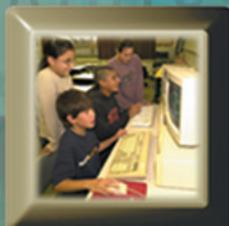




Department
of Education

CANADA



Journey On

Working Toward Communication and
Information Technology Literacy

Grade 2

September 2006 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 (2006), provides grade specific curriculum outcomes that have been assigned to core curriculum subjects. This grade 2 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

The Department of Education, Technology In Learning, gratefully acknowledges the suggestions, lesson plans, and other contributions made by Prince Edward Island students and educators. A special thank you is extended to the teachers who field tested the lesson plans and accompanying materials. This input was invaluable in making *Journey On* (2006) a useful teaching resource. The authors would also like to extend their appreciation to those individuals who provided feedback and editorial comments during the development of this document.

The communication and information technology committees were instrumental in providing input for the curriculum outcomes grades 1-12 framework on which *Journey On* (2006) is based. Past and present members of the committees are listed below:

Department of Education

Guy Albert	Joan Connell	Percy MacGougan	Kim McBurney
Gordon Bernard	Don Craig	Lana MacIsaac	
Bruce Brine	Judy Davis	Edward MacLean	
Robert Bourgeois	Peter Grisebauer	Ted Nabuurs	
Greg Bungay	Frank Hennessey	Danielle Plante-Bourgeois	
Pauline Coady	Linda Lowther	Jeanette Scott	
Clayton Coe	Doug MacDougall	Elizabeth Tumblin	

Eastern School District

Tami Jo Auld	Laurie King	Linda Shaw-Packard
Anne Campbell	Anne Ives	Marg Stewart
Jason Campbell	Lori Lavers	Joanne Stubbs
Bethany Doiron	Debbie MacLean	Susan Westphal
Lianne Garland	Dr. Kevin MacLeod	Kevin Whitrow
Robert Gaudet	Pam McIntosh-Whalen	B. J. Willis
Bob Gray	Joe Murphy	
Marg Gray	Tim Murphy	

Western School Board

Laura Brake	Mario Fiset	Sergine Ouellet
Laurie Callbeck	Marjorie Hunter	Gordon Ramsay
Ralph Carruthers	Sally MacDonald	Mark Ronahan
Nancy DesRosiers	Connie McCabe	Keith Tompkins
Kent England	Donald Mulligan	Kristin Trace

French School Board	University of Prince Edward Island
Sylvain Gagné	Dr. Martha Gabriel

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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*.

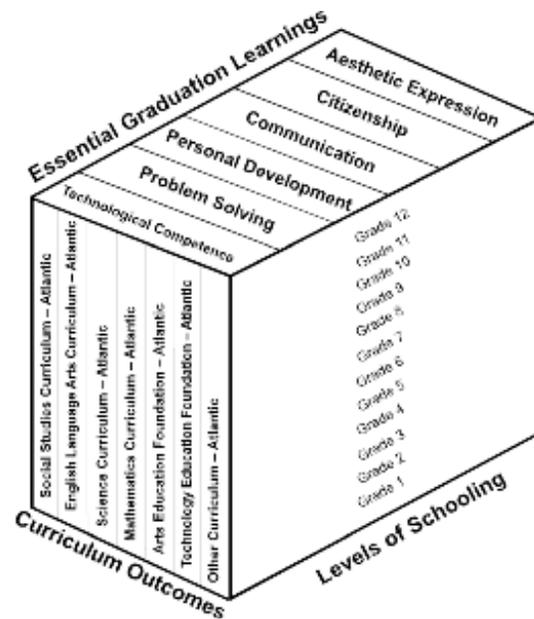
Essential Graduation Learnings (EGLs)

“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

Ot

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

uation Learnings

Technological Competence

Communication

Problem Solving

culum 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

her

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

Social, Ethical, and Health



Awareness



Guided



Independent

	Students will be expected to:		1	2	3	4	5	6	7	8	9	10	11	12
A2.1	identify aspects of an ergonomic workstation (lighting, monitor angle, work placement, keyboard height, seat height, posture, etc.)													
B2.1	demonstrate proper touch keyboarding techniques (ie: home row, quick key strokes, proper reaches)													
C2.1	examine current Canadian law governing the use of technology													
D2.1	determine the technological requirements for specific career goals													
E2.1	respect equipment and other student's work													
E2.2	work co-operatively at work station													
E2.3	adhere to acceptable use agreement for work station/network/Internet													
E2.4	use electronic communication etiquette													
E2.5	adhere to rules of freeware, shareware and commercial ware													
E2.6	adhere to copyright and privacy laws, give credit to sources of information (MLA, APA)													
E2.7	identify ethical issues involved with Internet content, awareness of inappropriate use of technology													
E2.8	demonstrate caution before sending personal information over the internet													
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.													

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

	Students will be expected to:		1	2	3	4	5	6	7	8	9	10	11	12
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

	Students will be expected to:		1	2	3	4	5	6	7	8	9	10	11	12
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

	Students will be expected to:		1	2	3	4	5	6	7	8	9	10	11	12
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*.

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.

Technology Curriculum Outcome Area

Grade Level

Grade 7

Computer Systems	
Students will be expected to:	Instructional Considerations
<p>AS 1 address applications which protect data in memory for users.</p> <p>BS 1 have an understanding of data storage devices and data storage systems. (e.g., hard drive, floppy, optical, tape, etc.)</p> <p>BS 4 understand the difference between software and hardware.</p> <p>BS 5 identify system functions and be able to identify their roles in hardware, hardware and software (operating system, etc.).</p>	<p>AS 1 Using the appropriate help sources will provide access to available help resources, manuals, and technical support. Encourage "the discovery" approach to this outcome to promote...</p> <p>BS 1 Explain the methods operating systems use to manage files, folders, and storage space. In addition, use the search capabilities of the operating system and understand the related importance of the folder structure and the search capabilities of the operating system.</p> <p>BS 4 Software provides the software instructions to tell the computer what to do. Some examples include operating systems, business or scientific software, word or spreadsheet applications, database software, and so on. Use the help and resources of the operating system to identify the operating system and its components and their functions. Application software does a particular type of work such as word processing, spreadsheets, etc.</p> <p>Hardware refers to the physical components of the computer. These include the monitor, mouse, keyboard, speakers, and so on.</p> <p>BS 5 Recognize technology is constantly evolving with data processing, word, data storage capabilities and access provided software. Using appropriate hardware or software, compatibility issues must be considered. When purchasing new software it is prudent to check the specifications listed on the product packaging or company web site to ensure that the operating system and minimum hardware requirements are met.</p>

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Grade 7

Technology Curriculum Outcome Area	District Specific Curriculum Outcome				
	Language Arts	Math	Science	Social Studies	Other
<p>Technology Lesson Plan: Grade 7 Unit: File Management and Storage. Lesson: File Management and Storage. This lesson is designed to help students understand the importance of file management and storage. The lesson includes activities, assessments, and resources.</p> <p>AS 1: Explain the methods operating systems use to manage files, folders, and storage space. In addition, use the search capabilities of the operating system and understand the related importance of the folder structure and the search capabilities of the operating system.</p> <p>BS 1: Explain the methods operating systems use to manage files, folders, and storage space. In addition, use the search capabilities of the operating system and understand the related importance of the folder structure and the search capabilities of the operating system.</p> <p>BS 4: Software provides the software instructions to tell the computer what to do. Some examples include operating systems, business or scientific software, word or spreadsheet applications, database software, and so on. Use the help and resources of the operating system to identify the operating system and its components and their functions. Application software does a particular type of work such as word processing, spreadsheets, etc.</p> <p>Hardware refers to the physical components of the computer. These include the monitor, mouse, keyboard, speakers, and so on.</p> <p>BS 5: Recognize technology is constantly evolving with data processing, word, data storage capabilities and access provided software. Using appropriate hardware or software, compatibility issues must be considered. When purchasing new software it is prudent to check the specifications listed on the product packaging or company web site to ensure that the operating system and minimum hardware requirements are met.</p> <p>DI 1: Explain the impact of system requirements and how to determine compatibility. Identify system requirements for hardware and software. Use the help and resources of the operating system to identify the operating system and its components and their functions. Application software does a particular type of work such as word processing, spreadsheets, etc.</p>	AS		1127, 2003	2003	

Journey On - P.E.I. Department of Education, 2005 31

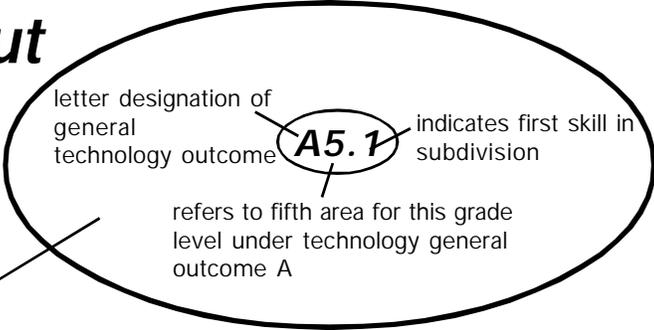
Specific CIT Outcomes

Instructional Considerations

Teaching Suggestions, Activities and Assessment

Links to Curriculum Outcomes

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>
A1.1 make use of help features to independently find solutions to problems	A1.1 Using the drop-down help menu will help find help materials, tutorials, and technical information using a “discovery” approach to find solutions.
B1.6 have an understanding of file management (drives and folders, rename, select, move, copy, paste, delete, display format, backup, etc.)	B1.6 Discuss the need for organizing electronic files. As storage space is limited, old files should be reviewed and outdated files deleted. Files should be backed up or archived to a disk, memory stick, or CD/DVD ROM. A utility is available for users to maintain their files.
B1.8 understand the difference between software and hardware	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.

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
Grade 2 Language Arts Theme: <i>New Perspectives</i> Lesson Plan: <i>Through a Bug's Eyes</i>	A1, A3, A4, D1, D3, E1, E1.3, E1.5, G1, G1.1, G2, G2.1, G2.2, G3, G3.1		
Grade 3 Language Arts Theme: <i>Vanishing Animals</i> Internet Sites:	A1, A3, A4, D1, D3, E1, E1.3, E1.4, E1.5, G1, G1.1, G2, G2.1, G2.2, G3, G3.1, H2, H, J5		

Computer Systems

Students will be expected to:	Instructional Considerations
<p>B1.1 login, open and close a program, open, save and close a file with mouse (Guided*)</p> <p>B1.2 demonstrate proper use of login numbers and names, setup and change passwords, and be aware of implications of multiple logins (Awareness)</p> <p>B1.4 differentiate between “Save” and “Save as...”(Awareness)</p> <p>B1.6 have an understanding of file management (Awareness)</p>	<p>B1.1 Students must be able to recognize capital letters and numbers in order to be able to login. There is a login and network password for grade 2 students. Students need to recognize left and right to operate a mouse and must have opportunity to practice these fine motor skills.</p> <p>The peer helping system encourages collaboration and cooperative learning. This exposes the younger students to the concept of communicating with technology and gives the older students an opportunity to reinforce their skills.</p> <p>B1.2 One network account is provided. If a user tries to log into a second computer while already being logged onto another computer, 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>B1.4 Newly created files must be given a name using the “save as” selection. Subsequent changes to the file will be updated with the “save” command. To avoid losing work, users should become accustomed to saving at regular intervals.</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). “Maintain Your Files” is a utility available to users to manage their files.</p>

Computer Systems

Teaching Suggestions, Activities and Assessment	Links to Specific Curriculum Outcomes				
	Language Arts	Math	Science	Social Studies	Other
<p>Technology Lesson Plan:</p> <p>My Journal (pg. 74)</p> <p>B1.1 With assistance students will be able to enter their login and password to access the school network. Schools are making extensive use of peer helping. A student from a higher grade becomes a mentor for a student in a lower grade. Early on the mentor could assist the grade 2 student with logging in, opening files, saving files and closing programs.</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>B1.4 Teachers may place activity files in the M: network drive(Multi-use) for students to access. Students are required to use the SAVE AS command to change the file name and storage location (to their G: drive) as students do not have save rights to M:</p> <p>SAVE AS is important when using templates so as not to destroy the original file. Save often.</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>	10.1, 10.4				

Computer Systems

Students will be expected to:	Instructional Considerations
<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>B1.13 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 CDs 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 users browser and automatically redirect the user to an unwanted website.</p>

Computer Systems

Teaching Suggestions, Activities and Assessment	Links to Specific Curriculum Outcomes				
	Language Arts	Math	Science	Social Studies	Other
<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. Consult an adult before opening any online file at home or school.</p> <p>B1.14 Preview web sites that will be visited and avoid those that enable popup windows and advertisements.</p> <p>Discuss the topic of respect with regards to Internet material. Students must be made aware of situations when they should ask adults for help. (i.e.: a student is automatically redirected when browsing or a popup window appears)</p> <p>Notify teacher immediately should popup or automatic redirection occur.</p>					

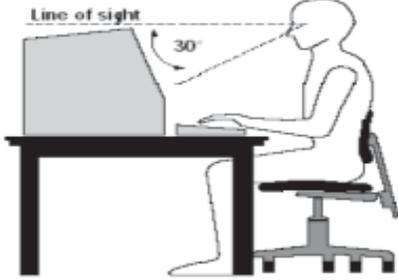
Computer Systems

Students will be expected to:	Instructional Considerations
<p>C1.1 identify technology that is found in everyday life (Guided*)</p>	<p>C1.1 Technology is human innovation in action that involves the generation of knowledge and process to develop systems that solve problems and extend human capabilities - technology is how humans modify the world around them to meet their needs and wants or to solve practical problems (TTEA, 2000)</p> <p>Technology is constantly evolving and will continue to impact upon the lives of our students as they continue through life. The speed at which change occurs, dictates the necessity for helping individuals to begin to develop strategies for managing and utilizing technology appropriately and to suit their own purpose. During grade 2, teachers can begin to develop an awareness in students of how technology impacts upon our lives and how it can be used as a tool to solve many problems.</p>

Computer Systems

Teaching Suggestions, Activities and Assessment	Links to Specific Curriculum Outcomes				
	Language Arts	Math	Science	Social Studies	Other
<p>C1.1 Students in the primary grades will begin to develop an awareness of technologies that are used in their home, school, and community. When using a specific technology, the purpose, appropriate use and etiquette surrounding technology must be reviewed by the teacher.</p> <p>Technology issues can be discussed within the context of several curricular themes.</p> <p>Students should be given the opportunity to discuss and express their opinions regarding these issues.</p>					

Social, Ethical and Health

Students will be expected to:	Instructional Considerations
<p>A2.1 identify aspects of an ergonomic workstation (Awareness)</p> <p>B2.1 demonstrate proper touch keyboarding techniques (Awareness)</p> <p>E2.1 respect equipment and other student's work (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> <p>B2.1 Emergent writers will become familiar with the keyboard through use of the keyboard and familiarity can be taught ... keyboarding skills for independent writers should be sufficient for them to keep up with their line of thought. (pg. 240 English Language Arts Curriculum, Grades Entry -3)</p> <p>E2.1 Work together to maintain a safe learning environment. Attention to computer work station arrangement will decrease the likelihood of electrical or physical mishap.</p>

Social, Ethical and Health

Teaching Suggestions, Activities and Assessment	Links to Specific Curriculum Outcomes				
	Language Arts	Math	Science	Social Studies	Other
<p>Technology Lesson Plan: Through a Bug's Eye (pg. 70)</p> <p>My Journal (pg. 74)</p> <p>A2.1 Introduce aspects of an ergonomic workstation (see appendix) Model proper posture and position at the keyboard. Many online resources exist for ergonomics. An example would be the following from Cornell University Department of Ergonomics (http://ergo.human.cornell.edu/CUEHinfo.html).</p> <p>Encourage posture and technique.</p> <p>B2.1 Use Ultimate Writing and Creativity Center as an entry level word processor.</p> <p>E2.1 Ensure that wires are properly connected and secured. Safety issues relating to electric shock, use of power bars, tripping on wires, etc. must be discussed. Encourage students to report any workstation abnormalities. Discuss classroom rules for behavior.</p>	<p>(Early) 4.3, 7.2 (Transitional) 1.1, 1.3, 1.4, 4.3, 5.1, 7.1, 7.2</p> <p>10.1, 10.4</p>				

Social, Ethical and Health

Students will be expected to:	Instructional Considerations
<p>E2.2 work co-operatively at work station (Guided*)</p> <p>E2.3 adhere to acceptable use agreement for work station/ network/ Internet (Guided*)</p> <p>E2.8 demonstrate caution before sending personal information over the Internet (Awareness)</p> <p>E2.9 follow publishing etiquette Adhere to the guidelines for school web pages as outlined by PEI Department of Education. (Awareness)</p>	<p>E2.2 Working cooperatively includes: listening to others, sharing ideas, taking turns keyboarding, asking questions, and participating in discussion.</p> <p>E2.3 Ensure that parents have signed the Acceptable Use Agreement. Additional permission must be obtained from parents to publish any student work, pictures or names on the Internet. See PEI Department of Education website guidelines (http://www.edu.pe.ca/journeyon/tech_support_pages/GuidelinesforSchoolWebPages.html)</p> <p>E2.8 Never give out personal information (personal details, phone number, address, picture, etc.) Personal information may include details about yourself, family and friends. If a student happens to open an objectionable site, s/he should immediately click on the “back button” to take him/her out of the site. S/he must immediately contact the adult in charge.</p> <p>E2.9 Consider the following:</p> <ul style="list-style-type: none"> Do not type 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.

Social, Ethical and Health

Teaching Suggestions, Activities and Assessment	Links to Specific Curriculum Outcomes				
	Language Arts	Math	Science	Social Studies	Other
E2.2 Suggestions for engaging students in the classroom can be found in the section “The One Computer Classroom” on the Journey On site (http://www.edu.pe.ca/journeyon/pro_d_pages/OneComputerClassroom.htm)					
E2.3 Discuss the contents of the Acceptable Use Policy.					
E2.8 Discuss the topic of personal privacy. Students must be made aware of situations when they should ask adults for help.					
E2.9 Guidelines for publishing school material on the web may be found on Journey On (http://www.edu.pe.ca/journeyon/tech_support_pages/GuidelinesforSchoolWebPages.html)					

Internet

Students will be expected to:	Instructional Considerations
<p>A3.1 demonstrate awareness of the Internet as a source of information (Awareness)</p> <p>A3.2 use various tools (search engines and directories) and strategies necessary to carry out research (Awareness)</p> <p>B3.1 Use the various browser navigation tools (Awareness)</p> <p>B3.2 manage bookmarks/favorites (Awareness)</p>	<p>A3.1 During the entry-12 grades, students within the school system must not use the Internet without teacher supervision. Most of the work by students at the grade 1 level will involve working with preselected websites. Teachers should take the opportunity when using the Internet in class to begin to discuss appropriateness with their students.</p> <p>There is a wealth of Web sites on the Internet that provide the opportunity to learn about the values, customs and beliefs of their own and other cultures.</p> <p>A3.2 Students should be able to understand that the browser enables the user to send and receive information to and from the Internet. Students at Grade 2 level should practice using the following buttons in the browser: back/forward, home, refresh, and stop.</p> <p>Use a search engine designed for children such as Yahoo!igans (www.yahooligans.com).</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. When the user clicks on "home", it will take them back to their original site. 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>

Internet

Teaching Suggestions, Activities and Assessment	Links to Specific Curriculum Outcomes				
	Language Arts	Math	Science	Social Studies	Other
<p>Technology Lesson Plan: Through a Bug's Eye(pg.70)</p> <p>A3.1 Demonstrate various multimedia resources from the Internet regarding animals i.e. animal sounds, pictures, at the zoo, in their natural habitat, endangered species, etc.</p> <p>A3.2 Use a search engine. Key searchable terms such as "north american bears". Narrow the search by adding other terms such as "brown", "black", or "grizzly".</p> <p>B3.1 Using a search engine, such as Yahoooligans, practice navigating among web sites.with the back, forward, home and history buttons. 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".</p>	<p>(Early) 4.3, 7.2 (Transitional) 1.1, 1.3, 1.4, 4.3, 5.1, 7.1, 7.2</p>				

Concept Maps

Students will be expected to:	Instructional Considerations
<p>A4.1 use brainstorming techniques to generate ideas (Awareness)</p>	<p>A4.1 Concept mapping software exists to assist users in developing ideas resulting from a brainstorming activity.</p>
<p>A4.3 categorize ideas graphically (Guided)</p>	<p>A4.3 Concept mapping encourages students and teachers to be creative. They are able to work together to create concept maps, story boards, cause and effect diagrams, and outlines.</p>
<p>A4.4 create links between ideas, relink or delete links between ideas (Guided)</p>	<p>A4.4 Graphical software allows easy manipulation of linked ideas. Simply click on a link and drag it to a new location.</p>
<p>A4.5 elaborate on ideas (Guided)</p>	<p>A4.5 Further explanation on an idea may be provided by adding notes. These may be clues, activities or questions relating to clarification of ideas.</p>
<p>B4.1 add fonts, graphics, sound, and colours to enhance ideas (Guided)</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>

Concept Maps

Teaching Suggestions, Activities and Assessment	Links to Specific Curriculum Outcomes				
	Language Arts	Math	Science	Social Studies	Other
<p>Technology Lesson Plan: Match the Hatch (pg.76)</p> <p>A4.1-A4.3 Inspiration 7.5 is available on all school computers and teachers may use this as a tool for organizing group discussion and prompting students for input. The licensing agreement also allows teachers to install this software on their home computer. Copies of this program have been provided to school librarians.</p> <p>A4.4 Record ideas generated during brainstorming sessions without organizing. Later, ideas can be easily categorized or deleted as required.</p> <p>A4.5 Following the brainstorming session further information can be added to the ideas by using the note feature.</p> <p>B4.1 Express design creativity through the use of graphics, fonts, sound and color.</p> <p>Critique aesthetic qualities of the completed activity.</p>			101-7, 202-2, 203-2		

Graphics

Students will be expected to:	Instructional Considerations
<p>A5.1 create illustrations or graphics by using the various drawing tools (Awareness)</p> <p>B5.1 demonstrate various object editing features (Awareness)</p>	<p>A5.1 Graphics programs provide the user with onscreen tools and palettes that can be used to design and create illustrations or graphics. Graphics 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.</p> <p>B5.1 Geometric shapes can be altered with respect to their size, orientation, colour, and position. Graphics programs are useful for helping students develop eye-hand coordination and aspects of spatial sense such as visual discrimination, perceptual constancy, and recognition of transformation (translation, rotation and reflection).</p> <p>Object editing features may include 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.</p>

Graphics

Teaching Suggestions, Activities and Assessment	Links to Specific Curriculum Outcomes				
	Language Arts	Math	Science	Social Studies	Other
<p>Technology Lesson Plan: Illustrating Stories(pg.58)</p> <p>Puzzles 1 (pg. 68)</p> <p>Patterning with Shapes (pg.72)</p> <p>A5.1 Teachers may wish to create a collection of activity files that may be opened and used at a learning station by individual or small groups of students. Example files are available with the “Puzzles” and “Patterning With Shapes” online lesson plans (http://www.edu.pe.ca/journeyon/).</p> <p>B5.1 Shapes can be sorted and classified according to various attributes. Patterns with 2D and 3D shapes may be created with varying attributes (size, colour, line thickness, etc.). Shape recognition can be reinforced by selecting or creating shapes.</p>	(Early) 10.4 (Transitional) 9.1, 10.4	E1, E3, E5, E10 C1, C2			Visual Arts 2.1.1,2.7.2, 2.8.1 Visual Arts 2.1.1, 2.7.3

Word Processing

Students will be expected to:	Instructional Considerations
<p>A7.2 identify examples of desktop publishing (Guided*)</p> <p>B7.1 use a grade level appropriate word processor to create and edit written work (Guided*)</p> <p>B7.2 locate characters on a keyboard and identify functions of word processing (Guided*)</p> <p>B7.4 change font, size, colour, and style of text (Awareness)</p> <p>B7.7 insert a graphic and manipulate (Awareness)</p>	<p>A7.2 Use concrete examples of computer generated media such as magazines, brochures, catalogues, newspapers to demonstrate how technology is used to create written and illustrated text.</p> <p>B7.1 Students can be introduced to using word processing to develop effective writing. As students develop new skills in writing, they can be introduced to new keys and functions. Once students become familiar with the various components of the writing process, cut and paste functions can be introduced.</p> <p>B7.2 Emergent writers will become familiar with the keyboard through use. It is simply necessary that writers be able to key their ideas at a pace similar to composing with pencil and paper. Keyboarding skills for independent writers should be sufficient for them to keep up with their line of thought. (APEF English Language Arts Curriculum Document for Grades Entry-3, page 240).</p> <p>Encourage students to use proper posturing and healthy ergonomic habits (see Social, Ethical and Health section of this guide).</p> <p>B7.4 Change text attributes by selecting upper and lower case letters, underlining text, placing spaces between words and changing font, style, colour and size of text.</p> <p>B7.7 Images may be imported, acquired from a scanner, digital camera or from the Internet. Many word processors come with a clipart library that allow for the easy insertion and manipulation of graphics. A text art feature available in most word processors allows text to be created as a graphic. ie. templates for placing text in arcs, circles, waves, 2D or 3D format, and in different colors.</p>

Word Processing

Teaching Suggestions, Activities and Assessment	Links to Specific Curriculum Outcomes				
	Language Arts	Math	Science	Social Studies	Other
<p>Technology Lesson Plan: Phoebe Gilman Book Responses(pg.67)</p> <p>A7.2 Provide or create an exemplar. Publish written work by printing a hard copy. Identify examples of Phoebe Gilman books.</p> <p>B7.1 Begin to use a simple word processor such as Appleworks or Ultimate Writing Creativity Centre.</p> <p>B7.2 Use the characters of the keyboard and the simple function keys such as the space bar and enter key. Change the style of the characters, words, lines, paragraphs, and pages of the written work. These changes are termed formatting and enhance the presentation of student writing.</p> <p>B7.4 and B 7.7 The design needs of a document will determine the appropriate use of these features. Suggested activities which may incorporate some or all of these outcomes follow:</p> <ul style="list-style-type: none"> - 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. 	(Transitional) 1.1, 6.1, 10.4			2.2.2	Health (Self-Esteem) E1

Multimedia

Students will be expected to:	Instructional Considerations
<p>B8.1 navigate multimedia resources such as slide shows, online resources or CD-ROM interactive educational activities (Awareness)</p>	<p>B8.1 Multimedia components such as CD-ROM/DVD, slideshows, and online resources often motivate the young learner to explore and discover new information, and therefore encourages self-directed learning. These components also address the issue of multiple intelligences by providing information visually (static and moving images) and auditorally. In terms of technology skills these programs are useful in encouraging the development of motor skills such as those required when using the mouse. More importantly, these components can be used to enhance the development of many information processing skills required for retrieving computerized information.</p>

Multimedia

Teaching Suggestions, Activities and Assessment	Links to Specific Curriculum Outcomes				
	Language Arts	Math	Science	Social Studies	Other
<p>Technology Lesson Plan:</p> <p>Illustrating Stories (pg.58)</p> <p>Through a Bug's Eye (pg. 70)</p> <p>B8.1 Ultimate Writing Creativity Center has a component which allows students to showcase their work using a slideshow in the form of a theatre presentation. For more information on this, visit the website: http://www.edu.pe.ca/journeyon/pro_d_pages/UWCC_basics/index.htm</p> <p>Electronic CD-ROM encyclopedias may also be available resources in schools. Web-based slide shows and educational websites are available for use.</p>	<p>10.4 (Early), 9.1, 10.4 (Transitional)</p> <p>4.3, 7.2 (Early) 1.1, 1.3, 1.4, 4.3, 5.1, 7.1, 7.2 (Transitional)</p>				<p>Visual Arts 2.1.1, 2.8.1,2.7.2</p>

Database

Students will be expected to:	Instructional Considerations
<p>A9.1 use an existing database to find information (Guided*)</p>	<p>A9.1 Databases can help students to develop organizational and problem solving skills by engaging them in tasks that involve organizing and sorting information from research to test hypotheses, retrieving information, discovering relationships and commonalities, and predicting trends.</p>
<p>A9.2 perform searches on a database file using logical and boolean operators (Awareness)</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 than, greater than, greater or equal than, not equal and equal) as well as the use of Boolean operators (AND, OR, NOT, AND NOT).</p>
<p>A9.5 use databases to analyze data and look for trends (Awareness)</p>	<p>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)</p>
<p>B9.1 enter data into a pre-existing database, edit data, use automated text (Guided)</p>	<p>B9.1 Compare non-computer databases such as phone books, index cards and recipe books to electronic databases. Convey to students that computers are advantageous because of the speed and ease with which information can be organized, stored, searched and retrieved.</p>
<p>B9.4 sort records alphabetically, numerically and by multiple fields (Awareness)</p>	<p>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.</p>

Database

Teaching Suggestions, Activities and Assessment	Links to Specific Curriculum Outcomes				
	Language Arts	Math	Science	Social Studies	Other
<p>Technology Lesson Plan: Dinosaur Facts (pg 60)</p> <p>A9.1 Submit queries in a pre-existing database such as a search engine or library book database.</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 (note that using “quotations” is the same as using AND to limit a search)</p> <p>A9.5 Refer to the lesson plan “Dinosaur Facts”. Review the chosen fields for this database. On page 63, a number of questions are provided. Use these as an assessment or as a resource to brainstorm further questions/trends.</p> <p>B9.1 Enter new information into a pre-existing database. This information may result from their own research activity.</p> <p>B9.4 Once students have entered data records for the lesson plan activity, they can demonstrate multiple field sorting with the following examples: sort the data by title, genre, rating, etc.</p>	(Early) 4.1, 5.1, 7.1, 10.5				

Database

Students will be expected to:	Instructional Considerations
<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>

Database

Teaching Suggestions, Activities and Assessment	Links to Specific Curriculum Outcomes				
	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>					

Telecommunications

Teaching Suggestions, Activities and Assessment	Links to Specific Curriculum Outcomes				
	Language Arts	Math	Science	Social Studies	Other
<p>Technology Lesson Plan: Email Economics (pg. 75)</p> <p>B10.1 Grade two students can be sent an email message by an older student. The older student assists the grade two student to access, read, reply or compose a message.</p> <p>B10.2 Alternatively, send each student a greeting prior to class. Demonstrate how to open, reply, or compose a message.</p>				2.2.1, 2.3.1	

Web Authoring

Students will be expected to:	Instructional Considerations
<p>A11.1 identify web page creation possibilities (Awareness)</p>	<p>A11.1 Many opportunities exist within the grade two 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.</p>

Web Authoring

Teaching Suggestions, Activities and Assessment	Links to Specific Curriculum Outcomes				
	Language Arts	Math	Science	Social Studies	Other
<p>Technology Lesson Plan: Illustrating Stories (pg.58)</p> <p>A11.1 Use a web page editor to create a template to display student creations. Content may include text, scanned drawings or graphics.</p>	(Early) 10.4 (Transitional) 9.1,10.4				Visual Arts 2.1.1,2.7.2, 2.8.1,

Lesson Plan Layout

Curriculum Outcomes

Activity Resources,
Instructions and Suggestions

Lesson Plan: Illustrating Stories

Outcomes

Technology (Awareness) E2.9.A5.1,
A.11.1, E8.1

Language Arts:

10.4 (Early), 9.1 (Transitional)
10.4 (Transitional)

Visual Arts 2.1.1, 2.8.1, 2.7.2

Activity

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 Centers 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.

Resources

art materials
graphics software
Ultimate Writing Creativity Center

Instructions

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 illustration 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: Illustrating Stories

Outcomes

Technology:(Awareness)E2.9,A5.1,
A 11.1, B5.1

LanguageArts:
10.4(Early), 9.1(Transitional)
10.4(Transitional)

Visual Arts 2.1.1, 2.8.1, 2.7.2

Activity

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.

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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.
4. Once printed, students can write the final version of their stories below the drawing if there is sufficient room or on an attached page.
5. Students may wish to add color to their illustration using crayons and markers.
6. Post the students combined electronic/paper efforts for all to see!

Lesson Plan: Illustrating Stories

7. If the students are using Ultimate Writing and Creativity Center, it will be necessary to show them how to insert graphics into their story.

For a tutorial on the basics of UWCC, please visit the following link: http://www.edu.pe.ca/journeyon/pro_d_pages/uwcc.htm

Below is an example of a simple activity for grade 2.



Teachers may also wish to publish the students work on their school web page. Using a WYSIWYG webpage editing program, or by scanning the work, students are able to publish to the Web. For a tutorial on Front Page Express web editor, visit the following link:

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

Teachers and students also must know the guidelines for school web pages.

These guidelines may be found at the following link:

http://www.edu.pe.ca/journeyon/tech_support_pages/GuidelinesforSchoolWebPages.html

Suggestions

If students are already familiar with basic graphic computer skills, encourage them to try flipping, rotating and rearranging objects to give the best final effect

You may wish to have each student print their work upon completion. However, this can be time consuming with graphics, especially if you run into printer difficulties. It may be easier to have a printing session at a later date when everyone has completed their illustrations, or simply print out the files yourself.

Lesson Plan: Dinosaur Facts

Outcomes

Technology:(Guided)A9.1,B9.1
(Awareness) A9.2,A9.5, B9.4,B9.5

Language Arts: (Early) 4.1, 5.1,
7.1,10.5

Activity

In this exercise, which is centred around the Grade 2 New Perspectives theme, students are introduced to the database concept using a pre-computer activity. Students follow up using a dinosaur database. Students manipulate data in this pre-created database and perform simple queries. As an option, students can enter new information into the database that they have gathered from their own research.

Resources

5 x 7 index cards or prepared dinosaur layout sheets
AppleWorks database file: dinosaur.cwk
overhead projector
question sheets

Database applications are software tools used for recording and organizing related data in a systematic way. Databases can be used to help students develop a higher level of critical thinking as students engage in organizing and sorting information, discovering relationships and trends, predicting, questioning and problem solving.

Terminology - All of the information stored in a database is stored as a file. Information within a database, such as a card catalogue, is grouped into records. The information for each card represents one record. Within a record the specific data is divided into fields. The fields in our analogy of a card catalogue are Title of Book, Author, and Date. Every record in a database has the same fields. The data within a field, differs from record to record. For example, in one record the date may be 1978, while in another it could be 1985.

Keywords - It is very important that students understand the significance of entering data consistently and accurately for later retrieval. In a research project on Dinosaurs, a general question that may be generated by the student is: How does the dinosaur get from place to place? The title of the field used in a database may be Movement. Certain words describing movement (fly, walk, swim) need to be agreed upon by all individuals entering the data, otherwise data will not easily be retrieved. For example, if in a database on dinosaurs, students enter the following data in three records:

	dinosaur	movement
record 1	Allosaurus	walk
record 2	Triceratops	strides
record 3	Diplodocus	wakk

Lesson Plan: Dinosaur Facts

Instructions (continued)

Later when searching for the answer to the student question: Which dinosaurs walk? only one dinosaur will show up; Allosaurus. In this case, the incorrectly spelled wakk would result in record 3, Diplodocus, not appearing in this search. Triceratops, even though it is a walker, would also be omitted since its movement was entered creatively as strides. When there are a number of possibilities of descriptive terms, one word should be chosen and used universally. Some databases will also make the distinction between walk and Walk. Therefore, it is important to be consistent with the use of capitals.

Part 1. Pre-computer introduction of the database concept

1. Discuss the database concept (organized collection of information) using examples such as phone books, the library catalogue system, a hockey card collection, and recipe cards. Ask students for other suggestions of databases and why they think that databases might be useful.
2. Brainstorm with students about some of the things they know and some of the things that they would like to know about dinosaurs (names, food type, how they move, etc).
3. Create a non-computer database about dinosaurs using index cards. The information should be arranged so that it appears in a similar format to that which appears in the computer version of the database. If teachers wish to emphasize interacting with the information, rather than gathering it, they can provide the information for students to enter.

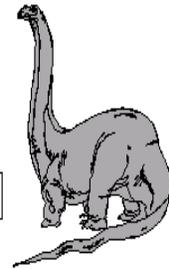
Lesson Plan: Dinosaur Facts

Instructions (continued)

Students enter facts on their cards while the teacher completes a sample sheet on an overhead projector. The terms record and field, and the concept of keywords are introduced at this point. To encourage collaborative learning, have each student or pair of students fill in information about a different dinosaur.

4. Have the students sort the completed index cards on the floor in a variety of ways; alphabetically, longest to shortest, etc. Have them further analyze the data and look for trends. This may be facilitated by prompting them with questions such as: "How many of the dinosaurs in our database eat plants?", "What was the tallest dinosaur?", and "How did most of these dinosaurs move?".

DINOSAURS	
NAME	<input type="text"/>
Length m	<input type="text"/>
Height m	<input type="text"/>
Movement	<input type="text"/>
Teeth	<input type="text"/>
Food	<input type="text"/>



Lesson Plan: Dinosaur Facts

Part 2: Introduction to an electronic database

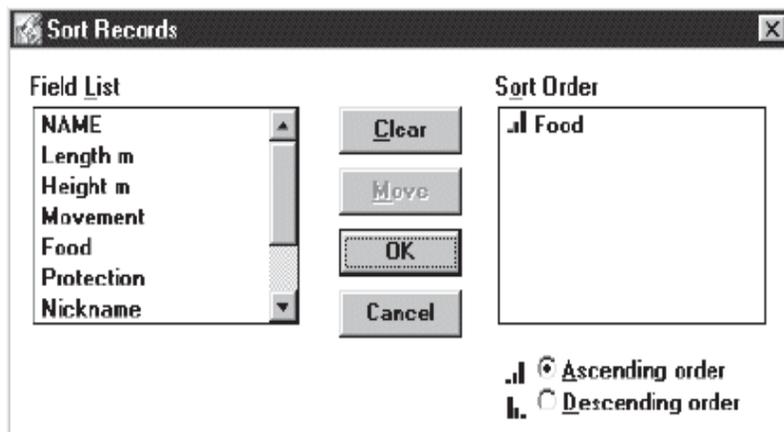
1. Point out to the students that answering some of the questions by reorganizing the index cards in the previous exercise was a lot of work. Other databases such as telephone books do not even permit us the flexibility of reorganizing information. If we have a person's address but not their full name for example, it would take us a long time to find their phone number. Electronic databases are much more flexible and let us reorganize and search for information in a much more efficient manner.
2. Open the file dinosaur.cwk and compare the prepared database with the student prepared cards. Review the database concept and terminology (database, record and field). Compare the facts on the computer screen with those entered on the note taking sheets.
3. Introduce students to the notebook. Clicking on the top page moves you back one record, while clicking on the bottom page advances you one record. The number of the active record (i.e., the one that you can edit or delete) is indicated in the bottom right hand corner. When you click and hold on the bookmark you can move from record to record by sliding the bookmark up or down.
4. Briefly introduce the concept of layouts. The way information in the database appears on the screen is referred to as the layout. Click on LAYOUT in the menu bar and then dino columns. You will notice that now the same information is organized differently. The field headings are now arranged across the top of the page and the information within the fields (data) is located in columns going down the page (see last page of this lesson plan).

Suggestions

If students are comfortable with the SORT command have them work on a teacher generated question sheet that requires them to use the FIND command. Have students research and enter other dinosaurs into the database. Have groups of students prepare questions for other students. They should also provide the answers to their questions

Lesson Plan: Dinosaur Facts

5. Introduce the SORT function. It is sometimes useful to reorganize records in the database alphabetically. Click on ORGANIZE in the menu bar and the Sort Records window appears.



Click on CLEAR if any fields names are located in the Sort Order box on the right hand side. Click on the field title Name in the field list and then click on the MOVE button (double-clicking on the field name will achieve the same thing). Notice that the field title Name appears in the Sort Order box. The little symbol in front of it indicates ascending order (meaning we wish to alphabetize the names of the dinosaurs from A-Z). Click OK. The records are rearranged alphabetically. Try sorting by teeth.

6. Have the students complete a question sheet of teacher or student generated questions such as the sample sheet provided on the next page.

For a tutorial on Appleworks Database, visit the following link:
http://www.edu.pe.ca/journeyon/pro_d_pages/appleworks.htm

Lesson Plan: Dinosaur Facts

ORGANIZE AND SORT

1. PUT IN ALPHABETICAL ORDER BY NAME

The fourth dinosaur is _____.

The first dinosaur is _____.

The eighth dinosaur is _____.

The last dinosaur is _____.

Which dinosaur came first? Pteranodon or Protoceratops?

Two dinosaurs that start with the letter A are _____
and _____.

2. SORT BY FOOD

What food is listed first? _____

How many fish eaters are there? _____

The fish eating dinosaur that flies is _____.

How many dinosaurs are plant eaters?

Plant eaters have _____ teeth.

How many dinosaurs in the database are meat eaters? _____

Meat eaters have _____ teeth.

3. SORT BY HEIGHT

_____ was the tallest dinosaur.

_____ was the shortest dinosaur.

How many dinosaurs were less than one meter _____?

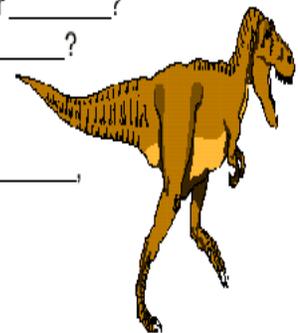
How many dinosaurs more than ten meters _____?

4. SORT BY MOVEMENT

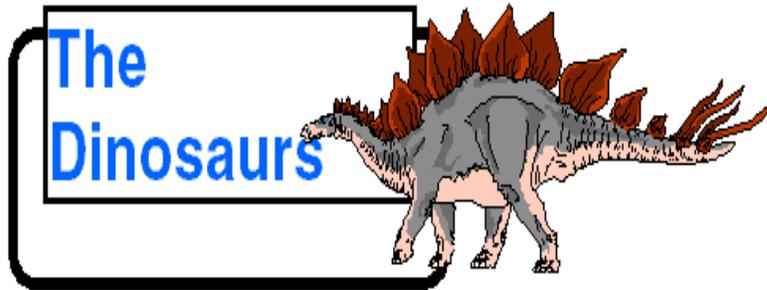
Three ways that dinosaurs move are by _____,

_____ and _____.

Most dinosaurs moved by _____.



Lesson Plan: Dinosaur Facts



<u>NAME</u>	<u>Length m</u>	<u>Height m</u>	<u>Movement</u>	<u>Teeth</u>	<u>Food</u>
ELASMOSAURUS	16	4	swim	sharp	fish
PROTOCERATOPS	2	1	walk	flat	plants
BRACHIOSAURUS	23	10	walk	flat	plants
DIPLODOCUS	28	12	walk	flat	plants
ANKYLOSAURUS	5	6	walk	flat	plants
TRACHODON	9	5	walk	flat	plants
ICHTHYOSAURUS	12	12	swim	flat	plants
ALLOSAURUS	11	3	walk	sharp	meat
TRICERATOPS	8	2	walk	flat	plants
BRONTOSAURUS	22	8	walk	flat	plants
TYRANNOSAURUS REX	16	6	walk	sharp	meat
PTERANODON	8	1	fly	none	fish

Lesson Plan: Phoebe Gilman Book Responses

Outcomes

Technology:(Guided)A7.2, B7.1,
B7.2 (Awareness)B7.4, B7.7

Language Arts: (Transitional) 1.1,
6.1, 10.4

Social Studies: 2.2.2

Health: (Self-Esteem) E1

Activity

1. Divide the class into six groups. Give each group one of the Phoebe Gilman books to read. Have group members individually take a minute to think about what each of them likes best about this book.
 2. Share in your small group what you like best about the book.
 3. Using Ultimate Writing and Creativity Center software, work with a partner from your group to show in text and graphics, your response to this question: "If you met Phoebe Gilman, what would you tell her you like best about her book?"
- For a tutorial on UWCC, visit the following web site:
http://www.edu.pe.ca/journeyon/pro_d_pages/uwcc.htm

Resources

Phoebe Gilman Books:
The Balloon Tree , Jillian Jiggs ,
Grandma and the Pirates
Something From Nothing ,
Little Blue Ben,
The Wonderful Pigs of Jillian Jiggs
Ultimate Writing Creativity Center Software

Lesson Plan: Puzzles 1

Outcomes

Technology:(Awareness) A5.1, B5.1

Math: E1, E3, E5, E10

Activity

Students are challenged to construct a picture or shape using the set of on-screen geometric shapes that are contained in a graphics file. On screen puzzles such as these provide the learner with the opportunity to explore geometric shapes and relationships. They also encourage the development of problem solving skills and spatial reasoning.

Resources

AppleWorks Drawing software
 Appleworks files: G2puzz1.cwk
 G2puzz2.cwk

Instructions

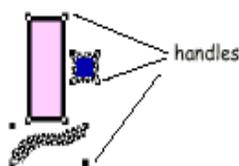
Graphics programs provide an ideal environment for exploring and experimenting with geometric shapes and relationships. They can be used to help students develop eye-hand coordination (mouse skills) and aspects of spatial sense.

Graphics programs are particularly well suited for activities that involve: problem solving, the concept of multiple solutions, and the reinforcement of shape recognition.

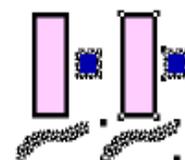
1. Open the activity of choice and use the **SAVE AS** command (under **FILE**) to save the file with a different name. This is to prevent over-writing the template file. (Teachers can have students download these files from the online site or teachers can download the files and then send all the files to students.)

2. These files involve the student moving the geometric shape into place. In some activities the shape must first be duplicated. To do this, click on the shape to select it. You will see little handles on the corner of the shape when it is selected. Next hold down the **CTRL** key and, while holding it down, tap the **D** key once. This will make a duplicate of the shape. Tapping the **D** more than once will make extra copies. As an alternative to using the **CTRL/D** combination, select the shape, click on **EDIT** and then click on **Duplicate**.

OBJECTS
SELECTED



OBJECTS
DUPLICATED



Lesson Plan: Puzzles 1

3. Once the puzzle is completed the student can save it or print it to include it in his/ her math folder.

Suggestions

The most important thing to remember is to make an extra copy of any activity file AND have students use the SAVE AS command as soon as they open the file.

If a puzzle piece becomes distorted as a result of resizing, close the file and restart. If you have been saving every few minutes you will not have lost too much work, and the puzzle piece will be back to the correct size for you to continue.

Teachers may want students work in pairs to encourage collaborative learning. Have students create their own puzzles for another individual to solve.

Lesson Plan: Through a Bug's Eye

Outcomes	Activity
<p>Technology: (Awareness) A3.1, A3.2, B1.13, B1.14, B3.1, B3.2, E2.8 (Guided) E2.1, E 2.2, E 2.3</p> <p>Language Arts: (Early) 4.3, 7.2 (Transitional) 1.1, 1.3, 1.4, 4.3, 5.1, 7.1, 7.2</p>	<p>As part of the grade 2 Reflexion's New Perspectives theme, students consider what it is like to consider things from a different point of view. This activity involves students using the Internet to research information about insects. Students then use this information to create a story about what the world might look like if they were a type of bug. During the activity students begin to use research and critical thinking skills about the facts they find.</p> <p style="text-align: center;">Instructions</p> <p>Most of the student activities for this level will involve working with preselected web sites. However, it must be remembered that many students have access to the Internet in their own homes. Teachers should take the opportunity when using the Internet in class to begin to instill "street sense" in their students. Issues such as Internet safety, viruses on the web, pop-ups must be discussed with students. Remind students that when they use the internet at home, they should check with an adult before they provide any personal information that is asked by certain websites in order to gain access. Following is a link to websites that contain information on Internet Safety and Website guidelines: http://www.edu.pe.ca/journeyon/pro_d_pages/internet.htm</p> <p>Planning Stage - Discuss the concept of insects (small creatures that have 6 legs, etc.) Brainstorm with information about some of the things they know about insects (names, what they look like, what they eat, how they move). What were some of the new things that they learned from reading the books about insects?</p> <p>Involve students in a discussion about what it might feel like to be a bug. What would be some of the advantages and disadvantages? What do you think bugs see? Have them imagine that they are insects in different places; flying in the sky, swimming in water, living in an animal's fur, hiding in rotten log, rolled in a leaf, etc. Encourage them to close their eyes and picture what they think an insect would see.</p> <p>What are some further things that they would like to learn about insects? Ask students to suggest places that they might look to find out information about insects.</p> <p>Have the students record their questions.</p>

Lesson Plan: Through a Bug's Eye

Once students have decided upon a site, they read the information provided in the site in more detail and collect information they need to answer their questions. Students will have to navigate within a web page by scrolling up and down, using the BACK and FORWARD button, and using hyperlinks to move from page to page within a site to access all of the information in the site. At this point, students may wish to add a site to their "Favorites" for future reference.

A tutorial on the use of Internet Explorer can be found at the following link: http://www.edu.pe.ca/journeyon/tech_support_pages/documents/IEIntroductionEnglish.html

Have students choose one of the insects that they researched and write a story with accompanying artwork that depicts what we would see if we were peering out through the bug's eyes.

Display the students' work for all to see. Invite students to share some of the things they learned from the site that they used. Ask the class their opinion about using the Internet. What did they like? Were there any difficulties?

Insects are a common theme for kid sites on the Internet. If you wish to search for your own sites, do a search using a search engine for kids (such as www.Yahooligans.com).

Suggestions

Instead of having students look at things from an insect's point of view, have them take the perspective of a large dinosaur.

Lesson Plan: Patterning With Shapes

Outcomes

Technology:(Awareness)A5.1, B5.1

Math: C1,C2

Visual Arts: 2.1.1, 2.7.3

Activity

Graphics programs provide an ideal environment for exploring and experimenting with geometric patterns and relationships. In Shapes 'n Patterns, students work alone or in pairs to create and extend pattern sequences with geometric shapes. Different activities which are based on the same concepts are suggested for grades 1-3. A number of math and art outcomes are addressed for these grade levels. This type of activity involves collaborative learning, problem solving, creative thinking and encourages the development of hand-eye coordination.

Resources

- AppleWorks Drawing
- **Appleworks Files:** G2patt1.cwk

Instructions

Preparation - Involve the class in a discussion about patterns. Have the students look about the class and point out patterns that they see on books, clothing, wallpaper, curtains, etc. Discuss with the class the fact that patterns can be created by repeated elements such as lines, colours, shapes, etc. Even numbers can be used to create patterns.

In the computer lab - Any graphics program can be used for this exercise. However, AppleWorks Drawing allows the beginning user the greatest ease when editing, moving and deleting objects that they have created. AppleWorks is required if you wish to use the file listed in the Resource section.

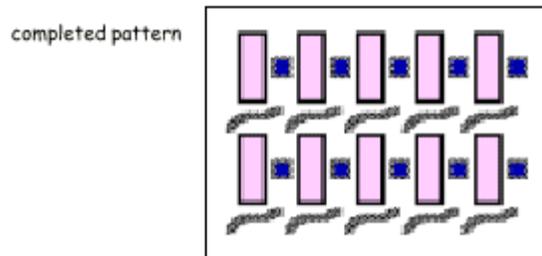
Duplicating objects - In most cases, students will be creating patterns using shapes that they have drawn. Once a shape is created it can be duplicated as follows: Select the shape by clicking on it. If the shape is composed of more than one object hold the SHIFT key down to select all the components. You will see little handles on the corners of the objects when they are selected. In the following example, 3 objects are selected to make one component of the repeat pattern used (see bottom of this page).



Lesson Plan: Patterning With Shapes

Instructions (continued)

Next hold down the CTRL key, and, while holding the key down, tap the D key once. This will make a duplicate of the shape in a similar fashion to using a rubber stamp. Tapping the D more than once will make extra copies. As an alternative to using the CTRL/ D combination, select the shape, click on EDIT and then click on Duplicate. If you wish to change the last step you made, click on EDIT and UNDO.

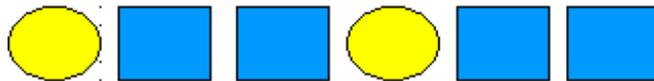


There are a number of ways to approach the next activity.

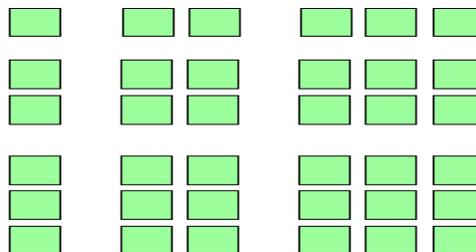
Students should first work with completing simple patterns such as those that are started in the file G2patt1.cwk. Students should use the SAVE AS command as soon as they open the file, and save the file under a different name. Use the DUPLICATE (Edit-Duplicate) command to continue the pattern.

Students can also create their own patterns by focusing on any attributes: number of sides, orientation, shape, colour, size, etc. Encourage students to make patterns that are not always linear and some that fill the page.

Students can work in pairs with one partner completing a pattern that the other partner started. For this level, encourage students to look at the characteristics of the pattern. How are two patterns similar and how do they differ? Patterns may be classified as repeating patterns:



or growing patterns.



By using the zoom feature, you can enlarge your view of the screen.

Lesson Plan: My Journal

Outcomes	Activity
<p>Technology:(Guided)B1.1,B7.1,B7.2 (Awareness) A2.1,B1.1, B1.2, B1.4, B1.6, B2.1, B7.4 , B7.7</p> <p>Language Arts: (Transitional) 10.1,10.4</p>	<p>Journal writing on the computer exposes students to a different way of creating text. It can be easily incorporated into class routine. Providing time for students to write in their computer journals also gives them their own time to explore different functions of a word processor and to become familiar with the keyboard. As with journal scribblers, students can spend 10-20 minutes composing their journal entry before saving and printing their entries. Make sure that the students practice proper posture and practice striking the keys with the proper fingers.</p> <p style="text-align: center;">Resources</p> <p>word processor such as: Ultimate Writing Creativity Center Appleworks Word Perfect</p> <p>In a one-computer classroom, journal writing on the computer can be easily incorporated into the daily routine of the class. It is not necessary to have all students use the computer for journal writing each day. Individual students must login using their username and password , open up a word processing program, and key in a journal entry. When a student is finished, they will have to logout of the system in order to safeguard their material.</p> <p>You may wish to create a weekly or monthly schedule for electronic journal writing . During the assigned journal writing time, one student can be using the computer while the remainder of the class uses pencil and paper. Entries made using the computer can be printed out and added to the student's paper journal, saved on the student "G" drive, or saved on a disk.</p> <p>If students are saving on the "G" drive, it is advisable to create a folder so that all journal entries can be easily found. A folder named "Journal" can be created so that the student will not have to search the entire "G" drive.</p> <p>A tutorial on File Management may be found at the following link: http://www.edu.pe.ca/journeyon/pro_d_pages/file_management/FileManagementinWindows.htm</p> <p>You may have students use the computer lab for journal writing at specific time periods throughout the year. For, example set aside one month where students visit the computer lab on a regular basis to make entries into their journal, or have one journal entry per month composed on the computer.</p> <p>If students choose Ultimate Writing Creativity Center for their word processor, they must be aware that this program requests a login name and a password. The login can be any generic name, but do not enter a password. This is redundant security as all files will be stored on that student's "G" drive and can only be accessed with their network login and password.</p> <p>Just remember that if a student does not logout of the computer in the classroom, they will be unable to login at a computer in the lab.</p>

Lesson Plan: Email Economics

Outcomes	Activity
<p>Technology: B10.1, B10.2</p> <p>Social Studies: 2.2.1, 2.3.1</p>	<p>Students will bring in from home a list of 5 food items that they like and the price that they would pay for each item.</p> <p>The students will create an email message and list the items and their prices in the message.</p> <p>The students will then send the message to 5 other students.</p> <p>The students who receive the message will reply to the sender adding their own items and prices.</p> <p>After the students receive all the information, they will then compare prices of similar items and make a decision as to what may be the best buy.</p> <p>Emphasize that the students are only able to communicate via email.</p> <p>From the information gathered from this activity, students will be able to make economic decisions on product choice and discuss the role of technology as a tool for gathering useful information.</p> <p>Extension:</p> <p>If there is more than one gr.2 class, the email may take the form of a survey in which students may seek this information from another class/school.</p> <p>Teachers may also make use of older students to assist the younger students with their email.</p> <p>For a tutorial on groupwise, visit the following website: http://www.edu.pe.ca/journeyon/pro_d_pages/gw_web/index.html</p> <p style="text-align: center;">Resources</p> <p>Netmail for Students</p>

Lesson Plan: Match the Hatch

Outcomes

Technology: (Guided) A4.3, A4.4, A4.5
(Awareness) A 4.1, B4.1, A5.1, B5.1

Science:101-7, 202-2, 203-2

Activity

In this activity, students will use the program Inspiration 7.5 to help them investigate the life cycles of various organisms.

Resources

Inspiration 7.5 software

Instructions

Students will open Inspiration 7.5 and open the symbol palette (short cut key "F8")

Students will browse through the symbol palette to find the various stages of life for a butterfly (adult and larva stage are in symbol palette) and select them by clicking.

Students will use the drawing tools in the program to recreate egg stage and pupa stage. (see examples given)

Students will use click and drag the symbols in a circle.

Students will use the "Link" to join the symbols with linking arrows in the program to indicate that life is a cycle.

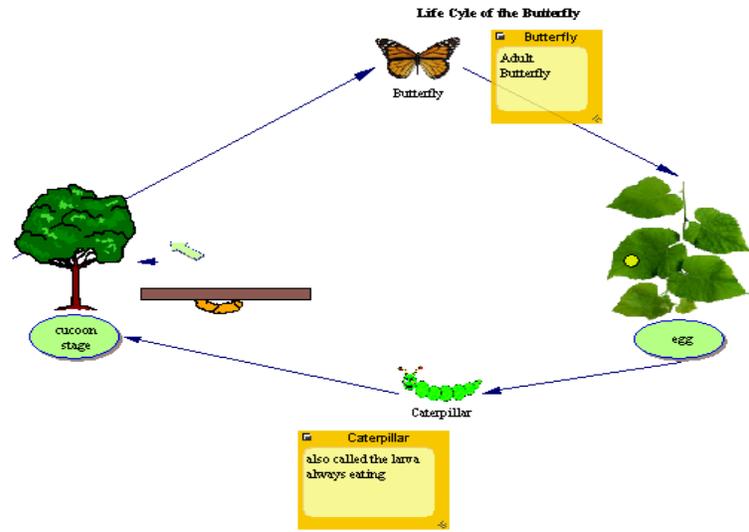
Using the "Note" utility, students will briefly explain the appearance, eating habits, behavior of each stage of the life cycle. Students may also orally describe each stage using the record feature of the program with a microphone.

Using the examples from the program, have the students sort and organize each of the symbols so that they represent the life cycles of different organisms. Students will make comparisons of the life cycles of the organisms they construct.

For further information on Inspiration 7.5, visit the following website:
http://www.edu.pe.ca/journeyon/pro_d_pages/Using_Inspiration/inspiration7.htm

Lesson Plan: Match the Hatch

Example 1

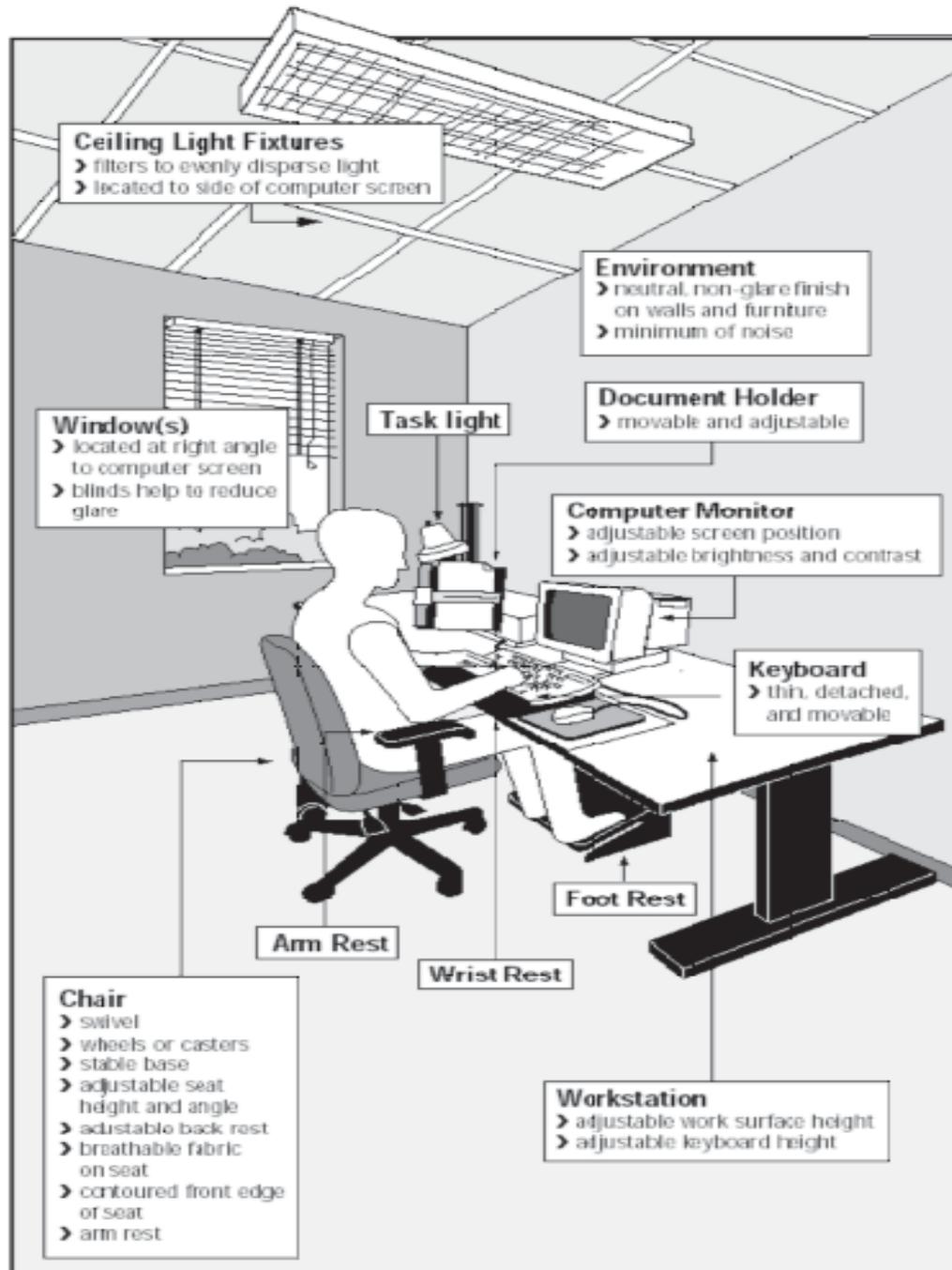


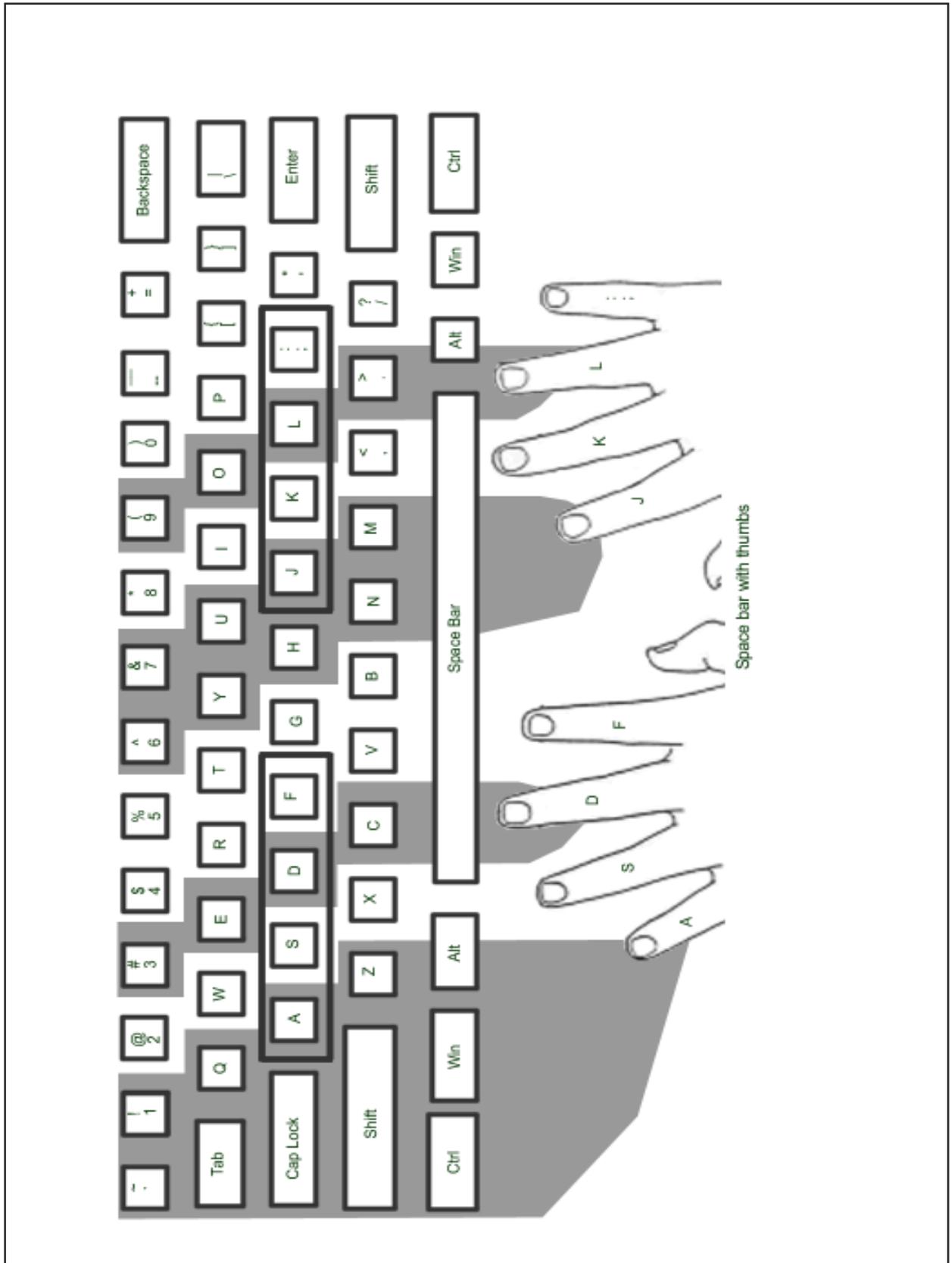
Example 2



Appendix

The VDT 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 i.e. 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 in 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 a 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