

Learning Technology

Overview

Learning Technology [LT] involves applying all that we know about human learning, to develop strategies (pedagogy) and use tools (computers) to enhance learning. In an ever-changing technological world, continually updating curriculum is essential in preparing students as life-long learners.

Learning Technology is a cross-curricula component of the *NT Curriculum Framework* (NTCF) and refers particularly to computers and peripherals, and computer-mediated communications. In all Learning Areas and EsseNTial Learnings, the role of LT falls into one or more of the following domains.

Problem-solving and Decision-making through Research allows learners to

- reinforce skills related to literacy and numeracy using the six steps of the Information Literacy process - defining, locating, selecting, organising, presenting and evaluating
- build on the Information Literacy Process by gathering data and information using electronic means, eg Internet, CD ROMS, multimedia, encyclopedias, databases
- make decisions or answer hypothetical questions, eg by generating spreadsheets, databases, concept maps or expert systems.

Communicating through Presentation, Publication or Performance empowers learners to

- design, create or invent, eg using drawing or computer-aided drafting software
- communicate or publish, eg using word processing, writing tools, web composing, email programs, presentation or graphic software applications
- record performances, eg video, digital images, sound recordings.

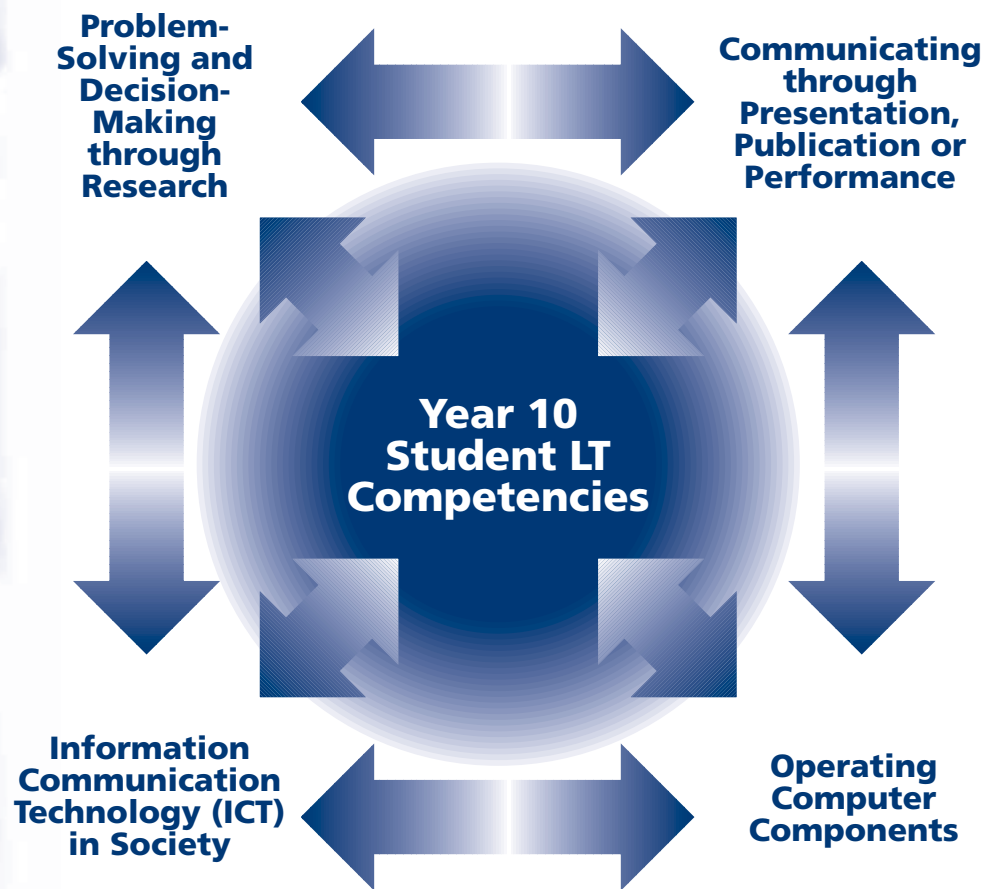
Operating Computer Components provides learners with

- objects of study, eg software, operating systems, file management, programming and hardware, input and output devices
- operation skills necessary for an effective and efficient functional level.

Information Communication Technology (ICT) in Society is the catalyst for learners to

- learn through an online learning environment
- learn as part of a community or micro-world in virtual reality simulations
- gain an appreciation and understanding of the impact of ICT in society relating to ethical and human issues.

All four domains have 'end point' outcomes that indicate expected achievement levels for Year 10 students and that will form the basis of Year 10 Student LT Competencies. Each outcome has developmental indicators through all Band levels, allowing learners to move toward the exit outcomes at varying rates, and to use a range of learning styles. The NTCF makes LT outcomes explicit. These domains should not be taught in isolation but together to develop confidence and an awareness of technological versatility to achieve Year 10 Student LT Competencies.



Domains	Outcomes
<p>Problem-Solving and Decision-Making through Research [LT-R]</p> <p>Enables learners to use Learning Technology to examine, question and devise situations to help solve problems. The Information Literacy process is developed as learners access, select and evaluate electronic information sources. Learners explore, experiment and program with relevant software to enhance questioning techniques, problem-solving skills and decision-making strategies.</p>	<p>Learners</p> <p>R1 use appropriate and effective search strategies to access electronic information</p> <p>R2 critically evaluate, scan and select relevant information from electronic sources</p> <p>R3 record and manipulate information electronically</p> <p>R4 use technological resources that require problem-solving skills, decision-making strategies and questioning techniques.</p>
<p>Communicating through Presentation, Publication or Performance [LT-P]</p> <p>Focuses on the use of Learning Technology to create and share information through contribution to, an appreciation of, and participation in, the publishing process. The opportunity for individual, local and global expression and sharing is enhanced through learning technologies. Learners manipulate and combine text, graphics, sound, moving images, organised data and hyperlinks.</p>	<p>Learners</p> <p>P1 select appropriate tools and skills to design and produce a multimedia presentation or performance</p> <p>P2 interact with others locally and globally using a range of technologies</p> <p>P3 competently use a range of software that creatively enhances presentation, performance or communication of information.</p>
<p>Operating Computer Components [LT-O]</p> <p>Develops essential skills for operating computer equipment, programs and systems. Learners develop confidence and an awareness of the limitations and opportunities associated with Information Communication Technology.</p>	<p>Learners</p> <p>O1 independently operate computer equipment and associated peripherals</p> <p>O2 efficiently use programs and systems</p> <p>O3 identify limitations and opportunities associated with using Information Communication Technology in relation to needs</p> <p>O4 develop a proactive model for optimising computer functionality including regular maintenance, file management and ergonomics.</p>
<p>Information Communication Technology (ICT) in Society [LT-S]</p> <p>Requires learners to practise responsible use of technology systems, information and software, while developing positive attitudes that support life-long learning, adaptability and innovation. An understanding of the basic issues associated with intellectual property, copyright and plagiarism is developed. Learners increase their awareness of ICT in an ever-changing society by gaining an understanding of social, cultural and ethical issues related to Learning Technology.</p>	<p>Learners:</p> <p>S1 comply with established Information Communication Technology expectations and protocols at various levels ranging from school to global contexts</p> <p>S2 identify and value the intellectual property associated with Learning Technologies and demonstrate ethical principles</p> <p>S3 critically analyse the place and potential impact Information Communication Technology has on society.</p>

Links

Essential
Learnings

Con 1, Con 2

Learning
AreasTechnology
and Design**[R 1] Learners use appropriate and effective search strategies to access electronic information.**

Learners demonstrating evidence of **Band 5** for example

- use advanced search techniques to minimise hits on requests, eg use of Boolean operators: and, or, not, +, wildcards, eg learning+technology
- select information from primary and secondary electronic sources using advanced search techniques
- access advanced functions of meta search engines, to effectively gather appropriate information, eg Copernic, Dogpile.

Learners demonstrating evidence of **Band 4** for example

- locate web sites using a range of methods, eg links, URL's, bookmarks, search engines
- search the Internet for web sites that suit selected learning outcomes
- debate the advantages and disadvantages associated with searching for information electronically **[Col 3]**
- use collaborative electronic tools to investigate curriculum related problems or issues, eg e-learning environments **[Col 3]**
- select the most appropriate search engine to gather information quickly and efficiently
- use meta search engines to maximise findings, eg Copernic, Dogpile
- use some advanced search strategies for limiting or increasing search engine results, when directed, eg narrower or broader keywords, synonyms, Boolean operators.

Learners demonstrating evidence of **Band 3** for example

- use appropriate terminology when using search engines
- read headings and blurbs on search engine results to determine relevance of links
- explain some advantages and disadvantages associated with searching for information electronically
- use key words to locate relevant information using various electronic resources, eg library catalogue, Internet
- use simple search engines, eg Yahoooligans
- select and use appropriate technology tools and resources to accomplish a research task.

Learners demonstrating evidence of **Band 2** for example

- suggest words required to effectively search electronic sources, eg library catalogue, Internet
- use menus and icons to locate relevant information from familiar sources, eg CD ROMs
- locate book marked or linked web sites
- conduct simple searches employing various search engines and using single or combined key words
- use 'browse' mode available on various search engines, eg Yahoooligans
- list advantages and disadvantages associated with searching for information electronically **[T&D]**
- use content specific electronic sources to support and enhance research, eg simulations, web sites, CD ROMs
- use technology to locate information from various sources, eg web favourites, web links, library catalogue, CD ROM menus
- use appropriate technology tools and resources to accomplish research tasks **[T&D]**.

[R 1] Learners use appropriate and effective search strategies to access electronic information.

Links

Essential Learnings

Con 1, Con 2

Learning Areas

Technology and Design

Learners demonstrating evidence of **Band 1** for example

- conduct a topic or keyword search to locate relevant information in a library catalogue, with some assistance
- suggest words to use when conducting an Internet search
- discuss ways to search for information using various forms of Learning Technology **[Col 1]**
- participate in research activities where the teacher models locating web sites using various strategies, eg simple search, URL, links, bookmarks
- use technology to locate information from various sources, with assistance, eg links or book marked websites, library automated catalogue, CD ROM
- use topic specific multimedia programs and encyclopedias to gather information, with assistance.

Learners demonstrating evidence of **Key Growth Point 3** for example

- conduct a simple topic or single key word search of a library catalogue to locate relevant resources, with teacher assistance
- using teacher talk, retell the steps of how to access information after searching for a given topic
- work together to decide on questions related to a given topic to be used to aid searches **[T&D]**.

Learners demonstrating evidence of **Key Growth Point 2** for example

- choose a cell, icon, key, button or switch to hear information stored electronically, eg cell on electronic communication device
- suggest key words that the teacher can use to search for information on a given topic
- select a topic to search electronically, eg a library catalogue, access bookmarked resources.

Learners demonstrating evidence of **Key Growth Point 1** for example

- select a cell, icon, key, button or switch to hear the information stored electronically, with assistance, eg cell on electronic communication device.

Links

EsseNTial Learnings

Con 1, Con 2

Learning Areas

Technology and Design

[R 2] Learners critically evaluate, scan and select relevant information from electronic sources.

Learners demonstrating evidence of **Band 5** for example

- sensitively select electronically accessed information relevant to a particular topic
- assess the authority, reliability and validity of electronically accessed information
- critically appraise electronic data by using the Information Literacy process, ie define, locate, select, organise, present and evaluate
- record a bibliography of sources including title, author, URL, date of access, date of creation and copyright details.

Learners demonstrating evidence of **Band 4** for example

- evaluate the relevance of electronically accessed information applicable to a particular topic
- evaluate the authority and reliability of electronic sources
- analyse multiple sets of information and reject low quality or unverifiable data **[T&D-Cri]**
- select sites aimed at appropriate level for own learning and needs
- create a reference list of electronic sources, eg title, author, URL, date created, last modified.

Learners demonstrating evidence of **Band 3** for example

- recognise that not all websites are credible and that Universal Resource Locators (URL's) can help determine validity of source based on the suffix or file extensions, eg '.gov' means government resources, '.edu' means educational or research sites, '.com' means commercial sites
- recognise that information serves different purposes and that data from electronic sources may need to be verified to determine accuracy or relevance
- determine the purpose of websites for bias or agendas, detecting obvious viewpoints, before selecting relevant information
- compare and contrast information from similar types of electronic sources **[T&D]**
- compare and use various electronic and non-electronic sources of information **[T&D]**
- visually scan on-screen electronic sources for relevant information using recording software where appropriate, eg word processing, templates, note pad
- use visual skimming and scanning skills to assess readability and relevance of electronic sources, eg URLs to help validate reliability of source
- evaluate the appropriateness and accuracy of information located on electronic sources **[T&D]**
- record resources accessed to form the basis for a reference list, eg title, author, URL **[T&D]**.

Learners demonstrating evidence of **Band 2** for example

- evaluate credibility through simple checklists, eg Section 6 of *Internet Insights for Teachers 2001* by Judith Evans
- determine the appropriateness of information to a specific topic or question located on an electronic source, with assistance **[T&D]**
- participate in teacher led discussion on the purpose of various web sites, eg personal, educational, propaganda, persuasion
- compare information found in various texts and electronic sources looking for discrepancies or variations, with guidance, before selecting relevant information
- scan on-screen, electronic sources for relevant information without printing
- compare and examine information gathered through research using software and web based sources
- analyse and evaluate various information contained on websites for research purposes
- use software designed to assist in organising tasks, eg Kidspiration
- highlight, copy and paste relevant information in small chunks from electronic sources to a word processing document
- use email to gather and contribute information
- list electronic resources accessed, eg URL, date accessed.

Problem-Solving and Decision-Making through Research [LT-R]

Development

[R 2] Learners critically evaluate, scan and select relevant information from electronic sources.

Links

Essential Learnings

Con 1, Con 2

Learning Areas

Technology and Design

Learners demonstrating evidence of **Band 1** for example

- identify whether an electronic source is fact or fiction
- judge the appropriateness of an electronic source in relation to a specific topic or question, eg pictures, headings, key words [T&D]
- classify teacher chosen websites according to a set criteria
- view and compare various Internet sites related to a similar theme/topic
- skim electronic sources for relevant keywords and graphics
- retrieve relevant information from a database, CD ROM, or other shared file
- use an application to represent and map concepts (defining), eg Kidspiration, simple drawing programs
- discuss possible electronic sources to find relevant information for a given topic
- analyse and discuss various teacher selected websites and the information they hold for research related purposes.

Learners demonstrating evidence of **Key Growth Point 3** for example

- judge the appropriateness of electronic resources, with assistance, eg pictures, headings, key words [T&D]
- view various teacher selected Internet sites and discuss similarities and differences between sites
- use simple visual scanning skills to make keyword selection using electronic sources, eg multimedia software, age appropriate web sites
- view, discuss and compare various teacher selected websites related to similar topics.

Learners demonstrating evidence of **Key Growth Point 2** for example

- view and comment on various teacher selected Internet sites related to a given topic, eg 'This one has interesting pictures.'
- use simple visual scanning skills to choose from a range of electronic sources, eg answers to simple questions, appropriate greetings, express feelings and needs.

Learners demonstrating evidence of **Key Growth Point 1** for example

- use simple visual scanning skills to choose from a range of electronic sources, with assistance, eg teacher asks a question relating to visuals on the screen and the student answers simple questions, uses appropriate greetings, expresses feelings and needs.

Links

[R 3] Learners record and manipulate information electronically.**Essential Learnings**

Creative Learner, Col 1

Learning Areas

Technology and Design

Learners demonstrating evidence of **Band 5** for example

- demonstrate competent use of word processing conventions to independently publish a document, paying attention to layout that incorporates advanced functions, eg use of templates/masters, style sheets
- use advanced software packages to input text or data, eg web design, graphic manipulation software, desktop publishing
- combine different documents to manipulate information, eg spreadsheet into a word processing document, mail merge
- use advanced functions in software programs, eg style sheets, track changes, different formats for translation of data into graphic representations
- design, create and modify a database demonstrating advanced functionality to record and manipulate information
- interact with concept mapping software to analyse a social issue, eg Inspiration, Mind Manager
- manipulate data by using charting and graphing to test inferences and probabilities **[T&D-De]**
- investigate and solve problems when organising and manipulating information, eg concept mapping tools **[T&D-Pr]**.

Learners demonstrating evidence of **Band 4** for example

- select appropriate programs to input text or data for different purposes, eg word processor, spreadsheet, web page
- apply effective word processing practices to format and publish text and graphics, eg format conventions, margins, tables, layout, style
- use programs to present information in an electronic form for a given audience, eg web design software
- use a range of tool bar functions to manipulate data, eg sorting, graphing
- use a spreadsheet program to display, interpret and modify graphs
- design, create and modify a database to record and manipulate information for a specific purpose
- interact with concept mapping software to plan and revise essays and speeches, eg Inspiration.

Learners demonstrating evidence of **Band 3** for example

- record relevant information located in electronic sources using electronic modes, eg templates, word processing, note pad
- use a range of technology tools to process, capture and record information, eg databases, spreadsheets, charts, word processor, digital camera
- design, develop and organise a simple database, with assistance
- compose, revise and edit word processing documents using formatting conventions, eg tabs, columns, graphics, text wrap, headers and footers
- use toolbar functions to modify or adapt data for a particular purpose, eg highlighting, bold, italicised, cutting
- use spreadsheet programs to display data and construct simple graphs from raw data for further purposes
- describe the functions of familiar programs to appropriately manipulate and present information, eg cutting and pasting, enlarging an image
- discuss the recording format of electronically sourced information and its usefulness, eg website, CD ROM, digital images **[Col 1]**
- manipulate concept mapping software to assist in manipulating information, eg Inspiration, templates **[T&D]**.

[R 3] Learners record and manipulate information electronically.**Links****EsseNTial Learnings**

Creative Learner, Col 1

Learning Areas

Technology and Design

Learners demonstrating evidence of **Band 2** for example

- demonstrate the basic skills involved in self editing/correction during word processing, eg spell check, thesaurus
- use tables to record selected information
- record information electronically using a familiar program in a clear and precise way, for others to view by using self editing techniques
- design and develop a simple class database related to class work or interest area, eg Hyperstudio, Claris Database
- use word processing conventions to format and publish original text, eg editing tools, alignment, copy/paste, spacing
- explain different ways that information is recorded electronically and give concrete examples of certain program usage, eg presentation software, web design software
- use and explain the purpose of tools and skills to manipulate documents in a variety of ways, eg copy, paste, cut, insert, move
- use appropriate software to assist with simple concept mapping (defining), eg Kidspiration, KidPix, draw/paint.

Learners demonstrating evidence of **Band 1** for example

- use basic word processing conventions to present simple stories, eg punctuation keys, text wrap, fonts and styles
- develop self-editing skills on the computer, eg editing from the screen
- record information electronically in simple language and plain text for others to view
- discuss ways that information is presented in various electronic forms **[T&D]**
- use software to express words and pictures, eg KidPix, drawing, paint
- experiment and use simple functions, eg copy, paste, cut, move.

Learners demonstrating evidence of **Key Growth Point 3** for example

- use a word processing document to record own name and a simple sentence with appropriate conventions, eg shift for capitals, space bar
- discuss the recording format of electronically sourced information, eg web site, digital images, CD ROM
- recognise, establish and choose ways to edit or delete information, eg backspace, delete, cut tool, arrow keys, enter key
- explore and experiment with various software that enables presentation of information, eg KidPix, painting, drawing.

Learners demonstrating evidence of **Key Growth Point 2** for example

- use a word processing document to record simple information, eg recording name, address and age, single words to accompany illustrations
- use icons on desktop
- use the mouse to highlight specific areas and, with guidance, follow the steps to delete or change the information in various simple, single step ways
- create a drawing or text for printing purposes
- collect printed items from printer.

Learners demonstrating evidence of **Key Growth Point 1** for example

- create a drawing or text for printing purposes, with assistance
- recognise mouse to screen link
- use icons on desktop, with assistance
- attend to screen
- use mouse, switch, keyboard, extended keyboard appropriately, with assistance
- use an adaptive word processing program to record simple information, with assistance, eg name, address, age
- collect printed item from printer, with assistance.

Links

[R 4] Learners use technological resources that require problem-solving skills, decision-making strategies and questioning techniques.**Essential Learnings**

In 1, In 3,
Cr 1, Cr 2,
Con 1, Con 2

Learning Areas

Technology
and Design

Learners demonstrating evidence of **Band 5** for example

- evaluate the appropriateness of the Learning Technology used to investigate or solve a problem
- use various forms of technology to solve numerical problems, eg sort data, organise and classify information, graphic calculators, spreadsheets, databases
- investigate and solve problems of prediction, calculation and inference, eg simulation games
- use graphic organisers to present connections between ideas and information in a problem-solving environment, eg mind mapping, flow charts
- design and create a 'scaffold' highlighting how a software application can be used to meet task requirements.

Learners demonstrating evidence of **Band 4** for example

- identify appropriate electronic materials and tools that can be used to accomplish a plan of action
- evaluate problem-solving choices, then redefine the plan of action as appropriate
- articulate clearly a plan of action that uses Learning Technology to solve a problem
- create a solution to a problem using software to demonstrate the solution, eg simulation programs
- create a simulation or model by using technology that permits inferences to be made
- pose and test solutions to problems by using computer applications, eg Computer Aided Design (CAD) simulation software
- participate in online projects that involve decision-making and problem-solving to reach an end point, eg Web Quests, ASX Schools Sharemarket Game **[Col 3]**.

Learners demonstrating evidence of **Band 3** for example

- compare various forms of technology for appropriateness in problem-solving
- list steps in a plan of action using technology to help in the decision-making process
- participate in online projects to locate, gather and contribute information, including web and email based projects **[Col 3]**
- generate alternative solutions to problems by using Learning Technology to facilitate the process.

Learners demonstrating evidence of **Band 2** for example

- choose most appropriate program to complete a task and use a selection of tools to achieve project goals
- make a variety of decisions in relation to a project and apply related problem-solving strategies
- participate in online projects to locate, gather and contribute information **[Col 3]**
- explain how to perform a task using a technological resource, clearly outlining the steps involved
- evaluate and answer questions based on a self produced Learning Technology enhanced task.

[R 4] Learners use technological resources that require problem-solving skills, decision-making strategies and questioning techniques.

Links

EsseNTial Learnings

In 1, In 3,
Cr 1, Cr 2,
Con 1, Con 2

Learning Areas

Technology
and Design

Learners demonstrating evidence of **Band 1** for example

- complete a task using a selection of electronic tools considered most appropriate for the designated task
- make decisions in relation to a teacher directed task and apply related problem-solving strategies, eg complete a pictograph with given data and create a variety of ways to complete a task with set restrictions (such as create different houses using a paint program, make a house using only shapes)
- respond to questions about self produced Learning Technology enhanced tasks
- ask questions about a peer produced Learning Technology enhanced task, eg 'Can you show me how you added the pictures?'. **[Col 3]**

Learners demonstrating evidence of **Key Growth Point 3** for example

- draw/paint a self chosen picture using a selection of paint tools, with assistance
- use computer software that fosters creativity, eg KidPix, Zoombinis
- make decisions in relation to a teacher directed task and apply related problem solving strategies, eg type your name and decorate around it using KidPix
- share some of the steps involved in producing a Learning Technology enhanced task, eg 'First I drew a box then I used colour to put inside it.' **[Col 3]**

Learners demonstrating evidence of **Key Growth Point 2** for example

- explore with open ended software, eg KidPix
- draw/paint a picture using basic paint/draw tools under teacher direction, eg pencil or brush only
- participate in a group task under teacher direction to make decisions and use problem-solving strategies that are directly related to set task **[Col 3]**
- ask questions of a peer produced Learning Technology enhanced task, eg 'How long did it take you to create?'

Learners demonstrating evidence of **Key Growth Point 1** for example

- experience open ended software, with assistance.

Links

[P 1] Learners select appropriate tools and skills to design and produce a multimedia presentation or performance.**Essential Learnings**

Creative Learner,
Con 1, Con 2

Learning Areas

The Arts-
CrA/Me,
Technology
and Design

Learners demonstrating evidence of **Band 5** for example

- select and use appropriate software to achieve specific effects within a presentation
- selectively use images, sounds and text to create a polished multimedia presentation
- choose an appropriate software application to design electronic presentations suited to the context/task, eg Power Point , Star Office Impress
- produce and arrange electronic data/information using multimedia software, eg Star Office Impress, Power Point, Hypercard, Dreamweaver, Flash
- record, edit and manipulate a digital video recording of a performance to optimise viewing of the presentation.

Learners demonstrating evidence of **Band 4** for example

- access and use software features to add specific effects to a presentation or performance
- select and manipulate appropriate images and sound to enhance a presentation
- select appropriate software to produce and present a multimedia presentation, eg Star Office Impress, Claris Office slide show
- use a digital video device to record a performance for a presentation
- evaluate the features of a good performance or presentation, possibly accessing digital recordings **[T&D-Cri]**.

Learners demonstrating evidence of **Band 3** for example

- operate a simple multimedia program to create texts that can be transferred and presented in electronic format
- experiment with various electronic presentation applications, database, slide shows, graphics, tables to manipulate and present data
- record on digital video, a performance for later retrieval of data
- select appropriate information/data that can be used and modified using tools within a specific multimedia program, eg cut and paste from one document to another, add sound recordings **[T&D]**
- identify tools within an application that are best suited for specific tasks **[T&D]**.

Learners demonstrating evidence of **Band 2** for example

- select and use various electronic tools or software appropriate for a set task **[T&D]**
- design and create a multimedia presentation, independently, eg make a poster advertising an event using text and images **[T&D]**
- save, copy, cut or move pictures into word processing documents to enhance the presentation of a designated project, eg use a digital camera to take appropriate pictures for inclusion in presentation
- create own sound recording to use in slide show.

Learners demonstrating evidence of **Band 1** for example

- use various tools and programs separately to design and create a designated task, eg make a poster promoting an event **[T&D]**
- contribute to a group project using a variety of multimedia tools **[Col 3]**
- use paint/draw tools to creatively produce own picture
- use standard computer generated pictures to creatively produce own design
- explain the printing dynamics of a picture, eg large areas of black do not print well
- recognise and select pictures that can be added to documents to enhance ideas and information for presentation purposes, use electronic resources to present researched information, eg digital camera, class web site.

[P 1] Learners select appropriate tools and skills to design and produce a multimedia presentation or performance.

Links

Learners demonstrating evidence of **Key Growth Point 3** for example

- use various tools and programs to illustrate a given topic, eg frogs: draw frogs in paint/draw program, find frog clipart, choose fonts and words to describe frogs
- experiment using paint/draw tools to create own picture
- experiment with computer generated pictures to create own design
- use various techniques to create a computer generated picture
- design and create two dimensional pictures to colour or paint using a drawing program, eg illustrate a narrative, show feelings, favourite foods.

Learners demonstrating evidence of **Key Growth Point 2** for example

- select pictures from a graphics program to represent a story, eg KidPix
- use several tools in a paint/draw program to design and illustrate a given topic **[T&D]**
- select a pictograph or Compic to add text to a picture/photo/drawing program.

Learners demonstrating evidence of **Key Growth Point 1** for example

- use tools and skills within a paint/draw program, with assistance
- select a pictograph to add text, with assistance
- use the mouse to 'paint' a picture to be part of a multimedia presentation, with assistance, eg Switch Basics, Reader Rabbit Toddler.

EsseNTial Learnings

Creative Learner, Con 1, Con 2

Learning Areas

The Arts-CrA/Me, Technology and Design

Links

[P 2] Learners interact with others locally and globally using a range of technologies.**EsseNTial Learnings**

Collaborative Learner, Con 1, Con 2

Learning Areas

The Arts

Learners demonstrating evidence of **Band 5** for example

- collaborate in online projects that involve integrating data from different places and incorporating it into a presentation/project
- use all email functions to efficiently communicate with others
- use appropriate netiquette for real-time online communication
- use the NT Schools Portal as a primary means of retrieving and storing work from outside the school environment
- create a web site that provides information to, and potential interaction with, the global community about a specific topic or thing **[Arts-Me]**.

Learners demonstrating evidence of **Band 4** for example

- participate in online projects where information about individuals and/or the community is communicated to students in other areas
- maintain a shared folder of data recorded through brainstorm/collaboration to enhance sharing information and communication with peers
- use the attachments function to transfer documents through email within and outside the school environment
- identify when email is the most appropriate form of communication
- use collaboratively agreed 'netiquette when communicating electronically
- identify and use the most appropriate means of delivering electronic information to a particular audience or target group, eg using the Portal drop box function to submit work as opposed to using floppy disc or email
- decide how to use the NT Schools Portal to disseminate school-wide based student information related to learning
- use a school based Intranet as a primary means of retrieving, reading and storing information
- create Intranet pages informing others of information current to learning or an area of interest **[Arts-Me]**.

Learners demonstrating evidence of **Band 3** for example

- participate in online curriculum projects that promote sharing, gathering and communicating, eg Webquests, EdNA Projects
- access and add to information stored in shared folders for use by peers
- debate the advantages and disadvantages of communicating with others electronically
- compose, send and receive email for various educational purposes
- create rules for appropriate netiquette when communicating online
- use address book and contacts functions within an email browser to efficiently send, store and manage email communication
- investigate and describe the capabilities for communication using the NT Schools Portal for classroom based communication
- collaborate with a range of others relating to a particular topic using email facilities available through the NT Schools Portal
- publish personally relevant web pages on the school Intranet, eg My Poems, About Me
- help to design and construct a class web site for publication on the Internet **[Cr 1] [Arts-CrA]**.

Learners demonstrating evidence of **Band 2** for example

- plan individual designated recipients for email, with assistance
- participate in class online projects using the Internet and email
- describe the email process

Communicating through Presentation, Publication or Performance [LT-P]

Development

[P 2] Learners interact with others locally and globally using a range of technologies.

- compose, send and receive email for various curriculum purposes, eg information gathering/sharing, Book Raps, Travel Buddies
- discuss the advantages and disadvantages of communicating with others electronically
- share electronically gathered information for group tasks
- use the NT Schools Portal to communicate using the email function locally and globally
- contribute to class web publishing on Intranet or Internet **[Arts-SkP]**.

Learners demonstrating evidence of **Band 1** for example

- participate in class programs that require composing, sending and receiving email, eg E-Pals, Book Raps
- discuss ways to communicate with others using various forms of Learning Technologies
- share ideas about electronically producing information
- send email by following a process set by the teacher, eg writing rough draft, typing it on computer, have teacher assist in sending email to designated recipient
- choose people to communicate with globally, using various sources
- outline the steps involved in sending an email to another person **[In 1]**
- work together in a group to design Internet/Intranet page for others to view **[Arts-SkP]**.

Learners demonstrating evidence of **Key Growth Point 3** for example

- participate in class lessons with teacher modelling composing, sending and receiving email, eg Book Raps, Travel Buddies
- discuss ways to communicate using electronic information, eg the Internet is a means of local and global communication, email
- contribute to producing class Intranet page, eg working with a Buddy class to create own page
- make suggestions about information that is acceptable to use in emails
- outline some of the steps involved in sending an email to another person **[In 1]**
- identify some advantages associated with using Information Communication Technology to communicate with others
- collaborate with a peer to produce an electronic product and share ideas **[Arts-SkP]**.

Learners demonstrating evidence of **Key Growth Point 2** for example

- discuss information or images received via email as a means of communication with another class of similar age in another school/state/country, eg E-Pals organised and maintained by the teacher/assistant
- participate in a group to send an email to another person
- contribute as a class to compiling an email, eg collaborative compilation for teacher to send to designated recipient
- suggest ways that Information Communication Technology can be used to communicate with others
- view local Intranet pages designed and created by other students within the school community.

Learners demonstrating evidence of **Key Growth Point 1** for example

- use a speech output device, eg Dynavox, text/symbol to speech software or switch, to convey a simple (one unit) message
- gain the attention of a peer or adult while interacting with learning technology, eg turn head towards teacher after hearing speech output when a switch is hit, speak to peer during a computer game/simulation.

Links

Essential Learnings

Collaborative Learner, Con 1, Con 2

Learning Areas

The Arts

Links

Essential Learnings

Collaborative Learner, Con 1, Con 2

Learning Areas

The Arts-SkP/CrA

[P 3] Learners competently use a range of software that creatively enhances presentation, performance or communication of information.

Learners demonstrating evidence of **Band 5** for example

- create, select and use appropriate software to manipulate and present data using advanced functions, eg database, spreadsheets
- select from a range of tools and applications appropriate for supporting creativity in presentations
- explore new software products to determine their suitability for a task, independently
- prepare a basic resumé, curriculum vitae or personal data sheet that is developed and stored electronically **[In 6] [In 2]**
- plan, develop and create an interactive web site requiring interaction to collect and disseminate information
- produce and maintain calendar and diary functions within an electronic organiser
- use the template function within word to create memos and faxes that assist in an efficient communication process
- use hyperlinks within documents to link with files that exist outside the current document
- incorporate files created using different programs within a current document, eg importing spreadsheets into a word processing document.

Learners demonstrating evidence of **Band 4** for example

- apply program specific techniques to clearly present data information within spreadsheets
- select from a range of tools and applications to enhance flexibility in presentation styles
- design, create and modify a database for a specific purpose
- create or modify a spreadsheet for simple calculations and graphs
- apply effective word processing practices to format and publish text/graphics, eg format conventions, margins, tables, layout, style
- plan and develop a website imparting information and encouraging communication through email
- select and add appropriate hyperlinks within a single document.

Learners demonstrating evidence of **Band 3** for example

- design, develop and organise a simple database, with assistance
- use a spreadsheet to display data and create simple charts
- develop a web site to share information on a given topic
- select a combination of multimedia tools to creatively produce work items **[T&D]**.

Learners demonstrating evidence of **Band 2** for example

- design and develop a simple database related to class work or interests
- use a simple spreadsheet to display data and create simple charts
- use word processing conventions to format and publish original text, eg editing tools, alignment, copy/paste, spacing
- add information to an Intranet site that disseminates relevant information to other users about a specific topic.

[P 3] Learners competently use a range of software that creatively enhances presentation, performance or communication of information.

Learners demonstrating evidence of **Band 1** for example

- use a range of tools and applications to record and present data expressing creativity and innovation, with support, eg slide show, table/chart, graphics, word processing
- use basic word processing conventions to present simple stories, eg punctuation keys, text wrap, fonts and styles
- demonstrate the ability to use software to express words and pictures, eg Kid Pix, drawing, paint.

Learners demonstrating evidence of **Key Growth Point 3** for example

- explore and experiment with various software that enables presentation of information, eg KidPix, painting, drawing
- use a word processor to write own name and a simple sentence with appropriate conventions, eg shift for capitals, space bar
- use fonts and sizes within a document
- explore and experiment with various software for a designated purpose.

Learners demonstrating evidence of **Key Growth Point 2** for example

- explore and experiment with various software that enables presentation of information, eg KidPix, painting, drawing
- use the computer to produce a set task as directed by teacher
- reproduce a teacher given task changing particular aspects, eg use drawing tools to make a picture then make alterations.

Learners demonstrating evidence of **Key Growth Point 1** for example

- explore and experiment with various software packages, with assistance
- choose an appropriate path within a known software package, with assistance
- use adaptive word processing programs to write own name, eg Co Writer, Pictograph Writer
- use a word processor to produce simple teacher directed tasks, with assistance
- select a switch to operate a device based on choice of activity, with assistance, eg painting, swirl art
- use a switch/mouse to activate familiar multimedia packages, eg slideshow, stack in Hyperstudio, KidPix.

Links

Essential Learnings

Collaborative Learner, Con 1, Con 2

Learning Areas

The Arts-SkP/CrA

Links

Essential
Learnings

Con 1

[O 1] Learners independently operate computer equipment and associated peripherals.

Learners demonstrating evidence of **Band 5** for example

- independently and confidently operate computer components, eg all keyboard functions, add printers, scan, burn a CD
- efficiently and strategically use available peripherals, eg scanner, external drives, digital camera
- apply etiquette and network protocols to be a responsible user, eg logging on and off, protecting passwords, locations for saving files.

Learners demonstrating evidence of **Band 4** for example

- describe and confidently use a range of computer components and connectivity, eg CPU, network, peripherals, server
- competently operate computers on local and global networks, eg Local Area Networks (LAN), Wide Area Networks (WAN)
- practise acceptable network etiquette, eg log on and off procedures, file saving.

Learners demonstrating evidence of **Band 3** for example

- identify and use the basic functions of computer components and peripherals, eg server, network, scanner, digital camera, drives, mouse
- print appropriate materials, independently
- consolidate keyboard and mouse dexterity and conventions, including right mouse click
- use efficient key boarding skills.

Learners demonstrating evidence of **Band 2** for example

- use correct terminology for computer components, eg server, network, drives
- follow keyboarding conventions for input of text, eg word processing
- use various peripherals, with assistance, eg digital camera, scanner, external drives
- follow keyboard conventions for word processing, eg home keys, space bar, shift, punctuation keys, backspace
- print to the appropriate location and retrieve printing, independently.

Learners demonstrating evidence of **Band 1** for example

- use correct terminology for computer components and basic peripherals, eg CPU, monitor, disc drive (A:), keyboard, mouse, printer
- practice fine motor skills to manipulate a mouse effectively, eg tracking, clicking
- follow keyboarding conventions of home keys, space bar and shift keys
- insert CD ROMs correctly, when appropriate
- select items to be printed, print and collect as appropriate, from the printer.

[O 1] Learners independently operate computer equipment and associated peripherals.**Links****Essential Learnings****Con 1**

Learners demonstrating evidence of **Key Growth Point 3** for example

- use correct terminology for basic computer components and everyday peripherals, eg computer, keyboard, mouse, printer
- demonstrate an awareness of start up and shut down procedures
- display basic navigational skills associated with mouse control within a restricted area
- recognise which pictures or text are best printed in black and white or colour
- print a page from the computer screen and collect it from the printer.

Learners demonstrating evidence of **Key Growth Point 2** for example

- turn on a computer following instructions
- manipulate mouse control and click on icons to open program
- shut down programs and the computer, under supervision
- use volume control and headphones with care
- use a switch to operate familiar equipment and programs, independently **[LS]**
- recognise that what is seen on screen is printed
- recognise the differences that occur between black/white and colour printers
- retrieve printed items from the printer located in a specific area on a regular basis.

Learners demonstrating evidence of **Key Growth Point 1** for example

- experiment with keyboard or voice activation to communicate **[LS]**
- attend to the computer screen
- recognise mouse to screen link
- manipulate mouse control to, click on icons to open programs, with assistance **[LS]**
- turn on a computer, with assistance **[LS]**
- use a mouse, switch or keyboard to operate familiar equipment or programs, with assistance **[LS]**
- collect printed item from printer, with assistance.

Links

[O 2] Learners efficiently use programs and systems.**EsseNTial
Learnings**

Con 1

Learners demonstrating evidence of **Band 5** for example

- file manage independently, efficiently and effectively
- operate computer systems independently and confidently, eg windows, generic software, (word processing, web browser)
- effectively manage multiple applications running simultaneously to create a product, eg merging documents, cut and paste between documents, insert hyperlinks to different files
- appraise new software products to determine suitability
- use a wide range of text manipulation and formatting keyboard shortcuts, eg Ctrl X for cutting text, Ctrl Z for undo
- arrange the operating environment using advanced taskbar functionality
- control desktop environment to maximise usage, eg settings and appearance.

Learners demonstrating evidence of **Band 4** for example

- file manage efficiently and effectively, eg regularly save, backup and trash unnecessary files
- recognise file extensions and use appropriate applications to read/open or work with the file
- select appropriate file formats, eg cross-platform files as '.rtf' files
- manage documents and applications using appropriate file and window management, independently
- explore new software and recognise that particular programs are used for specific tasks, with teacher direction
- use keyboard shortcuts, eg Ctrl C for copy and Ctrl V for paste
- adopt a positive and flexible attitude to working on various computers throughout the school, eg use various computers around the school adapting to slight differences
- personalise desktop environment to suit needs, eg settings and appearance.

Learners demonstrating evidence of **Band 3** for example

- choose the best place to store data on a network or computer hard drive after collaboration with a teacher or peer
- select an appropriate program to produce a specific document or file
- navigate through documents and applications using window management protocols
- participate in assessing new software for suitability of use in the classroom
- use simple keyboard shortcuts, eg Ctrl B for bold
- customise and organise the desktop for efficient access.

Learners demonstrating evidence of **Band 2** for example

- save documents to most suitable location, independently
- select and use different software for a variety of purposes
- locate, open and close an application or document from desktop and server
- use new software in order to share a developed opinion about the software with others, eg review for other classes to access
- use basic keyboard shortcuts, eg Ctrl S for saving
- insert pictures from graphics program, eg clip art
- use correct terminology for computer programs and systems, eg application names
- operate desktop functions, eg shortcuts, floating pallets, popup menus.

[O 2] Learners efficiently use programs and systems.

Links

EsseNTial Learnings

Con 1

Learners demonstrating evidence of **Band 1** for example

- open and close an application or document from the desktop
- save and print a word processing document to a specified location, independently
- select and use various software programs appropriately
- use correct terminology, eg programs, systems, desktop, menus, cursor, folders
- insert pictures from graphics program, eg clip art
- use new software after demonstration by a peer, eg following similar instructions
- operate basic desktop functions, eg pull down menus, scrolling, toolbars.

Learners demonstrating evidence of **Key Growth Point 3** for example

- open and close an application from the desktop
- save documents to a specified location, with assistance
- use correct terminology for basic computer hardware, eg keyboard, printer, screen
- change font size and style
- navigate around simple programs, eg KidPix, Claris Works
- explore various new software packages, with assistance
- operate desktop functions, eg tool bars, scrolling.

Learners demonstrating evidence of **Key Growth Point 2** for example

- save work to a specific location, with assistance
- navigate around and use simple programs, eg KidPix, Alphabet Blocks
- print from a program, with assistance
- open and close programs
- explore appropriate new software packages, with assistance
- follow simple repetitive screen prompts
- change text size and select different fonts.

Learners demonstrating evidence of **Key Growth Point 1** for example

- recognise symbols and icons that appear on a computer screen within a routine, eg program icons on desktop
- navigate around simple programs, with assistance, eg KidPix
- print from a program, with assistance
- follow a familiar screen prompt, eg dialogue box in Pictograph Writer
- open and close different programs, with assistance
- convey ideas and messages by using Compic or icons.

Links

[O 3] Learners identify limitations and opportunities associated with using Information Communication Technology in relation to needs.**EsseNTial Learnings**In 3, In 5,
Con 2, Cr 1**Learning Areas**Technology
and DesignLearners demonstrating evidence of **Band 5** for example

- discuss and debate limitations and opportunities associated with Information Communication Technology **[T&D-Cri]**
- recognise potential viruses and initiate the removal of the virus
- explain potential damages associated with computer viruses and the purpose of virus scans **[In 1]**
- identify opportunities associated with Information Communication Technology through working products, eg expert assistance, job find agencies, shopping **[T&D-Pr]**
- explain precautions to be taken when downloading and checking email
- interpret situations that arise in relation to troubleshooting, eg unable to print, programs not loading correctly, access to Internet unavailable
- choose the best way to solve an identified problem, eg spreadsheet for complex, repetitive calculations
- adopt a positive and flexible attitude to using various hardware and software, eg be prepared to try new software or change to another style of presenting work **[T&D-Pr]**
- explain the limitations of working with memory restrictive programs
- describe the limitations and possible advantages in being able to work in a cross platform environment.

Learners demonstrating evidence of **Band 4** for example

- research and report on information related to virus patterns
- research opportunities and limitations associated with Information Communication Technology **[T&D-Cri]**
- make informed decisions about electronically reviewing and sending information with reference to size, potential virus problems, comparable applications, file types
- discuss and research potential damage associated with viruses
- decide and explain when it is appropriate to download files from the Internet, taking appropriate precautions
- take appropriate precautions when downloading and checking email
- recognise the need to work across platforms in certain electronic environments.

Learners demonstrating evidence of **Band 3** for example

- research and describe some restrictions related to viruses and virus patterns
- discuss the purpose of a virus scan and undertake on a regular basis
- scan for common virus patterns before opening files
- troubleshoot basic problems, eg proactively prevent regular problems by ensuring setup is complete before using computer by checking cords, network cable, power on
- describe some problems and limitations involved in downloading files from the Internet.

Learners demonstrating evidence of **Band 2** for example

- report computer problems in an appropriate and informed manner, eg program not responding
- discuss limitations and opportunities associated with computer usage, with guidance
- begin to recognise issues related to use of programs and downloading
- demonstrate creative and inventive use of Information Communication Technology through accessing basic computer programs, eg KidPix.

[O 3] Learners identify limitations and opportunities associated with using Information Communication Technology in relation to needs.

Learners demonstrating evidence of **Band 1** for example

- practice appropriate and considerate computer usage, eg shut down files and programs after use
- recognise and communicate specific computer problems, eg computer freezing, unable to print, will not turn on
- suggest creative and inventive ways to use Information Communication Technology by accessing basic computer programs, eg KidPix.

Learners demonstrating evidence of **Key Growth Point 3** for example

- demonstrate appropriate behaviour associated with computer usage, eg no food or drink
- verbally express basic computer problems, eg mouse not responding
- explain how Information Communication Technology should be used to ensure everyone's safety, eg turn the computer off in an electrical storm.

Learners demonstrating evidence of **Key Growth Point 2** for example

- seek help when a problem arises, eg 'mouse won't work'
- recognise problems occur with technology, eg computer not working
- discuss software programs that are used at home and what they can do, eg drawing.

Learners demonstrating evidence of **Key Growth Point 1** for example

- use appropriate behaviour associated with computer usage, with assistance
- experience problems with the computer and seek appropriate help, eg 'It's not working, we need to get help.'

Links

Essential Learnings

In 3, In 5,
Con 2, Cr 1

Learning Areas

Technology
and Design

Links

[O 4] Learners develop a proactive model for optimising computer functionality including regular maintenance, file management and ergonomics.

Essential Learnings

In 4, In 5,
Con 1

Learners demonstrating evidence of **Band 5** for example

- develop and maintain a cleaning regime, eg mouse, keyboard, screen, defragment, scan disc
- indicate when computer performance is hindered by temporary files and Internet cache, regularly empty temporary files and cache to optimise computer performance
- explain and act on the need to file manage when files are no longer needed, therefore freeing up server space
- use a system of file names for related files
- appraise standard work station ergonomics and adjust as appropriate.

Learners demonstrating evidence of **Band 4** for example

- maintain cleaning regimes by regularly running scan disc and cleaning external peripherals, mouse, keyboard and screen
- explain the importance of regularly emptying the Internet cache to optimise computer performance
- perform a regular backup of work onto disc or server system, independently
- set up a filing system on a hard drive or server personal drive, eg use file names that are brief, stable and meaningful
- develop and maintain effective work habits between school and home computers, eg applying knowledge and transferring electronic files/documents
- transfer files using hard drive, disc and server
- develop and adopt ergonomically safe practises when using Information Communication Technology, eg posture and break times.

Learners demonstrating evidence of **Band 3** for example

- undertake regular cleaning of a system, with supervision, eg disc fragmenting
- perform regular back up of work
- use folders to store work so that files are easily accessible
- use file names that allow easy identification of contents
- save, label and safely store work created on disc outside the school environment
- copy files between folders on a network
- develop and adopt a work station appropriate ergonomic standard, eg keyboard height, mouse requiring no arm movement.

Learners demonstrating evidence of **Band 2** for example

- adopt a clean and tidy use of work station space
- explain the importance of backing information up
- research and adopt appropriate posture needed when using Information Communication Technology devices
- discuss and adopt safe practices when using Information Communication Technology, eg chair at correct height, screen at correct distance.

[O 4] Learners develop a proactive model for optimising computer functionality including regular maintenance, file management and ergonomics.

Links

EsseNTial Learnings

In 4, In 5,
Con 1

Learners demonstrating evidence of **Band 1** for example

- discuss ways to care for Information Communication Technology devices
- save file in designated area
- open a self created document and add information to it, rather than creating another document
- recognise inappropriate posture and self correct when using the computer, eg sitting on the chair correctly
- undertake a basic safety check when at work station, eg chair at correct height, screen at correct distance.

Learners demonstrating evidence of **Key Growth Point 3** for example

- explain and apply appropriate skills involved with shutting down the computer
- suggest ways information produced on the computer can be linked and transferred from one document to another
- recognise and adopt appropriate posture when using the computer, eg sitting on chair correctly.

Learners demonstrating evidence of **Key Growth Point 2** for example

- shut down the computer appropriately
- adopt appropriate posture when using the computer, when prompted, eg sit on chair correctly
- use individually selected equipment to optimise access to computer, eg screen height, adaptive equipment to facilitate access, touch screens, joysticks, switches (mechanical devices of various sizes and shapes made for a specific purpose) modified keyboards.

Learners demonstrating evidence of **Key Growth Point 1** for example

- adopt appropriate posture when using the computer, with assistance
- use individually selected equipment to optimise access to computer, with assistance, eg screen height, adaptive equipment to facilitate access, touch screens, joysticks, switches, modified keyboards.

Links

Essential Learnings

In 3, Col 4,
Con 3

[S 1] Learners comply with established Information Communication Technology expectations and protocols at various levels ranging from school to global contexts.

Learners demonstrating evidence of **Band 5** for example

- practise acceptable use of hardware, software and networks, independently
- follow guidelines on Internet pages regarding access, eg age and content restrictions
- adhere to Acceptable Use Policies (AUP) as set down and agreed to prior to access.

Learners demonstrating evidence of **Band 4** for example

- practice acceptable use when accessing the network or any hardware or software
- respect cultural expectations and show awareness when using online resources
- practice respecting the rights and privileges of other online users, both within the school and globally
- respect access/security issues and comply with set guidelines.

Learners demonstrating evidence of **Band 3** for example

- discuss then adhere to set guidelines when accessing computers, software, peripherals and networks, eg what are the consequences if expectations are not followed
- respect individual rights and cultural differences when accessing online resources
- follow school and class rules for using computer systems, eg Acceptable Use Policies (AUP), network security, communication protocols.

Learners demonstrating evidence of **Band 2** for example

- identify own class rules for acceptable use of computers in the classroom, school and beyond
- discuss safety rules using the Internet, eg acceptable use, personal safety
- observe the Acceptable Use Policies (AUP) of the school when accessing Information Communication Technology.

Learners demonstrating evidence of **Band 1** for example

- observe class and school rules for using Information Communication Technology, eg sharing, care of hardware
- discuss privacy issues when working on a computer, eg only saving work to own file, seeking permission to view peers' computer work
- navigate around bookmarked web sites accessing only topic specific links/content
- recognise and report inappropriate behaviour and make suggestions about appropriate behaviour.

[S 1] Learners comply with established Information Communication Technology expectations and protocols at various levels ranging from school to global contexts.

Links

Essential Learnings

In 3, Col 4,
Con 3

Learners demonstrating evidence of **Key Growth Point 3** for example

- observe class rules for using and caring for Information Communication Technology and discuss consequences of misuse, eg follow a usage timetable and cooperatively work with peers **[Col 3]**
- participate in and follow guidelines when working on Information Communication Technology activities that simulate online access, eg only follow appropriate screen prompts and ask for help when necessary
- recognise and report inappropriate behaviour
- apply and define class set rules for appropriate computer use.

Learners demonstrating evidence of **Key Growth Point 2** for example

- participate in shared Information Communication Technology activities, eg share computers and peripherals **[Col 3]**
- observe and discuss real time online web sites demonstrated by the teacher
- contribute to developing class computer rules.

Learners demonstrating evidence of **Key Growth Point 1** for example

- use adaptive technologies appropriately
- use computers and electronic equipment as expected within a given environment, with assistance
- share computers and other devices, with assistance **[Col 3]**.

Links

EsseNTial
LearningsIn 3, Con 1,
Con 3**[S 2] Learners identify and value the intellectual property associated with Learning Technologies and demonstrate ethical principles.**

Learners demonstrating evidence of **Band 5** for example

- observe copyright/reference procedures when extracting information from electronic sources, independently
- approach owners to use copyrighted work
- be aware of legislation surrounding copyright infringement
- adhere to copyright principles in work to be published in the public domain.

Learners demonstrating evidence of **Band 4** for example

- follow conventions for writing a bibliography of resources used, including text, graphics and electronic data
- extract information from electronic resources, while still adhering to copyright and plagiarism guidelines
- identify Internet content that can be downloaded without breaching copyright.

Learners demonstrating evidence of **Band 3** for example

- prepare a bibliography for presented work using basic conventions
- recognise copyright restrictions when downloading from the Internet
- extract essential information from online sources, with teacher direction.

Learners demonstrating evidence of **Band 2** for example

- establish ways to acknowledge others' work when creating ownership of personal work
- discuss presentation ownership issues in relation to text and graphics
- identify the reasons for copyright laws.

[S 2] Learners identify and value the intellectual property associated with Learning Technologies and demonstrate ethical principles.

ICT in Society (2)

EsseNTial Learnings

In 3, Con 1,
Con 3

Learners demonstrating evidence of **Band 1** for example

- identify the creator/author of various sources while developing ownership of own pieces of work
- view various Internet sites and identify the creator/author
- acknowledge others' contributions when jointly producing work **[CoI 3]**.

Learners demonstrating evidence of **Key Growth Point 3** for example

- recognise that Internet sites have a creator and locate the creator/author's name, with assistance
- display an appreciation and ownership of personal work, eg naming, displaying
- name the person who created the work somewhere on the work before using it.

Learners demonstrating evidence of **Key Growth Point 2** for example

- recognise that programs/documents are made by someone and do not copy or alter others' work, eg adding more words, colour or lines
- identify names of specific programs.

Learners demonstrating evidence of **Key Growth Point 1** for example

- recognise the need to create own work and not to touch the others' work, eg on the desktop, on the hard drive.

Links

[S 3] Learners critically analyse the place and potential impact Information Communication Technology has on society.**EsseNTial Learnings**Cr 1,
Constructive Learner**Learning Areas**

Technology and Design

Learners demonstrating evidence of **Band 5** for example

- hypothesise about the future impact and potential role of Information Communication Technology on society, support the hypothesis with research based evidence, eg 'living online', banking, paying bills, shopping, virtual schools
- debate own viewpoint on Information Communication Technology use in society and support with sound evidence and research
- identify and access other non-electronic sources of information when appropriate.

Learners demonstrating evidence of **Band 4** for example

- debate the advantages and disadvantages of Information Communication Technology use in society
- construct a strong case supporting a personal stance on Information Communication Technology use as means of educational change
- explore the use of technology as a means of 'living on line', eg banking, shopping, communicating
- recognise the value of other sources of information that are not electronically based or generated
- analyse the progress of Information Communication Technology in society from the past to the present.

Learners demonstrating evidence of **Band 3** for example

- identify and discuss the uses and impact of Information Communication Technology in the community, eg survey number of home computers, list business uses
- research the advantages and disadvantages of Information Communication Technology use in society
- examine and participate in online games or challenges that demonstrate real life situations, eg ASX Schools' Stock Market Game, Murder Under the Microscope
- research and examine why organisations use Information Communication Technology
- explain the reason why sources other than electronic forms are valid ways of gaining information
- examine society's increasing reliance on technology and the financial impact
- outline changes that have occurred in Information Communication Technology over a given period
- design an Information Communication Technology unit for the future and outline its uses.

Learners demonstrating evidence of **Band 2** for example

- identify and discuss various forms of Information Communication Technology in the home and its uses, eg plot ICT uses on a house plan
- discuss the impact that Information Communication Technology has on society relating to the home, school environment and the local and global community
- identify some potential problems that may occur if certain Information Communication Technology systems breakdown in the community, eg systems in hospitals
- list advantages and disadvantages related to Information Communication Technology usage in society
- conduct surveys related to Information Communication Technology use in society
- name some changes in the last 10 years in relation to Information Communication Technology
- predict possible uses of Information Communication Technology in the future and interpret potential impact on society.

[S 3] Learners critically analyse the place and potential impact Information Communication Technology has on society.

Links

Essential Learnings

Cr 1,
Constructive Learner

Learning Areas

Technology and Design

Learners demonstrating evidence of **Band 1** for example

- list some problems that might arise if Information Communication Technology systems break down
- identify various ways that Information Communication Technology can be used in everyday life
- explain some ways that Information Communication Technology has been used to create certain products, eg books, Internet pages, newspapers, newsletters, advertising
- identify and discuss various uses of Information Communication Technology in the school, eg library, administration, network
- list and discuss the ways that their family uses Information Communication Technology each day
- discuss the difference between electronic and text mediums to inform, eg locate a library book through the use of an electronic system to gather relevant information
- audit the whole school to discover the various uses of Information Communication Technology, as a class activity
- identify changes that occur within Information Communication Technology, eg new programs, updated versions, new hardware (CD burners, webcams)
- predict possible future uses of Information Communication Technology and suggest potential impact/s on society.

Learners demonstrating evidence of **Key Growth Point 3** for example

- participate in and contribute to class discussions about ways that Information Communication Technology is used in society
- voice own opinions on computers and their purpose
- identify the use of Information Communication Technology in the classroom
- discuss the difference between books and computers, eg 'Can you get the same information from a book that can be obtained from a computer and visa versa?'
- examine various uses of Information Communication Technology
- identify some differences between various computers
- discuss what a computer might do and look like in the future.

Learners demonstrating evidence of **Key Growth Point 2** for example

- identify some forms of Information Communication Technology used in every day life
- indicate in some way how one personally feels about any form of Information Communication Technology
- take turns to use various available forms of Information Communication Technology.

Learners demonstrating evidence of **Key Growth Point 1** for example

- participate in activities that use Information Communication Technology, eg communicators, switches, computers.

Glossary

Acceptable Use Policy (AUP)	A policy designed to advise users of acceptable use of computers and peripherals within an organisation.
Adaptive equipment	Any equipment purposely adapted to assist access to technology and enhance learning.
ASX Schools' Sharemarket Game	A simulation game where school students from around the nation race against each other to achieve the highest valued share portfolio in a set time in online share 'trading'. A taste of real life 'trading'.
Book Raps	A book discussion conducted via electronic mail enabling individuals or groups of students from across the country or around the world to discuss scheduled books.
Bookmarks	A browser feature that stores the URLs of sites 'book marked' to negate the need to type in a site's URL. Known as 'Favourites' in Internet Explorer.
Boolean operator	The Boolean system uses a logical combination through the operators AND, OR, NOT, OR.
Browser	Software programs that allow users to access Internet information and services. Browsers have different capabilities, eg Netscape Navigator/Communicator, Internet Explorer, Mosaic, Opera.
Burn a CD	To write or rewrite data onto a Compact Disc using a device called a CD Burner.
Cache	A temporary storage place inside a computer for frequently or recently accessed data. Web Browsers access the cache next time that site is visited.
CD ROM	'Compact Disc - Read Only Memory' is a disc with information that can be accessed but not changed.
Cell	In spreadsheet applications, a cell is a box in which a single piece of data can be entered. A column letter and row number usually identify individual cells, eg <i>D12</i> specifies the cell in column D and row 12.
Clip Art	Electronic illustrations that can be placed into a document.
Collaborative electronic tools	Electronic ways of communicating with one or more persons simultaneously to gain or share information.
Computer components	Various parts that make up a whole computer work station, eg keyboard, monitor, printer, mouse.
Computer freezing	The computer will not respond to any keyed in commands. This is often referred to as 'frozen'.
Connectivity	The ability of a device to link with other programs and devices, eg export/import data from other sources.
CPU	'Central Processing Unit' is the brain of the computer. Sometimes referred to simply as the processor or central processor, the CPU is where most calculations take place. In terms of computing power, the CPU is the most important element of a computer system.
Cross-platform	The platform is the underlying system hardware or software, eg Macintosh or Windows. The term, cross-platform, refers to applications, formats or devices that work on different platforms.
Ctrl (Control)	A PC keyboard key labelled <i>Ctrl</i> that is used in the same way as the shift key is used, and which is pressed down at the same time as another character. The result is a control key combination that can have different effects depending on which program is running.
Cursor	A special symbol, usually a solid rectangle or a blinking underline character, which signifies where the next character will be displayed on the screen. The cursor is moved to type in

	different areas of the screen. This can be done with the arrow keys or with a mouse if the program supports it.
Database	A collection of information organised in such a way that a computer program can quickly select desired data. A database is like an electronic filing system.
Defragment	To defragment is to reorganise (a computer file) to eliminate fragmentation. Fragment refers to the condition of a disc in which files are divided into pieces scattered around the disc.
Desktop	A desktop is displayed on a computer monitor after it starts up. It consists of pictures called icons that represent files, folders and shortcuts to various types of programs and/or documents.
Dialogue box	Dialogue boxes request some type of information from the user.
Digital camera	A camera that stores images digitally rather than recording them on film. Once a picture has been taken, it can be downloaded to a computer system.
Digital video	A Digital video can capture, manipulate and store video in digital formats. A digital video (DV) cam-corder is a video camera that captures and stores images on a digital medium such as a Digital Audio Tape (DAT).
Download	To transfer (data or programs) from a server or host computer to one's own computer or device.
Drives	see 'external drives'
Drop box	A secure method by which students can submit work.
e-learning environment	An online platform allowing learning programs to be delivered to students regardless of their geographical location.
e-pals	An electronic set-up allowing pen pals to communicate through email.
Electronic organiser	A program where calendar and diary functions are recorded and displayed electronically.
Email	Email is the internet-based electronic means of sending a message from one computer to another in an organised fashion.
Ergonomics	The relationship between machines and people is the science of ergonomics.
External drives	A 'hard drive' located outside the computer's tower or box.
File extensions	Three letters appearing after a file name that represent file type, eg .rtf (rich text format) .pdf (portable document format) .doc (word document) .jpg (joint photographic experts group) .bmp (bitmap). Computers use file extensions to determine which programs should be used to open a file.
Floating pallets	Application elements, such as tools, that can be moved to different screen locations to customise the working environment.
Floppy disc	A small square removable disc on which files can be stored. Used for storing backup copies, files or moving information from one computer to another.
Folders	An object that can contain multiple documents used to organise information.
Header and Footer	Sections at the top and bottom of word documents where information can be kept outside the document's contents area.

Graphics	Images including photos, hand drawings, or clip art that may have one of the file extensions, .jpg .gif .png .psd.
Hits	The number of web sites found when searching the Internet or the worldwide web. Also used to refer to 'hits' on a web site counter to show the number of times visitors access web sites.
Home keys	The keys that typists use to position their fingers when learning or practicing typing, eg left hand fingers rest on the 'asdf' keys while the right hand fingers rest on the 'jkl;' keys.
Hyperlinks	Links to other pages, which enable users to navigate through a number of linked screens by simply clicking on the links.
Icons	Small pictures that represent an object or a program, that can be double clicked on to open programs or perform tasks. Tool bars are made up of a series of icons.
Images	Graphics including photos, hand drawings, or clip art that may have one of the file extensions, .jpg .gif .png .psd.
Information Literacy Process	The six steps by which information is gathered and processed through logical stages: <ol style="list-style-type: none"> 1 Defining – determining the nature and purpose of the task. 2 Locating – seeking information sources and retrieving information. 3 Selecting – selectively and critically examining the information. 4 Organising – recording, synthesising and reconstructing the information to suit the task. 5 Presenting – creating and presenting the information and generating a new perspective and knowledge. 6 Evaluating – assessing the process and making judgements about own learning.
Interactive web sites	Web sites that are responsive and able to be modified by the user's input.
Internet cache	A copy of original web site data stored locally so that it doesn't have to be retrieved from a remote server when requested the next time.
Intranet	A network running within a single institution, similar to the Internet, usually with access limited to internal users.
Keyboard	A set of typing keys, numbers and symbols that allow data entry into a computer.
Links	A name for a hyperlink or hotlink commonly found on web pages linking to another page or document.
Local Area Network (LAN)	A computer network that spans a relatively small area, and allows data communication between connected users.
Mail merge	The generation of form letters by combining one file containing a list of names, addresses, and other information with a second file containing the body of the letter.
Merging documents	Combining two files to create a file that has the same organisation as the two individual files. Two files contain a list of names in alphabetical order, merging the two files results in one large file with all the names still in alphabetical order.
Meta search engines	Search engines that search both the web and other search engines for requested key words.
Monitor	The screen on your computer.
Mouse	A peripheral that allows the cursor to be moved around the screen.
Multimedia presentation	A presentation using many media forms, eg sound, animation, text.

NT Schools Portal	The access point at which members of the NT DEET community can access the available range of online resources and services.
Navigational skills	Skills that allow navigation or the ability to gather or research information from an electronic source efficiently.
Netiquette	Etiquette acceptable to be used on the Internet.
Network	A system of computers linked for file sharing between many computers.
Network cable	A cord connecting a computer into a network data point to allow access to shared files on a network or access the World Wide Web.
Online	Connected to the Internet.
Peripheral	A device that can be connected to a computer, eg printer, scanner, mouse.
Pop up menus	Toolbar menus that pop up to show more options when the cursor moves over them.
Printer	A peripheral that allows data to be printed as a paper copy from a computer.
Programs	A set of instructions that computers use to perform specific tasks. These usually take the form of software programs, eg Word, Star Office, KidPix or operating systems such as Windows. Computer programs are collectively referred to as 'programs'.
Pull down menus	A set of menus or commands that can be chosen by clicking on a toolbar.
.rtf	see <i>File extensions</i>
Scan	Scan can mean two things. To scan a computer screen of information is to quickly look over the information. When doing a scan using a peripheral called a scanner, the document/image placed on the scanner bed is transferred from hard copy into electronic format.
Scan disc	A Windows option/program run to detect any corruption in an operating system.
Scanner	A peripheral device used to transfer hard copy information, either typeface or images, into digital/electronic format.
Screen prompts	Displayed text prompts or sound prompts to remind the user of certain functions.
Scrolling	Using the small bar on the left-hand side of a window to move up and down the window contents by clicking on the small arrow or dragging its bar.
Search engine	A type of software that creates indexes of databases or Internet sites based on file titles, key words or the full text of files. Search engines either have an interface that allows a user to type an identification word in a blank field, or a categorised system of searching. The user is provided with a list of the results of the search. When a Web search engine is used, the results are presented in HyperText. This means the user can click on any listed item to access the actual file.
Server	The computer that controls a network and stores resources and files.
Slide show	A set of pages or slides containing text images, sound and/or effects that are played in a sequence, eg Power Point, Star Office Impress.
Software	Programs (see programs) stored electronically on a computer that tell it how to operate.

Spreadsheet	A software program that records information in cells (see cells) identified by row numbers and column letters. This information (data) can be recorded as text, numbers, dates and formula. Data can be used to calculate, plan, manage things, draw graphs and write lists, eg Excel, Calc in Star Office.
Stack	A collection of information or cards about the same topic used in HyperStudio.
Style sheets	A file or form that defines the layout of a document in word processing or desktop publishing.
Systems	Various computer components working together, eg hardware, software, operating system, network environment.
Taskbar	The bar that appears, usually at the bottom of the screen, to indicate which programs are currently running on a computer.
Templates	Documents with a set format to which information can be added.
Temporary files	Files stored by the operating system, programs and web pages.
Text wrap	A tool that allows text to move to the next line automatically without the RETURN or ENTER keys being pressed.
Toolbars	A row of buttons, icons or words that are clicked to perform various tasks.
Touch screens	A computer monitor or screen that is touch sensitive. Instead of using a mouse, the user points a finger at objects on the screen to run programs.
Travel Buddies	A soft toy that belongs to or represents a class or school. The travel buddy visits other interstate or overseas schools. The participating schools maintain email communication by passing on the travel buddy's stories and experiences.
Troubleshooting	The ability to identify computer problems and take steps to solve them.
URL	URL - Universal Resource Locator or Uniform Resource Locator and also referred to as the location or address, is the global term for a 'place' or 'file' that can be visited on the Internet.
Virus scans	A program that checks a computer for viruses.
Viruses	Man-made programs that load themselves onto a computer without the user's knowledge. They can damage files and computer hard drives. Some viruses try to replicate and can be passed on to other computers via email, shared files or floppy discs.
Web browser	see <i>Browser</i>
WebCam	A Web page that hosts images or even live video streams served by a digital Camera attached to a computer. Thus, a WebCam .
Web Quests	Inquiry orientated activities where most of the information accessed by learners is available from the Web.
Wide Area Network (WAN)	A network of computers extended outside the same geographical area and connected by telephone lines, radio waves or satellite.
Wild cards	The use of the asterisk (*) symbol to search for variations, eg cook* will return a result such as cooks, cooking, Cook Islands.
Windows	A graphic user interface used to operate computers.

References and Further readings

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