








Computer capabilities

The following pages have been provided as a guide to what you can be doing to effectively use information and communications technology (ICT) in your classroom. These student activities have been grouped by the type of computer *capability*. The capabilities (developed by the Department of Education and Training) are the foundation of the competencies being used by the Board of Studies to produce the Year 10 Computing Skills Assessment. There are five capabilities:

-  Using ICT to locate, access, evaluate, manipulate, create, store and retrieve and display information.
-  Express ideas and communicate with others using ICT.
-  Develop an awareness of the range of applications of ICT in society.
-  Discriminate in the choice and use of ICT for a given purpose.
-  Develop the confidence to explore, adapt and shape technological understanding and skills in response to challenges now and in the future.

Pilot programs are presently being conducted in schools in:

preparation for the introduction of statewide Computing Skills Assessments for all Year 6 and Year 10 students. These statewide assessments are intended to measure students' knowledge, skills and understanding in the use of information and communications technology (ICT).

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All teachers will have a role to play in preparing students with the skills they will need for this assessment. By grouping the classroom examples into the capabilities, it is hoped that you will gain an insight into the types of skills which students need to achieve. We also hope it will assist you in understanding the **range of classroom learning activities** that could be used to help students to achieve these skills. These suggestions can be used as idea starters for programming.



Examples of activities for the development of skills in:
using ICT to locate, access, evaluate, manipulate, create, store and retrieve and display information.

Stage 4	Stage 5		Stage 6
<ul style="list-style-type: none"> ● Search the Internet within clear parameters or use its resources with guidance such as using hotlists and hyperlinks. ● Use program features including spelling checkers and thesaurus to edit compositions. ● Use a spreadsheet to compose a survey. ● Use CD-ROMs and DVDs to explore ideas and information about particular texts. ● Select and insert graphics found on the Internet or created personally (e.g. photos, video, drawings, animations) to represent ideas. ● As a class, create and use a database of the group's wide reading preferences. 	<ul style="list-style-type: none"> ● Use a range of techniques to carry out effective searches for information on the Internet. ● Use desktop publishing facilities to compose texts for particular media. ● Identify the components of multimedia and describe how one mode affects another. ● Create a collage demonstrating key concerns of a text using 3D text and graphics (cropped and/or enlarged). ● Question, read the gaps and critique a database. 		<ul style="list-style-type: none"> ● Evaluate particular web sites in terms of their content, textual form and reliability. ● Evaluate CD-ROMs and DVDs according to a range of criteria including the ways they present complex ideas through the use of different modes. ● Use a range of cataloguing systems to source information.



Examples of activities for the development of skills to:

express ideas and communicate with others using ICT.

Stage 4	Stage 5		Stage 6
<ul style="list-style-type: none"> ● Design a personal home page. ● Explore an author's web site. ● Explore interactive web sites to evaluate the effectiveness of the communication. ● Use software such as <i>Inspiration</i> to develop concept maps. ● Use animation and sound to enliven a <i>PowerPoint</i> presentation. ● Email friends and send assignments as attachments to teachers. 	<ul style="list-style-type: none"> ● Create a web site on a particular topic ● Create a hyperlinked text. ● Present ideas using <i>HyperStudio</i>, animation or <i>PowerPoint</i>. ● Use software such as <i>Reason!Able</i> to construct essay plans. ● Compose a short film to illustrate an aspect of a poem. ● Post questions and comments on a bulletin board for inter-class discussions. ● Change the meaning of an image by writing new captions to accompany it (and vice versa). ● Participate in a video conference. 		<ul style="list-style-type: none"> ● Create a web site to explore a concept and information related to it. ● Use hyperlinks to present multiple readings of a particular text. ● Use a range of media (e.g. edited video extracts, animations. <i>Inspiration</i> mind map etc.) in ICT supported presentations. ● Make a video illustrating different styles of interviewing, negotiation, public address or conflict resolution etc. ● Edit highlights of a video to support an argument in an oral presentation. ● Participate in <i>WebBoard</i> asynchronous discussions between schools studying the same HSC texts.



Examples of activities for the development of skills to:

develop an awareness of the range of applications of ICT in society.

Stage 4	Stage 5		Stage 6
<ul style="list-style-type: none"> ● Compose a mood soundtrack to accompany the reading of a poem. ● Identify the use of different information technologies in a museum exhibition. ● Compare a television channel with its online version. 	<ul style="list-style-type: none"> ● Compare the differences between book, stage and film productions of texts using Internet, film clips, CD-ROM and DVD. ● Explore films which use computer animation and consider how these might be viewed differently if they were using human actors. ● Compare news coverage on television with that of a newspaper to explore the changes from print to electronic communication on mass media. ● Compare news coverage on television with that of Internet video (e.g. NASA TV) to explore the changes in electronic communication. 		<ul style="list-style-type: none"> ● Critically examine the role of special effects in action films and find comparisons to them in extracts from heroic poetry. ● Consider the different ways in which we compose and respond to texts in handwriting, print and word processing. ● Consider the nature of generic distinctions between computer games and films in such packages as <i>Lara Croft Tomb Raider</i> or <i>Monsters Inc.</i> ● Take part in an Internet discussion following a television or radio program.



Examples of activities for the development of skills to:

discriminate in the choice and use of ICT for a given purpose.

Stage 4	Stage 5		Stage 6
<ul style="list-style-type: none"> ● Select appropriate software programs for composing particular texts such as <i>Publisher</i> for brochures or <i>PowerPoint</i> for oral presentations. ● Decide and justify whether a spreadsheet or database is the tool to store and manipulate data gathered in a survey of teenage slang. ● Select appropriate formats to save and transfer graphics for different kinds of presentation. ● Compose a storyboard using particular functions such as text boxes or a table, software such as <i>PowerPoint</i>, <i>HyperStudio</i> or a graphics program etc. 	<ul style="list-style-type: none"> ● Choose appropriate technology such as a pen or computer technology for particular writing tasks, e.g. note taking, letter to the editor or written support for verbal presentation. ● Choose appropriate tools and avenues of investigation for different purposes and justify choice. For example: text book, anthology, CD-ROM or DVD or Internet etc. ● Develop an advertisement (magazine, online or television) for a product of your choice using a range of media. ● Choose appropriate technology to communicate with other students for a particular purpose, e.g. email, chat, bulletin board. 		<ul style="list-style-type: none"> ● Transform texts from one medium into another commenting on the effect of the type of technology on meaning. ● Assess the benefits of using ICT such as <i>Inspiration</i>, word processing, database of research etc, to develop and document projects ● Assess the benefits of using a digital portfolio instead of a handwritten journal. ● Use sophisticated features such as Reviewing Tool Bar in <i>Word</i> to reflect on texts.



Examples of activities for the development of skills to:

develop the confidence to explore, adapt and shape technological understanding and skills in response to challenges now and in the future.

