy systems that involve classmates helping classmates, students with disabilities can play role of helper as well.
- Colour code the keyboard using small dot stickers. For example, right of centre is green, left of centre is red. Small stickers can be placed on the back of the student's hand, corresponding to the side of the keyboard.
- Use a slant board to position the keyboard (1" or 2" binders can be used as slant boards)
- Seat the student facing the computer monitor with keyboard and computer monitor at the appropriate height.
- Identify specific function keys such as Spacebar, Enter, Backspace, Tab and Shift, etc. with coloured dot stickers to highlight their position on the keyboard.
- Some software such as Ultimate Writing and Creativity Center, Inspiration 7.5, Understanding Numeration, ATutor have accessibility features. Check the help section of these programs to determine how to access available.

Glossary

Abbycat: PEI Public library database system

Absolute: a cell reference that remains constant in a formula. Dollar signs are used to force the spreadsheet to keep the cell reference in a formula the same when it is copied. (i.e. when the formula =A6/\$B\$6 is copied the numerator A6 will change to A7, A8, etc. while the denominator \$B\$6 will stay the same)

APA: abbreviation of American Psychological Association. The APA standard is used for quoting references for the sciences.

Applet: An application, written in Java, that can run inside a web page but is not limited by the functionality of HTML. Java applet and Java script differ that a Java applet needs to be downloaded. Java script is incorporated in a web page with HTML tags.

Application sharing: a program that is installed on the server computer which allow all computers on the network to have access to that software.

Assignment drop box: a mechanism for uploading electronic assignment files for an instructor using an online content management system such as WebCT or ATutor.

Attachment: file that is attached to an email

Auto fill data: spreadsheet feature that will complete a series of entries such as the “days of the week” or “months of the year”. (i.e. enter January, February and select the corresponding cells with the mouse and select “auto fill”. The remaining 10 months will be automatically entered)

Automated text: database input form feature that will automatically fill a field with a predetermined value (i.e. current year, telephone area code, etc.)

Background: display behind graphics and text on a web page. A background can be a colour or a tiled graphic.

Bitmap: pixel (picture element) representation of a graphic. The image is made by small dots (pixels) of different colors.

Bookmark (Favorite): a saved link to a specific place on the Internet.

Boolean operators: logic system that returns “true or false”, “yes or no”, “AND”, “OR”, “NOT”. These terms are used to set parameters for searching.

Browser: a program that accesses and displays files and other data available on the Internet and other networks. (i.e. Internet Explorer, Netscape)

Bullets: a symbol appearing before items in a list.

Button bar: a bar of graphical buttons found in a program that contain “short cuts” for commonly used tasks.

Cascading style sheet (CSS): a feature of HTML that allows users to create style templates (sheets) that specifies how different text elements (paragraphs, headings, hyperlinks, etc.) appear throughout a website.

Cell address: coordinate of a cell. It is represented by a letter and a number such as A2

Cell: the area in a spreadsheet where rows and columns intersect. Data and formulas are placed in cells. Cells are identified by the alphabetical column and numeric row i.e. A1

Clone brush: a graphics tool used to copy all or part of an image.

CMYK: a subtractive color model used in color printing. This color model is based on mixing pigments of cyan, magenta, yellow and black in order to make other colors.

CODEC: abbreviation for COmpression/DECompression. Software or hardware that compresses and decompresses audio and video data streams into smaller sizes while maintaining the quality. (.wmv, .ra, SVCD, MPEG, mp3, etc.)

Cold boot: powering off the computer completely and restarting it.

Column: vertical section of a spreadsheet, identified by a letter

Commercial ware: commercial software which requires purchase and registration.

Compatibility: whether or not hardware or software will work on a computer.

Compression: process of encoding data, video, or audio in order to reduce its size (.zip, .jpg).

Connection line type: how a computer is linked to a network (i.e. T3, modem, DSL, etc.)

Connection speed: the speed of information transfer among networked devices.

Cursor (Pointer): the symbol used to represent the movement of the mouse. (i.e. arrow)

Data entry bar: space in the spreadsheet to enter the cell data or formulas.

Database report: data from fields specified in a search query sorted into a particular order. Calculations and formatting may be applied to the reports generated.

Database: collection of structured, searchable electronic data (i.e. search engines are data bases)

Decompression: process of decoding or reading encoded data.

Desktop publishing: combination of text, images and graphics to produce publications such as newsletters, posters and brochures

Display format: the way the files and folders are being displayed in the windows (i.e. thumbnails, icons, details, etc.)

Distribution list: a list of email addresses that are grouped together so that one email message may be sent to all members of the group. (i.e. all students in a class, all teachers on a particular committee)

Download / Upload: refers to the transfer of information between computers. The person/computer sending the information refers to the transfer as an upload, while the person/computer receiving the information refers to it as a download.

Drive: name that refer to a storage location such as C:, G:, or A:

Dynex: PEI (French) school library database system

Effect: graphical manipulation that applies special effects to objects (i.e. chrome, neon).

Embed object: objects (audio, video, animation, etc.) that load with the HTML tags when the page is visited. Those items will be downloaded and run automatically

Ergonomic: workplace designed for maximum comfort, efficiency, safety, and ease of use.

Error checking routine: features in a database input form that checks to see that entered data corresponds to some pre-defined criteria (i.e. ticket number must fall within the range of 1-500, and no two records may have the same ticket number)

Export: to transfer information to another format for use in a different program.

Field types: identifies the type of information that is to be entered into a field in a database (i.e. date, numeric, text)

Fields: different categories in a database (i.e. first name, middle initial, last name, street)

File extension: alphanumeric characters located after the period at the end of a filename. This identifies the type of software that can open the file. (i.e. .mp3, .wpd, .gif, .html, etc.)

File management: process of organizing files into folders and sub-folders and selecting storage medium (i.e. hard disk, floppy disk, CD)

File properties: detailed information on the file. (i.e. size, date, extension)

File size: storage space taken by a file in the computer system (i.e. kilobytes - kb, megabytes - mb, gigabytes - gb)

Filter (graphic): graphical manipulation that applies special effects to images (i.e. blur, sharpen).

Filters: search criteria that allow particular emails to be located. Filters may be set with “rules” that provide directions on tasks to perform with selected emails.

Fixed/locked titles: feature in spreadsheet program to keep certain cells showing (i.e. headings) while scrolling

Flash: developed by Macromedia, Flash is a software used to create web content that interacts with the users by providing animations, audio, games, etc.

Flat database: is a single database table structure (i.e. Appleworks, MS-Works) Searches can be performed within this table but it is not capable of organizing complex applications.

Folder (Directory): an electronic storage area that can contain a group of files and/or other directories.

Font: the style of text characters. (Times New Roman, Arial, Garamond, etc.)

Footer: text placed automatically at the bottom of each page in a document

Frame: a webpage that has separate divisions (windows) within the web browser. The content for each frame area comes from a different .html file.

Freeware: software distributed by the creator free of charge under certain conditions.

Functions: pre-defined mathematical rules that are available in spreadsheet programs i.e. mean, round, standard deviation, exponents, payment amount, etc.

Graphics in layers: objects placed over other objects to create one image. This allows for easier editing and manipulation.

Group file sharing: a specific network folder that a workgroup member can share

Grouping: creating one single object made up of several other objects. This allows for resizing the object as a whole.

Hardware: all physical parts of a computer (i.e. monitor, mouse, keyboard, etc.).

Header: text placed automatically at the top of each page in a document

Hexadecimal: a numbering system with base of 16 includes only the digits 0 through 9 and the letters A, B, C, D, E, and F. Used to identify large numbers accurately i.e. identify colors, network addresses.

Hosting service: service that companies provide to store data on their server

HTML tags: Hypertext Markup Language tags are instructions within brackets < > that tell the web browser how to display the page information.

Image map: an alternative navigational structure whereby an image on a webpage has “programmed coordinates” that allow the user to navigate the site intuitively, using the mouse.

Import: to bring in external information

Insertion point: the insertion point is where the next character typed from the keyboard will appear. (i.e. “I beam”)

Interactive syllabus: an electronic course outline

Java Script: a scripting language developed by Netscape to enhance the capability of HTML language

Justification: adjustment of text to ensure that margins will align throughout the document (i.e. left, center, right)

Layer: visualized as electronic “transparencies” which allow users to display and manipulate information separately.

Link (Hyperlink): a clickable link to another file (i.e. web page).

Lock cell: locking a cell will prevent any changes on its content. It doesn't hide the content of the cell.

Logical operators: used to compare variables such as greater (>) greater or equal (>=), equal (=), less or equal (<=) and less (<).

Macro: a group of repeated commands that are recorded and saved for later use.

Mail merge: a word processing feature that allows a user to create a “data records” database to record information about a number of people, and a form letter template. Based upon a search criteria, names, addresses and other recorded data are combined with fields found in the form letter. Completed forms may be displayed on the screen or sent directly to a printer.

Menu bar: a horizontal bar at the top of a window, below the title bar, that contains drop-down menus.

Microcat: PEI (English) school library database system

MLA: abbreviation of Modern Language Association. The MLA standard is used for quoting references for the humanities.

Multimedia: the use of several media to convey information (text, audio, graphics, animation, video).

Multiple logins: simultaneously logging into multiple computers on the same network using the same username.

Network: a communication system connecting two or more computers.

Notebook: another name for an individual spreadsheet.

Object alignment: positioning of an object with respect to other objects.

Panorama: a series of picture “stitched” together using software to create a picture wider than what the camera is normally capable of capturing. Some panorama can offer user a 360 degree view.

Plug-in: an auxiliary program that works within a browser to enhance its capability. The plug-in can be a third party product. (adobe reader for .pdf, Real Audio, Shockwave, etc.)

Pop-up ads: a form of online advertising that open a new window automatically to display advertisements.

Principles of design: five universally recognized principles are contrast, unity, pattern, movement, and rhythm. Used in combination these principles create an esthetically pleasing product.

Print queues: set of printing tasks waiting to be processed.

Publishing etiquette: acceptable guidelines for publishing. (i.e. non-biased, inclusive language).

Record: all fields relating to one “object” in a database (i.e. all information regarding one student)

Relational database: is the creation of multiple tables linked to each other through a common “key” such as a customer number. (i.e. a travel agency may have customer contact information in one table, airline reservations in a second, hotel and car reservations in a third. If any piece of information changes only one table needs to be updated.)

Relative: a cell reference that will automatically update itself in a formula when it is copied. (i.e. a formula =A6/B6 will update itself to =A7/B7, =A8/B8, etc. as it is copied downward in a column)

Rename: change the name of the file or folder to another name.

RGB: a color model that utilizes the additive model in which red, green, and blue light are combined in various ways to create other colors (i.e. pixels on a computer monitor). Colours created on the computer monitor sometimes may not be able to be reproduced when printed.

Rollover (mouse over): a “change of state” when the mouse is positioned above an object.(i.e. colour changes, cursor changes, image changes)

Row: horizontal section of a spreadsheet, identified by a number

Rule: a task to perform on emails that meet a particular criteria. (i.e. send a return message for all incoming emails, such as “on vacation until ..”, delete message from particular sources, or automatically place mail in a particular folder)

Save as: same as “Save” but allows user to save a copy of current file under a new name or location.

Save: permanently record data to a storage medium such as a floppy disk or hard disk.

Screen capture: saving a portion of the current screen as an image file to be inserted into a document. Paintshop Pro includes a screen capture utility.

Search engine: a program designed to help find information on the Internet. (i.e. Google, Ask Jeeves, Yahoooligans)

Server: the central computer in a network. (i.e. contains shared data, programs, etc.)

Shareware: trial version of any commercial software.(i.e 30 days) Shareware is also known as demoware, trialware and many other names.

Signature: text added automatically at the end of an email (i.e. name, position, return address, phone/fax number, email address)

Software: program or application that runs on a computer.

SPAM: acronym of the words: Stupid Pointless Annoying Messages. These messages are often advertising emails sent out massively on the internet.

Spreadsheet: a grid which helps you organize data in rows and columns. Calculations may be performed by inserting formulas. Charts or graphs may be generated from the data.

Spyware: computer software that gathers and reports information about the computer usage without the user’s knowledge or consent.

Streaming video and audio: refers to a technique of transferring media over the Internet to the user’s computer so that it is available without having to download the whole file. The media will begin to play once a predetermined amount of data is transferred to the computer “buffer”

Tab rulers: guides found in word processors allowing the user to graphically set and delete tab indents

Template (Master page): a model page that provides a basic structure for adding content

Text art: tool found in Word Perfect that allows the user to create text in 2D and 3D formats in a variety of shapes

Text wrap: word processing feature that automatically places the text on the next line

Touch keyboarding: the ability to type without looking at the keyboard.

Un-grouping: separating objects that were previously grouped.

Unlock cell: this allows modification be to performed on cells that were previously “locked”

Vector: mathematical representation of a graphic. The image is made from mathematical equations that represent the curves, lines, area, color, etc. This form of representation allows for small file sizes while maintaining detail when increasing picture size.

Virtual reality: an artificial environment created with computer technology

Virus: a virus is a program or piece of code that causes an unexpected, usually negative, event.

W3C accessibility guidelines: World Wide Web Consortium organization that provides standards for web page creation. These include accessibility issues (challenged users, slow line speeds, older processing equipment) and equipment compatibility.

Warm boot: restarting the computer using reset button, Ctrl+Alt+Del, etc.

Watermark: a graphic or text appearing in the background of a page (i.e. the word “Draft” or a graphic of a soldier in a Remembrance Day poem)

Web Server: a computer that stores data (i.e.: web sites) for the world wide web

Whiteboard: a whiteboard is a shared electronic workspace. Each participant can add text, make drawings or paste pictures on the whiteboard. Other participants can immediately see the result on their workstation.

Wireless connection: connection to another device without physically connecting a wire.

WYSIWYG: Acronym for “What You See Is What You Get”. WYSIWYG is used to describe applications that let you see what documents will look like

Understanding Math Plus Grade 6 Math Correlations

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GCO A: Students will demonstrate number sense and apply number theory concepts.

<p>A1: represent large numbers in a variety of forms</p>	<p>Understanding Whole Numbers and Integers Topic 1: The Meaning of Whole Numbers CAN/US Millions Examples Examples 1,2,3,4 The Number Line Billions Example 1 Comparing Large Numbers Examples 1,2,3,4 Ordering Large Numbers Examples 1,2,3,4</p>
<p>A2: represent fractions and decimals</p>	<p>Understanding Fractions Topic 5: Introduction to Decimals Introduction to Decimals Tenths and Decimals Examples 1,2,3,4 Ones and Tenths Examples 1,2,3,4 Decimals on a Number Line Examples 1,2,3,4,5</p>
<p>A3: write and interpret ratios, comparing part-to-part and part-to-whole A4: demonstrate understanding of equivalent ratios A5: demonstrate an understanding of the concept of percent as a ratio</p>	<p>Understanding Percent Topic 4: Ratios and Proportions Ratios in the News What is a Ratio Examples 1. Fraction Strip 2. Balls 3. Students 4. Gears Writing Ratios Concept Examples 1,2,3,4</p>
<p>A6: demonstrate an understanding of the meaning of a negative integer</p>	<p>Understanding Whole Numbers and Integers Topic 4: The Meaning of Integers Integers Around Us Temperature Helicopter Submarine Elevator The Integer Line</p>

Understanding Math Plus Grade 6 Math Correlations	
A7: read and write whole numbers in a variety of forms	Understanding Whole Numbers and Integers Topic 1: The Meaning of Whole Numbers CAN/US Represent Numbers in Many Ways Examples 1, 2, 3, 4, 5
A8: demonstrate an understanding of the place-value system	Understanding Whole Numbers and Integers Topic 1: The Meaning of Whole Numbers CAN/US Place Value to 999 999 Examples Examples 1,2,3,4,5 The Number Line Examples 1, 2
A9: relate fractional and decimal forms of numbers	Understanding Fractions Topic 5: Introduction to Decimals Introduction to Decimals Tenths and Decimals Examples 1,2,3,4 Ones and Tenths Examples 1,2,3,4
A10: determine factors and common factors	Understanding Fractions Topic 3: Equivalent Fractions Greatest Common Factor 12 and 18 30 and 40 70 and 42
A11: distinguish between prime and composite numbers	Understanding Algebra Topic 3: Patterns, Patterns, Patterns Prime and Composite Prime Numbers Composite Numbers
GCO B Students will demonstrate operation sense and apply operation principles and procedures in both numeric and algebraic situations.	
B1: compute products of whole numbers and decimals	Understanding Whole Numbers and Integers Topic 3: Multiplying and Dividing Whole Numbers Multiply by a Single Digit Multiplier Partial Products Partial Products - Examples 1,2,3 – with blocks Partial Products – Examples 4,5,6 – without blocks Partial Products – Questions 1,2,3 Distributive Method Distributive Method – Examples 1,2,3 Distributive Method – Questions 1,2,3 Lattice Method Lattice Method – Examples 1,2,3 Lattice Method – Questions 1,2,3

Understanding Math Plus Grade 6 Math Correlations

B1: compute products of whole numbers and decimals	Understanding Whole Numbers and Integers The Standard Method The Standard Method– Examples 1,2,3 The Standard Method– Questions 1,2,3
B2: model and calculate the products of two decimals B3: compute quotients of whole numbers and decimals	Understanding Whole Numbers and Integers Topic 3: Multiplying and Dividing Whole Numbers Divide by a Single Digit Divisor Fair Sharing Fair Sharing – Example 1 – with blocks Fair Sharing – Example 2 – without blocks Fair Sharing – Questions 1 through 6
B4: model and calculate the quotients of two decimals B5: add and subtract simple fractions using models	Understanding Fractions Topic 8: Adding Fractions Pattern Blocks Hexagon 1 Summary Fraction Strips Concepts 1,2 Percent Strips Examples 1,2 Decimal Strips Examples 1,2 The Clock Examples 1,2 Adding Fractions on a Number Line Examples 1, 2, 3 Topic 9: Subtracting Fractions Pattern Blocks Hexagon 1,2,3 The Clock Example 1,2,3 Fraction Strips Concepts 1,2 Percent Strips Examples 1,2 Decimal Strips Examples 1,2 Subtracting Fractions on a Number Line Examples 1, 2

Understanding Math Plus Grade 6 Math Correlations	
<p>B6:demonstrate an understanding of the function nature of input-output situations</p> <p>B7:solve and create relevant addition, subtraction, multiplication, and division problems involving whole numbers</p>	<p>Understanding Whole Numbers and Integers</p> <p>Topic 2: Adding and Subtracting Whole Numbers Whole Numbers Around Us</p> <p>Example 1 – Kilometers</p> <p>Example 2 – Quarters</p> <p>Example 3 – Baseball cards</p> <p>Example 4 –Dollars</p> <p>Example 5 – Pennies</p> <p>Example 6 – Water in a jug</p> <p>Topic 3: Multiplying and Dividing Whole Numbers Whole Numbers Around Us</p> <p>Example 1 – Orange</p> <p>Example 2 – Bananas</p> <p>Example 3 – Cycling</p> <p>Example 4 – Baseball Cards</p> <p>Example 5 – Cookies</p> <p>Example 6 – Running</p>
<p>B8:solve and create relevant addition, subtraction, multiplication, and division problems involving decimals</p>	<p>Understanding Fractions</p> <p>Topic 14: Addition and Subtraction of Decimals Decimals Around Us</p> <p>Length in Metric Units</p> <p>The Tools</p> <p>Examples 1,2,3,4,5</p> <p>Pencils</p> <p>Examples 1,2,3,4,5</p> <p>Money</p> <p>Examples 1,2,3,4,5</p>
<p>B9:estimate products and quotients involving whole numbers only, whole numbers and decimals, and decimals only</p> <p>B10:divide numbers by 0.1, 0.01, and 0.001 mentally</p> <p>B11:calculate sums and differences in relevant contexts by using the most appropriate method</p> <p>B12:calculate products and quotients in relevant contexts by using the most appropriate method</p>	<p>Understanding Whole Numbers and Integers</p> <p>Topic 2: Adding and Subtracting Whole Numbers Whole Numbers Around Us</p> <p>Example 1 – Kilometers</p> <p>Example 2 – Quarters</p> <p>Example 3 – Baseball cards</p> <p>Example 4 –Dollars</p> <p>Example 5 – Pennies</p> <p>Example 6 – Water in a jug</p> <p>Topic 3: Multiplying and Dividing Whole Numbers Whole Numbers Around Us</p> <p>Example 1 – Orange</p> <p>Example 2 – Bananas</p> <p>Example 3 – Cycling</p> <p>Example 4 – Baseball Cards</p> <p>Example 5 – Cookies</p> <p>Example 6 – Running</p>

Understanding Math Plus Grade 6 Math Correlations	
GCO C Students will explore, recognize, represent, and apply patterns and relationships, both informally and formally.	
C1:solve problems involving patterns	Understanding Algebra Topic 3: Patterns, Patterns, Patterns Number and Geometric Patterns Examples 1, 2
C2:use patterns to explore division by 0.1, 0.01, and 0.001 C3:recognize and explain how changes in base or height will affect areas of rectangles, parallelograms, or triangles	Understanding Measurement and Geometry Topic 2: Perimeter and Area of Polygons Amount of Surface The Driveway – An Introduction to Area Area – Estimation Area of a Rectangle Area of a Parallelogram Area of a Triangle
C4:recognize and explain how an increase in height, width, or length of a rectangular prism changes its volume	Understanding Measurement and Geometry Topic 4: Solids: Volume and Surface Area Volume of a Solid The Concept Volume of a Prism: Examples 1, 2
C5:recognize and explain how the change in one term of a ratio affects the other term	Understanding Percent Topic 4: Ratios and Proportions Writing Ratios Concept Examples 1,2,3,4
C6:represent equivalent ratios using tables and graphs C7:represent square and triangular numbers concretely, pictorially, and symbolically	Understanding Exponents Topic 1: The Meaning of Exponents Introduction... The Money Game Money Grab Game Show Graphs – Game Show Results Graphs – Comparing the Two Results Introduction ... Bacteria Doubling Introduction ... Paper Folding Experiment Pattern Exponents, Powers, Bases Powerful Explosions Introductory Examples Examples 1,2,3,4,5 Examples – Substitution Examples 1,2,3,4 Examples – Order of Operation Examples 1,2,3,4

Understanding Math Plus Grade 6 Math Correlations	
C8: solve simple linear equations using open frames	Understanding Graphing Topic 6: Linear Relations In This Topic What is a Linear Relation? Graphs of Linear Relations Concept Examples 1 through 6
C9:demonstrate understanding of the use of letters to replace open frames	Understanding Algebra Topic 4: Patterns, Formulas, Substitution Introduction...Math is Patterns Expressions, Terms, Variables Definitions
GCO D Students will demonstrate an understanding of and apply concepts and skills associated with measurement.	
D1: use the relationships among particular SI units to compare objects D2:describe mass measurements in tonnes D3:demonstrate an understanding of the relationship between capacity and volume D4:estimate and measure angles using a protractor D5:draw angles of given sizes	Understanding Measurement and Geometry Topic 5: Angles and Their Measure Measuring Angles
D6:continue to solve measurement problems involving length, capacity, area, volume, mass, and time	Understanding Measurement and Geometry Topic 2: Perimeter and Area of Polygons Amount of Surface Relationship – Area and Perimeter Squares Rectangles Topic 4: Solids: Volume and Surface Area Volume of a Solid The Concept Volume of a Prism: Examples 1, 2
D7:demonstrate an understanding of the relationships among the base, height, and area of a parallelogram	Understanding Measurement and Geometry Topic 2: Perimeter and Area of Polygons Area of a Parallelogram
D8:demonstrate an understanding of the relationship between the area of a triangle and the area of a related parallelogram	Understanding Measurement and Geometry Topic 2: Perimeter and Area of Polygons Area of a triangle Area of a Parallelogram
D9:demonstrate an understanding of the relationships among the three dimensions of a rectangular prism and its volume and its surface area	Understanding Measurement and Geometry Topic 4: Solids: Volume and Surface Area Surface Area of a Solid The Concept Volume of a Solid The Concept Volume of a Prism: Examples 1, 2

Understanding Math Plus Grade 6 Math Correlations

GCO E Students will demonstrate spatial sense and apply geometric concepts, properties, and relationships.

<p>E1:describe and represent the various cross-sections of cones, cylinders, pyramids, and prisms</p>	<p>Understanding Measurement and Geometry Topic 4: Solids: Volume and Surface Area Classifying Solids A Solid is... Recall Polygons A Polyhedron is... A Prism is... Some Special Pyramids A Cylinder is... A Cone is... Platonic Solids</p>
<p>E2:make and interpret orthographic drawings of 3-D shapes made with cubes</p>	<p>Understanding Measurement and Geometry Topic 8 : Projective Geometry Orthographic Projections: Introduction The Cube Tool Introduction Tutorial Play with Tool</p>
<p>E3:make and apply generalizations about the sum of the angles in triangles and quadrilaterals</p>	<p>Understanding Measurement and Geometry Topic 6: Angles and Polygons Angles in Polygons Methods 1,2</p>
<p>E4:make and apply generalizations about the diagonal properties of trapezoids, kites, parallelograms, and rhombi E5:sort the members of the quadrilateral “family” under property headings E6:recognize, name, describe, and represent similar figures E7:make generalizations about the planes of symmetry of 3-D shapes E8:make generalizations about the rotational symmetry property of all members of the quadrilateral “family” and of regular polygons</p>	<p>Understanding Graphing Topic 4: Transformations Line of Symmetry – An Introduction Introduction Examples 1 through 6 Symmetry Match Puzzle 1,2</p>
<p>E9:recognize and represent dilatation images of 2-D figures and connect to similiar figures</p>	<p>Understanding Graphing Topic 4: Transformations Dilatations Object to Image We Say, We Write Dilatation Mapping Rule Examples</p>

Understanding Math Plus Grade 6 Math Correlations

GCO F Students will solve problems involving the collection, display, and analysis of data.

<p>F1:choose and evaluate appropriate samples for data collection F2:identify various types of data sources</p>	<p>Understanding Graphing Topic 2: Statistics Data... What is it? Examples of Data Example 1 – Fast Food Earnings Example 2 – Infant’s Walk Example 3- Canada and U.S. Forecast Example 4 – King of the Strike Out Example 5 – U.S. Stake in India Example 6 – Allergy Troubles A Summary: Examples</p>
<p>F3:plot coordinates in four quadrants</p>	<p>Understanding Graphing Topic 3: Points on a Grid Josh’s Neighborhood Concept Number Houses Grids on Maps Ordered Pairs Axis Quadrants and Cartesian Plane</p>
<p>F4:use bar graphs, double bar graphs, and stem-and-leaf plots to display data</p>	<p>Understanding Graphing Topic 2: Statistics In This Topic An Introduction Tally Chart Pictograph #1, #2 Bar Graph #1, #2 Line Graph #1, #2 Presenting Data Stem-and-Leaf Diagram Examples 1 & 2</p>
<p>F5:use circle graphs to represent proportions F6:interpret data represented in scatterplots</p>	<p>Understanding Graphing Topic 2: Statistics Presenting Data Circle or Pie Graph Examples 1 & 2 Scatter Plot Examples 1 & 2</p>

Understanding Math Plus Grade 6 Math Correlations	
F7:make inferences from data displays	Understanding Graphing Topic 2: Statistics Collecting Data Throw a Die Throw 2 Dice Voting Primary Data – Gathering Methods Secondary Data – Gathering Methods
F8:demonstrate an understanding of the differences among mean, median, and mode	Understanding Graphing Topic 2: Statistics Measures of Central Tendency Introduction The Mean Average The Median Average The Mode Summary Another Example
GCO G Students will represent and solve problems involving uncertainty.	
G1:conduct simple simulations to determine empirical probabilities G2:evaluate the reliability of sampling results G3:analyze simple probabilistic claims G4:determine theoretical probabilities G5:identify events that could be associated with a particular theoretical probability	Understanding Probability Topic 1 : An Introduction to Probability The Spinner Game Board 1 Board 2 It's in the Bag Tree Diagrams Meals Topic 2: What's the Chance Probability What is it? Introductions 1 & 2 Spinner 1 Spinner 2 The Bag Probability Examples 1. Coin Toss 2. Picking One Ball 3. Picking Two Balls 4. Travel Example 5. Number Example 6. Rabbit Example 7. Mailing Letters 8. Forest Ahmed's Maze The Probability Scale Examples Summary Follow Up Soccer Example Experimental Probability