

Information Communications Technology 8-10

*Adapted, with permission from Alberta Learning,
Information and Communications Technology Program of Studies*



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Information and Communication Technology 8-10 is designed to provide Yukon students with the knowledge, skills and understanding of ICT required for them to use technology securely, creatively and independently.

ICT 8 - 10 consists of three compulsory modules and one optional unit of study. Modules 1, 2 and 3 are compulsory. In addition to the compulsory modules, twenty-seven learning outcomes have been identified to be integrated throughout the course.

- Integrated Outcomes
- # Module 1 - Web Awareness / Communications / Network Use
- # Module 2 - Keyboarding / Word Processing / Spreadsheets
- # Module 3 - Presentation / Multimedia
- # Module 4 - Optional

Within each module individual learning outcomes have been identified. Following the learning outcomes specific topics have been identified to address the learning outcomes and a list resources available to Yukon students and teachers to address the learning outcomes.

Integrated Outcomes for ICT 8 – 10

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The following learning outcomes are compulsory for Computer Literacy, Communications, Planning and Technical Skills. These outcomes are to be integrated throughout modules 1 to 3.

Computer Literacy

1. explain the concept of software and hardware compatibility
2. apply terminology appropriate to the technology being used
3. demonstrate an understanding that technology is a process, technique or tool used to alter human activity
4. describe the impact of communication technologies on past, present and future workplaces, lifestyle and the environment
5. Identify potential technology-related career paths
6. identify the cultural impact of global communication
7. evaluate the driving forces behind various technological inventions
8. explain ways in which technology can assist in the monitoring of local and global environmental conditions
9. analyze and assess the impact on society of having limitless access to information
10. identify the manner in which telecommunications technology affects time and distance

Communications

11. communicate in a persuasive and engaging manner, through appropriate forms, such as speeches, letters, reports and multimedia presentations
12. access diverse viewpoints on particular topics by using appropriate technologies
13. use information technology to find facts that support or refute diverse viewpoints
14. access, retrieve and share information from electronic sources, such as common files
15. use networks to brainstorm, plan and share ideas with group members
16. make connections among related organized data and assemble various pieces into a unified message
17. explain ways in which technology can assist in the monitoring of local and global environmental conditions

Planning

18. assemble and organize different viewpoints in order to assess their validity
19. create a plan for an inquiry that includes consideration of time management
20. articulate clearly a plan of action to use technology to solve a problem
21. identify the appropriate materials and tools to use in order to accomplish a plan of action
22. evaluate choices and the progress in problem solving, then redefine the plan of action as appropriate
23. pose and test solutions to problems by using computer applications

Technical Skills

24. develop a process to manage volumes of information that can be made available through electronic sources
25. access, retrieve and share information from electronic sources, such as common files
26. pose and test solutions to problems by using computer applications
27. demonstrate the ability to troubleshoot technical problems

Module 1

Web Awareness / Communications / Network Protocol

Module 1 consists of three distinct units of study including:

- Web Awareness
- Communications
- Network Use.

At the completion of module 1 students will:

1. plan and conduct a search, using a wide variety of electronic sources
2. refine searches to limit sources to a manageable number
3. demonstrate an understanding that information can be transmitted through a variety of media
4. understand the nature of various media and how they are consciously used to influence an audience
5. identify specific techniques used by the media to elicit particular responses from an audience
6. recognize that the ability of technology to manipulate images and sound can alter the meaning of communication
7. identify and apply safety procedures, including antivirus scans and virus checks, to maintain data integrity
8. evaluate the authority and reliability of electronic sources
9. evaluate the relevance of electronically accessed information to a particular topic
10. demonstrate the advanced search skills necessary to limit the number of hits desired for online and offline databases, for example, the use of “and” or “or” between search topics and the choice of appropriate search engines for the topic
11. use time and resources on the network wisely
12. explain the issues involved in balancing the right to access information with the right to personal privacy
13. use appropriate communication technology to elicit feedback from others
14. model and assume personal responsibility for ethical behaviour and attitudes and acceptable use of information technologies and sources in local and global contexts
15. download and transmit only materials that comply with the established network use policies and practices (educational)
16. demonstrate proficient in accessing local area network, wide area network and Internet services, including uploading and downloading text, images and video
17. access and retrieve information through the electronic network
18. understand the need for copyright legislation
19. cite sources when using copyright and / or public domain material

20. perform routine data management of personal files
21. understand the risks associated with posting personal information on the Internet (blogs, etc.)

I A -Web Awareness and Internet Safety

1. Personal privacy/information
2. Awareness of access to personal information online/security
3. Blogs - risks of posting personal information
4. Spoofing of e-mail and web sites
5. Encrypted sites for reliable e-commerce
6. Authentication of online materials
7. Marketing/Advertising online
8. Online search engines and effective search techniques

Resources for Module IA.

Media Awareness Resources

- + Reality Check
- + Media and Race
- + Deconstructing Online Hate

1 B. Communications and First Class Orientation

1. Introduction to login procedures for YESNet's First Class Communications System
2. Appropriate use of First Class
3. Effective use of e-mail for academic use
4. Awareness of email systems and privacy
5. Sharing and transferring files from home and school

Resources for Module 1B.

- o Login information for configuration of YESNet's First Class Client

1 C. Network Use / YESNet's Acceptable Use Policies

1. Familiarity and compliance with YESNet's Acceptable Use Policy for First Class, Internet Use, Web Publishing and file storage
2. Acceptable use of the network, e.g. peer-to-peer downloads
3. Acceptable data storage on YESNet (copyright)
4. File formats and extensions
5. Efficient file management (Documents, email, multimedia)
6. Central storage and file sharing

Resources for Module 1C.

- o YESNet Acceptable Use Policy
- o YESNet's Web Publishing Policy

Module 2

Keyboarding / Word Processing / Spreadsheet

Module 2 consists of three distinct units of study including Keyboarding, Word Processing and the use of Spreadsheets. At the completion of module 2 students will:

1. design a document, using style sheets and with attention to page layout, that incorporates advanced word processing techniques, including headers, footers, margins, columns, table of contents, bibliography and index
2. use advanced word processing menu features to accomplish a task; for example, insert a table, graph or text from another document
3. revise text documents based on feedback from others
4. analyze and synthesize information to create a product
5. design, create and modify a database for a specific purpose
6. design, create and modify a spreadsheet for a specific purpose, using functions such as SUM, PRODUCT, QUOTIENT and AVERAGE
7. use a variety of technological graphing tools to draw graphs for data involving one or two variable
8. integrate information from a database into a text document
9. integrate database reports into a text document
10. emphasize information using placement and colour
11. identify risks to health and safety that results from improper use of technology, including posture and keyboarding techniques
12. identify and apply safety procedures required for the technology being used
13. be encouraged to use proper keyboarding techniques whenever using technology
14. type a minimum of 20 wpm
15. identify patterns in organized information

2 A. Keyboarding

1. ergonomics
2. reinforce the need to use proper keyboarding technique whenever using technology
3. work cooperatively with classroom teachers to identify curriculum assignments that may be used as a product when teaching report formatting
4. students will type a minimum of 20 wpm, using proper touch typing technique (pretest for skill base)

Resources for Module 2A

- All the Right Type
- Tap Touch (EET)

2 B. Word Processing

1. integrate word processing formatting with assignments needing to be prepared for other classes
2. saving your work
3. file types (apple works, word, rtf, etc)
4. first class documents (proper file extensions)
5. think free office – online application
6. simple text formatting

Resources for Module 2B.

- o Microsoft Word
- o ThinkFree Office

2 C. Spreadsheets/Database

1. Creation of spreadsheet/database for specific purposes (data collection)
2. Relative and absolute cell references
3. Using spreadsheet data to create a chart
4. Creation of databases for a specific purpose

Resources for Module 2C.

- o Microsoft Excel
- o ThinkFree Office
- o AppleWorks Database

Module 3 Presentation / Multimedia

Presentation and Multimedia are compulsory units of study for Module 3. Additional topics for this module have also been identified.

At the completion of module 3 students will:

1. demonstrate an understanding that information can be transmitted through a variety of media
2. identify and understand the nature of various media and how they are consciously used to influence an audience
3. identify specific techniques used by the media to elicit particular responses from an audience
4. recognize the ability of technology to manipulate images and sound to alter the meaning of a communication
5. connect and use audio, video and digital equipment
6. create multimedia presentations that take into account audiences of diverse size, age, gender, ethnicity and geographic location
7. create multimedia presentations that incorporate meaningful graphics, audio, video and text gathered from remote sources
8. emphasize information using placement and colour
9. access and retrieve information through the electronic network
10. create a multi-link webpage

The following two units of study are compulsory for Module 3:

- Powerpoint and/or
- Keynote

A. Digital presentation

Resources for Module 3A.

- o PowerPoint
- o ThinkFree Office Presentation

B. Digital Photography

- Camera setting
- Data transfer
- Cropping and rotating

Resources for Module 3B

- o iPhoto
- o Fireworks
- o Photoshop
- o Photoshop Elements

C. Optional / Additional Units for Module 3

1. Digital Video
2. Camera techniques
3. Storyboarding - planning
4. Importing - basic editing/storage
5. Exporting/sharing

6. Web Design
7. Basic HTML
8. HTML - wysiwyg - tools

9. Digital Audio
10. Animation
11. Video Conferencing
12. Principle of layout and design
13. Peripheral devices
14. Electronic journals/Blogs

Module 4

Optional ICT Units

Module 4 consists of optional units of study for ICT 8 - 10. Learning outcomes identified for the optional module are:

1. demonstrate an understanding that information can be transmitted through a variety of media
2. demonstrate the ability to control devices electronically
3. create multimedia presentations that take into account audiences of diverse size, age, gender, ethnicity and geographic location
4. create multimedia presentations that incorporate meaningful graphics, audio, video and text gathered from remote sources
5. connect and use audio, video and digital equipment
6. create multimedia presentations that take into account audiences of diverse size, age, gender, ethnicity and geographic location
7. create multimedia presentations that incorporate meaningful graphics, audio, video and text gathered from remote sources
8. emphasize information using placement and colour

Optional Units Module 4

1. Hardware
 - Basic maintenance (replace memory, etc.)
 - Basic networking
 - Connecting computers
 - Peripheral use (find drivers)
2. Software
 - Integration with other classes
 - Real world use
3. Flash : animation, programming
4. Animation: Clay, Stop motion, 3D animation

5. Video
6. Audio
7. Drafting
8. Programming
9. Game building
10. Digital art (paint and draw)
11. Web: html
12. Layout/ design
13. Print design
14. Network security
15. Telephony (e.g. Skype)
16. Emerging technologies
17. Other

Resources for Module 4

- o iMovie
- o Final Cut Express
- o Dreamweaver
- o Flash
- o Python
- o GarageBand

ICT 8 - 10 Committee Members

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