Student ICT Expectations

The Student ICT Expectations identify the ICT knowledge, understandings and skills that students in Queensland state schools are required to have the opportunity to develop from Prep to Year 12. These expectations have been developed to align with national goals and are based on the National Statements of Learning for Information and Communication Technologies. This curriculum resource will assist Queensland state schools to implement the Australian Curriculum General Capability, ICT competence, recognizing that to be successful learners at school and beyond, students need to become 'creative and productive users of technology' (MCEETYA 2008,p.8)

The Student ICT Expectations are organised as a continuum and specify the learning expected by the end of Years 3, 5, 7, 9, 10 and 12. The Student ICT Expectations recognize that students develop ICT competence and understandings as they use ICT effectively across all learning areas. The expectations are organised according to the following elements:

- Inquiring with ICT
- Creating with ICT
- Communicating with ICT
- Ethics, issues and ICT
- Operating ICT.

How to use the Student ICT Expectations

Teachers

The Student ICT Expectations enable teachers to plan for continuity of student learning. Based on what students can currently do, teachers can look back and forward, to identify and plan for future learning.

Teachers should plan to address the expected ICT learning by the relevant juncture.

It is also important for teachers to look back to what was expected at previous junctures as these expectations are not included in the expectations for later junctures.

The Student ICT Expectations are included within the C2C units where relevant to curriculum intent and it is expected that ICT can be used to assist teachers as they differentiate to suit the diverse needs of their students. The ICT examples provided within the C2C units and lessons demonstrate how ICT can be used to develop and consolidate understandings of curriculum concepts.

The Student ICT Expectations should be used within curriculum areas rather than within discrete ICT lessons. However, particularly in the two aspects of Operating ICT and Ethics, Issues and ICT, explicit teaching is required to develop specific knowledge, understanding and skills. In these situations there are specific C2C lessons or learning sequences within the lesson devoted to explicit teaching of an ICT skill or competency.

School administrators

The Student ICT Expectations inform whole-school planning and phase-level planning. School administrators can use the Student ICT Expectations to establish school-wide expectations about ICT in their curriculum and to consider implications for professional development and for resource allocation.

School clusters

When school clusters plan to support successful student transitions from primary to secondary schooling, the Student ICT Expectations are a useful reference to promote continuity in curriculum, management and organisational processes related to the use of ICT, particularly in situations where students are moving to or from a 1:1 ICT learning environment.

Student ICT Expectations

Students explore, select and use ICT in the processes of inquiry and research across key learning areas. They identify an inquiry focus; plan, conduct and manage searches; and evaluate data and information gathered for relevance, credibility and accuracy. They reflect on and evaluate how ICT have assisted in meeting inquiry purposes and in developing new understandings.

	By the end of Year 3 students:	By the end of Year 5 students:	By the end of Year 7 students:	By the end of Year 9 students:	By the end of Year 10 students:
Use ICT in the processes of inquiry and research	• know that a search engine can be used to locate information on topics of interest • identify where information can be located from safe online resources • suggest key words for class Internet searches • conduct simple Internet searches for information using a common search engine • navigate digital resources relevant to an inquiry • use learning objects and simulations in the inquiry process • interpret and evaluate information from digital resources	• conduct simple Internet searches for information and digital content • select and use ICT appropriate to the inquiry including online and database formats • apply useful keywords and phrases when searching for information online • use digital concept mapping to organise ideas and information into main ideas and supporting details • identify the inquiry focus of an investigation and match the appropriate digital information sources • evaluate data and information gathered for usefulness, credibility, relevance and accuracy • reference valid sources of information	• search for data, information and digital content using a range of information sources including online communication tools such as blogs, wikis, RSS and databases • identify the inquiry focus of an investigation and match the appropriate digital information sources • efficiently search by identifying key words and concepts • use digital concept maps to plan research projects and curriculum tasks by analysing the topic and identifying key aspects to research • critically evaluate data and information gathered for usefulness, credibility, relevance, accuracy and reliability • reference valid sources of information and acknowledge the work of others • participate in online challenges or webquests • understand that social networking and interactive sites provide new and different sources of information and knowledge that may provide an individual perspective and subjective opinion but are not necessarily correct	• select appropriate and efficient sources of digital information in response to identified needs, inquiries and research questions • understand that using ICT can enable broader inquiry, enabling access to a wide variety of information, opinions and perspectives • locate information relevant to an inquiry by conducting an effective search using selected ICT resources • interact as a member of an online community as an inquiry strategy to discuss, compare and clarify ideas and to discover specialised information • critically evaluate data, information and sources for usefulness, credibility, relevance, accuracy, currency and reliability • cite all sources used when presenting research • use ICT to develop and implement project plans and processes for efficient information management such as note taking and summarising	• conduct Internet searches and critically evaluate data, information and sources for usefulness, credibility, relevance, accuracy, currency and reliability • use online survey tools to locate data • use ICT to design investigations, formulate hypotheses, compile primary and secondary data, monitor, record and analyse data and draw conclusions • discriminate and decipher data and information from a range of digital sources to justify inquiries, or to identify new paths for inquires • locate information to critique a proposition, test the merit of hypotheses, or judge the logic of an argument • use social networking environments and online communication tools including blogs, wikis and forums to build an information community as a shared resource
Reflect on the value of selected ICT in the inquiry process	• reflect on the benefits of ICT in meeting the inquiry purpose • consider how useful the information was to their purpose	• reflect on how ICT sources and tools have assisted their inquiry • compare different ICT sources for credibility	• consider how ICT assist in developing new understandings	• reflect on how interactive online communities present a wide variety of information, opinions and perspectives • compare and evaluate information sources relating to a research topic	• compare and evaluate information sources relating to a research topic

Inquiring with ICT

Student ICT Expectations

Students experiment with, select and use ICT to creatively express ideas, represent information and generate products appropriate to particular audiences and purposes. They reflect on their use of ICT as creative tools.

	By the end of Year 3 students:	By the end of Year 5 students:	By the end of Year 7 students:	By the end of Year 9 students:	By the end of Year 10 students:
Select and use ICT to create a range of products to suit the purpose and audience	• use digital tools to create personal products and explore different ways to change and refine creations • produce representations of concepts, ideas and experiences using digital tools, including painting and drawing software • contribute ideas for a class digital product	• plan, create and refine digital products for specific purposes in a range of KLA-related contexts • combine their own text and/or images with imported materials to create products • design and create a multimedia presentation combining text, animation, graphics and sound • create simple digital concept maps when planning to create products • use ICT tools to repeat design elements to create patterns • demonstrate ownership of digital work by naming, sharing and discussing products and gathering feedback	• select appropriate devices and software to plan, create and refine digital products for specific purposes in a range of KLA-related contexts • collect, combine and manipulate digital images, text and sounds when creating digital products • use graphic organisers and digital concept mapping tools when planning to create products • in the process of creating a product, use the specialised function of digital tools/ software to solve design problems • use digital tools to duplicate elements in creations • design and create an interactive website to share or present information • use online communication tools to gather feedback to refine products • recognise and acknowledge products created by others	• individually select and use a range of digital tools and software to plan, create and refine products for specific purposes • digitally record and edit music for a specific audience and purpose • use digital concept mapping and project management tools to plan and organise tasks and resources when creating a digital product • use animation software to present the dynamic interaction and movement of objects • use digital tools to generate design solutions when creating products • use digital tools to duplicate, change and personalise products for a number of users • use online communication tools to collaboratively plan, design and develop a product • recognise and acknowledge products created by others	• use digital concept mapping and project management tools to plan complex multi-phase projects, to manage timelines, to represent and explain thinking, to document ideas and to organise tasks and resources • use electronic organisers and online calendars to plan and develop schedules when creating products • design and create digital products for personal, class or community use, for example 3D objects, animations, games, music, artworks and media products • use industry standard design software where appropriate to communicate designs for products, concepts and simulations • design and create interactive digital products (such as virtual worlds, suites of images, drawings, sound/media bytes, video and animation) that adhere to specific criteria and demonstrate the extent of their design knowledge and capability • design and create a website or part of a website following design conventions and standards • use online communication tools to communicate with others and collaboratively plan, design, create and refine products
Reflect on their use of ICT as creative tools	• reflect on the use of digital tools to refine creations	• articulate the benefits of creating a digital product	• reflect on the choice of digital tools/ software when creating and refining products	• evaluate the effectiveness of the editing and refining process to convey ideas • reflect on the arrangement of media elements and media technologies and techniques to maintain clear messages for the audience	• consider the importance of generating and recording design ideas in a detailed design proposal

Creating with ICT

SMART Classrooms

Student ICT Expectations

Students experiment with, select and use ICT across key learning areas to enhance communication and to collaborate in different contexts with identified audiences. They reflect on their use of ICT to communicate and identify ways to improve their effectiveness of communication with ICT.

	By the end of Year 3 students:	By the end of Year 5 students:	By the end of Year 7 students:	By the end of Year 9 students:	By the end of Year 10 students:
Explore different digital media to communicate and collaborate	• know that ICT can be used to communicate meanings in different situations • read and write simple email messages to a known audience • participate in online events via the Learning Place e.g. Online Literature Festival • participate in collaborative online projects e.g. book raps, travel buddies • interact with presentation software and understand its value in enhancing communication • use images and sounds in presentations • use word processing software to convey messages and meanings for specific audiences	• compose email to suit the purpose and audience and use electronic address list to communicate with groups • use a range of online communication tools to share ideas and information • participate in collaborative online projects with peers and online experts • use digital concept mapping tools to present ideas and show relationships between main ideas and supporting details • use spreadsheet software to present data and communicate findings • use word processing, publishing and presentation software to convey messages and meanings for specific audiences through text and images	• send and receive email messages with relevant files attached to personal acquaintances • collaborate online to solve problems, share ideas and communicate with people in different social and cultural contexts • select and use a variety of digital media to improve communication by matching tools to purpose, social context and audience • use digital devices to collect and share ideas and information • understand the purpose and relevance of text messaging as a form of communication	• use email for ongoing communication with individuals and groups for specific tasks or inquiries • use online environments to seek information, exchange ideas, formulate critical opinions and learn • collaborate locally and globally, distribute information, participate in online challenges, influence public opinion and behaviour and create digital products • select and use a variety of digital media to communicate ideas and present information	• use email and online communication tools to improve interpersonal associations within local, national and global communities • use online collaborative environments to build an information community as a shared resource to seek information and knowledge, work with others and share • use online learning environments to participate in online courses, blended courses and to access materials and services • manipulate and use a range of online communication tools to develop knowledge • incorporate online communication tools into real work situations
Apply standards and conventions when using ICT to communicate	• correctly compose an email, including recipient address, subject, greeting and closing • understand that editing tools in word processing are used to improve the quality of text for improved communication • use word processing software to apply basic formatting conventions such as bold, italic, underline, font size and style for the intended audience and purpose • use editing processes and tools such as spell check to improve the clarity of digital communications	• use correct conventions of the email genre when composing and sending messages • know that digital texts can be edited to improve the effectiveness of communication • determine and select appropriate communication devices for particular audience and purpose • use editing features of software such as spelling and grammar tools to improve writing for publication • use consistent text and image formatting and page designs in digital products	• design and produce digital texts, products and online publications using styles and templates suitable for a specific audience • consistently use the editing features of software to improve the effectiveness of communication • apply agreed communication conventions and protocols and netiquette when communicating online	• manipulate and edit text, sound and graphics and use a variety of word processing features and styles to improve the effectiveness of communication • apply suitable presentation and communication conventions when creating digital products • know appropriate levels of personal information disclosure for specific online environments • follow school policy and protocols and apply netiquette when communicating in online spaces • follow an appropriate course of action in response to inappropriate messages conveyed online	• know appropriate levels of personal information disclosure for specific online environments • understand that communication conventions and protocols exist and differ in relation to the time and place of the communication and specific target audience • present an appropriate identity when communicating in an online environment • identify and consistently follow netiquette
Reflect on their use of ICT and identify ways to improve their effectiveness of communication	• consider the purpose of email • reflect on the purpose of combining sounds with images to enhance communication • consider the benefits of participating in an online chat	• reflect on the editing process to improve effectiveness of communication • consider the use of email when communicating with groups • reflect on the choice of software used to communicate ideas	• justify the purpose for email communication • reflect on their participation in a collaborative online project	• reflect on the use of online learning spaces to collaboratively complete projects and investigations	• reflect on the benefits of being a member of an online community

Communicating with ICT

Queensland Government

Student ICT Expectations

Students understand and consider the role and impact of ICT on society. They develop and apply ethical, safe and responsible practices when working with ICT in online and stand-alone environments.

	By the end of Year 3 students:	By the end of Year 5 students:	By the end of Year 7 students:	By the end of Year 9 students:	By the end of Year 10 students:
Use ethical, safe and responsible practices when working with ICT	• understand safe and responsible ICT practices • are aware of ethical and unethical ICT communications including appropriate choice of language in emails • understand that the Internet can be a place for sharing material; and that it is not appropriate to copy large amounts of information • recognise the significance of private passwords and use and maintain passwords for access to files and school network • relate stranger danger to online environments and understand why access to certain websites is restricted • show an understanding of netiquette by using positive social skills and considering others while online • understand the importance of correct posture while working at the computer • comply with school expectations and protocols when using ICT	• apply codes of practice that promote safety, responsibility and respect when working in online and stand alone ICT environments • identify and acknowledge the owner/ creator of digital sources and cite online references consistently following agreed conventions • use and maintain personal passwords for access to files and school network • respect the privacy of others • understand safety strategies including those relating to stranger danger in online environments • use positive social skills consistently in ICT communications • consolidate understanding of netiquette, such as showing respect for others when communicating in online environments • comply with school expectations and protocols when using ICT	• conform to intellectual property and copyright laws by acknowledging the ownership of digital information and developing an awareness of legislation surrounding digital theft and plagiarism • use responsible and respectful ICT practices reflecting accepted values including sharing materials responsibly, and respecting self and others • understand the difference between ethical and unethical use of specific communication tools • practice appropriate codes of conduct for ICT communications and consistently follow netiquette • understand appropriate levels of personal information disclosure for specific online environments, including managing online identity by using anonymous nick-names, avatars and private passwords appropriately • communicate with others online with a password protected identity • comply with school expectations and protocols when using ICT	• adhere to codes of practice and apply strategies to conform to intellectual property and copyright laws including identifying and acknowledging the owner/ creator of digital sources, and citing references following agreed conventions • develop and maintain strategies for securing and protecting digital information • share materials responsibly respecting self and others when working online • know appropriate levels of personal information disclosure for specific online environments including information within emails, blogs and project rooms • understand how to manage risks involved with purchasing goods and services online • know that there are preventative strategies for addressing health and safety issues when using ICT, including taking regular breaks from computer work and checking for correct ergonomics of furniture setup • comply with school expectations and protocols when using ICT	• adhere to codes of practice and apply strategies to conform to intellectual property and copyright laws including identifying and acknowledging the owner/ creator of digital sources and citing references following agreed conventions • understand ethical and unethical use of communication tools and social networking environments • use devices safely and ethically and share materials responsibly, respecting self and others • describe appropriate levels of personal information disclosure for specific online environments • formulate and maintain strategies for securing and protecting digital information • devise and implement risk management strategies when engaging in commercial transactions in online environments • follow environmentally and ergonomically sound work practices which ensure health and safety issues when using ICT • comply with school expectations and protocols when using ICT
Reflect on how ICT are used in the community and identify ways they can impact people	• reflect on individual use of ICT to ensure personal safety and information security	• reflect on experiences and evaluate practices in terms of being socially aware, safe, responsible and respectful	• articulate the importance of citing references and acknowledging the owners of digital sources	• reflect on the ethical issues associated with the use of materials available on the Internet • reflect on the individual use of ICT to enhance personal safety and information security	• articulate the importance of sharing materials responsibly

Ethics, Issues and ICT

SMART Classrooms

DEPARTMENT OF EDUCATION, TRAINING AND EMPLOYMENT

Student ICT Expectations

Students use a range of ICT devices, functions and applications across key learning areas to inquire, create, collaborate and communicate and to manage, store and retrieve information and data. They reflect on their operational skills and identify ways to improve effectiveness.

	By the end of Year 3 students:	By the end of Year 5 students:	By the end of Year 7 students:	By the end of Year 9 students:	By the end of Year 10 students:
Operate ICT efficiently and safely	• locate keys on a keyboard and operate major keyboard functions • log on to the school network using a keyboard and mouse • log off and shut down a computer after use • use and manipulate the mouse including 'click and drag' • identify and use correct terms to name visible system components such as keyboard, monitor, screen and mouse • demonstrate awareness of correct posture, reach and need for comfortable vision • safely handle DVDs/CDs and USB devices and insert them into the appropriate location • connect and disconnect devices with care • identify the function of some ICT devices such as a digital camera and printer	• have keyboard proficiency • independently log on and off the school network • differentiate between hardware and software • distinguish between input, output and storage devices • use a range of input, output and storage devices, understand how these devices work together and select the devices most suited to specific tasks • use a digital camera to capture images • use school printers to complete specific printing tasks, such as select network printer within the print dialogue box; select printing properties; load paper; change ink cartridge; check printer connection cable; connect printer to computer; and check printer properties	• have keyboard proficiency including the use of shortcuts for copying, cutting and pasting • independently use a range of input, output and storage devices for specific curriculum purposes • transfer and process information from one ICT application and environment to another • independently select and use appropriate devices for specific tasks • use a scanner to create a digital file from a hard copy image • use a digital camera, including changing image resolution and setting image effects • use a digital video camera to create and edit recordings • independently use school printers by making appropriate selections prior to printing, such as selecting the number of copies, page range and paper orientation	• independently select and operate input, output, processing and storage devices for specific curriculum purposes • understand the concept and functions of a network, e.g. using shared printers and saving to network drives	• independently select and effectively operate a range of ICT devices for specific curriculum purposes • collect and use data from hand held devices for real time data processing • apply problem solving and troubleshooting progressions for the efficient operation of devices
Navigate software and virtual environments	• recognise and select features from options on a toolbar, including select, copy, paste, font, bullets and numbering • understand the function of home pages, hyperlinks and navigation bars in websites • follow hyperlinks to view web pages • select and use navigation features in interactive stories, learning objects and teacher-selected websites • engage with software for word processing, concept mapping, drawing and creating presentations	• use and understand common choices within the file menu of different applications • navigate virtual and software environments, including learning objects, games, websites and publishing software • use editing features to improve drafts of writing, presentations, email and published products • navigate spreadsheet software to explore, record and collate data, perform simple statistical calculations, construct simple tables and graphs, change values and observe results, format data and transfer to writing or publishing software • use concept mapping software to represent related ideas and information diagrammatically • use digital photograph and movie making software • access Help features within programs when required	• differentiate between software types and select appropriate programs to undertake specific curriculum tasks • select and use navigation features within learning objects, software, simulations and websites • use spreadsheet functions to create tables; record, sort, calculate and present data; identify trends; and to perform simple mathematical operations • use concept mapping software to plan projects, record ideas and organise main ideas and supporting details and to present research findings • use formatting, editing and layout options in word processing software to manipulate content appropriate to text type	• independently select and use navigation features within learning objects, software programs and websites • use spreadsheets to collate and manipulate data and create graphs from multiple sets of data • use the features of presentation, word processing and publishing software to automate processes to increase efficiency including using templates, headers, footers and page setup	• use learning objects, games and simulations to consolidate conceptual understanding • use advanced features of spreadsheets to record, sort, calculate and retrieve data, establish data trends, produce data reports and present results • use advanced features of word processing, presentation and publishing software to automate processes within and across documents and products • insert or merge data between software programs • effectively integrate advanced editing features of photo/image editing programs • use industry standard software particular to each subject area

Operating ICT

Queensland Government

Student ICT Expectations

Students use a range of ICT devices, functions and applications across key learning areas to inquire, create, collaborate and communicate and to manage, store and retrieve information and data. They reflect on their operational skills and identify ways to improve effectiveness. *(continued)*

	By the end of Year 3 students:	By the end of Year 5 students:	By the end of Year 7 students:	By the end of Year 9 students:	By the end of Year 10 students:
Use ICT to manage, store and retrieve information and data	• identify places and devices for storing data • save digital work regularly while working • use 'Save' and 'Save As' intentionally • save and retrieve files to and from specific locations • understand that data can be transferred between devices • create, name and rename folders • follow a simple folder structure when saving and retrieving files	• organise and digitally store information, images, sound files and references to information sources for later retrieval and use • use filing systems to store and retrieve data including the use of electronic folders and files and meaningful file and folder names • retrieve information from a database such as a library catalogue • retrieve and open appropriate files from specific locations such as a network, shared and personal folders and storage devices • use usernames and passwords to access files stored on a network • consistently use backup procedures and know the difference between 'Save' and 'Save As'	• manage and transfer data between school and home electronic environments • organise electronic folders and files in a clear, logical structure enabling the efficient retrieval and saving of files • recognise different file types • know limitations of file size for email attachments • know the memory capacity of storage devices • implement a set of backup procedures for personal data	• use logical naming conventions to save digital files, routinely backup files and protect personal information from unauthorised use • understand the purpose of databases and use these to organise, store and retrieve data • identify the function of a file type by its extension • understand how to compress and decompress files	• maintain digital files in a clear, logical structure demonstrating understanding of file size, type and naming conventions • transfer and process information from one ICT application and environment to another, improving or supporting information flows • use databases to organise, store and retrieve data • understand why, when and how to compress files • save documents in other formats to reduce incompatibility issues • use electronic organisers and online calendars to plan and develop schedules
Reflect on operating ICT	• describe the importance of logging off the computer • discuss the need to save while working • describe known keyboard functions • contribute possible solutions for solving common computer problems	• articulate the advantages of organising files efficiently • reflect on the choice of software to complete a specific task • share knowledge to correct a problem encountered while operating an ICT device	• reflect on how ICT devices can be used to complete a task more effectively • justify the choice of using a particular ICT device • describe the importance of using meaningful file names	• recognise the need to compress files • articulate the advantages of good file management • identify ways to improve the efficiency and effectiveness of their ICT practices	• justify the purpose of merging data between programs, such as when creating mash-ups or form letters • reflect on the efficient management, storing and retrieval of data

Operating ICT