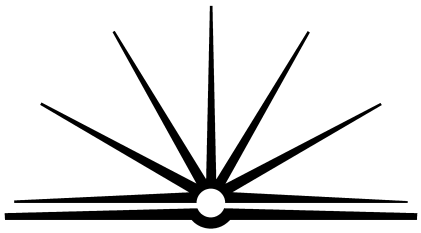

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Computing Skills Assessment at Year 10

Mapping of Information and Communications Technologies in Mandatory Stages 4 and 5 Syllabuses

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This mapping provides a complete list of specific Information and Communication Technologies (ICT) requirements in the outcomes and content of current mandatory Stage 4/5 syllabuses.

It is recognised that as information technology has developed in recent years many teachers have incorporated a range of other computing experiences into the classroom. These experiences may complement and enrich the experiences provided in the syllabuses.

Some syllabuses make explicit statements about the type of ICT that is to be incorporated into the teaching and learning process. For example, in Stage 4 Science, 'students learn to process information to organise data using a variety of methods including diagrams, tables, *spreadsheets* and *data bases*.'

Other syllabuses may include statements that require teachers to integrate 'technology' in teaching and learning activities where possible. In this context, 'technology' could include ICT.

For example:
- Music includes a statement about the 'Use of Technology': 'Teachers are encouraged to use as broad a range of technology as is available to them in the classroom and in the wider school context.'
- Design and Technology students should be able to 'identify uses of specific technologies in the personal, commercial/industrial and global domains' (outcome K2.2).

The revision of Years 7–10 syllabuses in the future will increase the level of ICT knowledge, skills and understanding expected of students.

Mapping ICT Skills*: English 7–10 Syllabus (1987)*

Student should learn to:	Stage 4	Stage 5
Computing Capabilities from the NSW Government's *Plans for Education and Training 1999 – 2003* 1. *Use ICT to locate, access, evaluate, manipulate, create, store and retrieve and display information*	Writing Outcomes • On their own and with others use various strategies (a word processor, dictionaries, reference books, thesaurus) to edit and proofread writing Course Requirement C3. Writing **Assumption** 3. Students learn to write mainly by writing **Implications for the Classroom** 3.9 Using a word processor can help students to write by facilitating drafting and revising and providing immediate printouts Mass Media • design and plan mass media products using television, radio, film, computer, and print technologies • observe, listen to, and read print, electronic, and computer mass media products	Course Requirement C3. Writing **Assumption** 3. Students learn to write mainly by writing **Implications for the Classroom** 3.9 Using a word processor can help students to write by facilitating drafting and revising and providing immediate printouts Mass Media • design and plan multi-media products • use a range of media production techniques such as video recording or computer generated graphics
2. *Express ideas and communicate with others using ICT*		
3. *Develop an awareness of the range of applications of ICT in society*	Mass Media • identify a range of mass media products, technologies, and the distinguishing features of media forms • describe the ways in which different technologies affect the language of mass media products	Mass Media • identify the distinguishing features of multimedia forms • predict how emerging communications technologies may change language use and ideologies
4. *Discriminate in the choice and use of ICT for a given purpose*	Mass Media • identify the ways in which media products may be limited by the technologies and industries used to produce them	
5. *Develop the confidence to explore, adapt and shape technological understanding and skills in response to challenges now and in the future*		

Mapping ICT Skills: *Mathematics 7–8 Syllabus (1989)* *Mathematics 9–10 Syllabus (1996)*

Student should learn to:	Stage 4	Stage 5
Computing Capabilities from the NSW Government's *Plans for Education and Training 1999 – 2003* 1. *Use ICT to locate, access, evaluate, manipulate, create, store and retrieve and display information*	Working Mathematically WM4.5 determines and applies appropriate mathematical techniques, either mental, written, calculator or computer, in the solution of problems	Standard • uses appropriate technology effectively to assist in the solution of problems Intermediate • uses appropriate technology effectively to assist in the solution of problems Advanced • uses appropriate technology effectively to assist in the solution of problems
2. *Express ideas and communicate with others using ICT*		
3. *Develop an awareness of the range of applications of ICT in society*		
4. *Discriminate in the choice and use of ICT for a given purpose*		
5. *Develop the confidence to explore, adapt and shape technological understanding and skills in response to challenges now and in the future*		

Mapping ICT Skills: *Design and Technology 7–10 Syllabus (1992)*

At least 50 hours (indicative time) of the mandatory 200 hours (indicative time) Design and Technology Year 7-10 course must be devoted to learning about and using computers. Teachers must ensure that students experience and investigate a broad range of technologies.

This requirement will be met by integrating computer technology in appropriate design projects.

Design and Technology emphasises a breadth of technological experiences.

Student should learn to:	Stage 4	Stage 5
Computing Capabilities from the NSW Government's *Plans for Education and Training 1999 – 2003* 1. *Use ICT to locate, access, evaluate, manipulate, create, store and retrieve and display information*	K5.4 outline the application of computers to specific Design Projects S4.3 use computer technology to access and manipulate data S4.1 incorporate appropriate computer aids when undertaking Design Projects S4.2 demonstrate proficiency and safety in the use of a variety of systems and packages	
2. *Express ideas and communicate with others using ICT*	K1.1 describe a range of technologies	
3. *Develop an awareness of the range of applications of ICT in society*	K2.1 identify technologies used by historical, cultural and contemporary groups in society K2.2 identify uses of specific technologies in the personal, commercial/ industrial and global domains K2.3 outline ways of incorporating specific technologies into everyday living A1.1 appraise the positive and negative effects of technology on society A1.2 appreciate the historical and cultural significance of technological developments on society	
4. *Discriminate in the choice and use of ICT for a given purpose*	K1.2 relate these technologies to practical design projects K3.1 identify positive and negative consequences of various technologies for society K3.2 outline the effects of specific technologies in the personal, commercial/industrial and global domains	

Mapping ICT Skills: *Design and Technology 7–10 Syllabus (1992) (Continued)*

(continued) *4. Discriminate in the choice and use of ICT for a given purpose*	K3.3 describe the moral and cultural implications of using technology in society A1.3 appreciate the contribution of different cultures to technology A1.4 appreciate the impact of technology on Indigenous and other cultures A2.1 develop a commitment to the efficient use of technology A4.3 develop an appreciation of appropriate technological applications A4.5 accept responsibility for the consequences of personal technology	
5. Develop the confidence to explore, adapt and shape technological understanding and skills in response to challenges now and in the future	S5.5 participate in discussions about the impact of design and technology A3.1 appreciate the impact technological development has on satisfying human needs and wants A3.2 recognise the contribution technology makes to everyday living A4.1 display a willingness to participate in technological activities A4.4 develop confidence, purpose and competence in using technologies A5.1 appreciate motivational forces in design and technology	

Mapping ICT Skills: *Science 7–10 Syllabus (1998)*

Student should learn to:	Stage 4	Stage 5
Computing Capabilities from the NSW Government's *Plans for Education and Training 1999 – 2003* 1. *Use ICT to locate, access, evaluate, manipulate, create, store and retrieve and display information*	4/5.13.1 identify data sources to: f) recommend the use of an appropriate technology strategy for collecting data or gathering information 4/5.15 gather first-hand information to: b) use a range of data collection technologies and strategies independently 4/5.16 gather information from secondary sources to: a) use a range of sources, including CD-ROMs and the Internet, to access information 4/5.17 process information to: d) organise data using a variety of methods including diagrams, tables, spreadsheets and data bases NB: 4/5.15, 4/5.16 and 4/5.17 also relate to capability 3	4/5.13.1 identify data sources to: f) recommend the use of an appropriate technology strategy for collecting data or gathering information 4/5.15 gather first-hand information to: b) use a range of data collection technologies and strategies independently 4/5.16 gather information from secondary sources to: a) use a range of sources, including CD-ROMs and the Internet, to access information 4/5.17 process information to: d) organise data using a variety of methods including diagrams, tables, spreadsheets and data bases NB: 4/5.15, 4/5.16 and 4/5.17 also relate to capability 3
2. *Express ideas and communicate with others using ICT*	4/5.15 gather first-hand information to: b) use a range of data collection technologies and strategies independently 4/5.16 gather information from secondary sources to: a) use a range of sources, including CD-ROMs and the Internet, to access information 4/5.17 process information to: e) organise data using a variety of methods including diagrams, tables, spreadsheets and data bases	4/5.15 gather first-hand information to: b) use a range of data collection technologies and strategies independently 4/5.16 gather information from secondary sources to: a) use a range of sources, including CD-ROMs and the Internet, to access information
3. *Develop an awareness of the range of applications of ICT in society*	Refer to outcomes 4/5.15, 4/5.16 and 4/5.17 that appear above in capability 1	5.12 A student will learn about technology to: d) discuss, using examples, how developments in electronics have changed technology, and identify some applications g) describe the ways in which technology has increased the variety of materials
4. *Discriminate in the choice and use of ICT for a given purpose*	4/5.18 b) select and use an appropriate medium to present data	4/5.18 b) select and use an appropriate medium to present data
5. *Develop the confidence to explore, adapt and shape technological understanding and skills in response to challenges now and in the future*		

Mapping ICT Skills: *History 7–10 Syllabus (1998)* *Geography 7–10 Syllabus (1998)*

Student should learn to:	Stage 4	Stage 5
Computing Capabilities from the NSW Government's *Plans for Education and Training 1999 – 2003* 1. *Use ICT to locate, access, evaluate, manipulate, create, store and retrieve and display information*	**Geography** Geographical Skills Through the study of Geography, students will develop skills in: acquiring geographical information: - by reflecting on prior learning with consideration of: what information technology can I use? - by identifying and gathering geographical information to; locate and gather information from a variety of primary and secondary sources, including … information technology … processing geographical information: - by analysing geographical information: by using information technology to process, present and analyse geographical evidence - by organising and synthesising geographical information: select and use appropriate graphical methods (incorporating information technology) to present evidence in maps and diagrams communicating geographical information - by answering geographical questions by presenting geographical information in the form of both oral and written reports accompanied by maps and graphs, including databases … multimedia presentations **History** Knowledge and Understanding M4.11 locates, selects and organises simple historical information from a variety of sources, utilising technological and other processes to address simple historical problems and issues	**Geography** Geographical Skills Through the study of Geography, students will develop skills in: acquiring geographical information**:** - by reflecting on prior learning with consideration of: what information technology can I use? - by identifying and gathering geographical information to: locate and gather information from a variety of primary and secondary sources, including … information technology … processing geographical information: - by analysing geographical information: by using information technology to process, present and analyse geographical evidence - by organising and synthesising geographical information: select and use appropriate graphical methods (incorporating information technology) to present evidence in maps and diagrams communicating geographical information - by answering geographical questions: by presenting geographical information in the form of both oral and written reports accompanied by maps and graphs, including databases … multimedia presentations **History** Knowledge and Understanding M4.11 locates, selects and organises simple historical information from a variety of sources, utilising technological and other processes to address simple historical problems and issues

Mapping ICT Skills: *History 7–10 Syllabus (1998)* *(Continued)* *Geography 7–10 Syllabus (1998)*

Student should learn to:	Stage 4	Stage 5
(Continued) 1. *Use ICT to locate, access, evaluate, manipulate, create, store and retrieve and display information*	**History** Skills Research Collecting information • locate historical information from written, audio-visual and multimedia resources	**History** Skills Research Collecting information • locate historical information from a wide variety of written, oral, audio-visual and multimedia resources
2. *Express ideas and communicate with others using ICT*	**History** Skills Communicating Presenting • use multimedia processes to create published works incorporating text, graphics, sound and/or animation as appropriate	**History** Skills Communicating Presenting • use a wide variety of multimedia processes to create published works incorporating text, graphics, sound and/or animation as appropriate
3. *Develop an awareness of the range of applications of ICT in society*	**Geography** Focus Area 4G4 Global Citizenship Spatial variations in life opportunities throughout the world, such as: • work and technology	**Geography** Focus Area 5A2 Changing Australian Environments • processes causing change in Australian communities such as - new technologies **Geography** Focus Area 5A4 Australia in Its Regional and Global Context • regional and global links such as: - technology
4. *Discriminate in the choice and use of ICT for a given purpose*		
5. *Develop the confidence to explore, adapt and shape technological understanding and skills in response to challenges now and in the future*		**Geography** Focus Area 5A4 Australia in Its Regional and Global Context • regional and global links such as: - technology

Mapping ICT Skills: Languages syllabuses 7–10 (as at May 2001)

While there is no specific reference to ICT in this syllabus, it is recognised that as information technology has developed in recent years many teachers have incorporated a range of computing experiences into the classroom. These experiences may complement and enrich the experiences provided in the syllabuses.

The revision of this syllabus in the future will increase the level of ICT knowledge, skills and understandings expected of students.

Student should learn to:	Stage 4	Stage 5
Computing Capabilities from the NSW Government's *Plans for Education and Training 1999 – 2003* 1. *Use ICT to locate, access, evaluate, manipulate, create, store and retrieve and display information*	See above	See above
2. *Express ideas and communicate with others using ICT*	See above	See above
3. *Develop an awareness of the range of applications of ICT in society*	See above	See above
4. *Discriminate in the choice and use of ICT for a given purpose*	See above	See above
5. *Develop the confidence to explore, adapt and shape technological understanding and skills in response to challenges now and in the future*	See above	See above

Mapping ICT Skills: *PDHPE 7–10 Syllabus (1991)*

While there is no specific reference to ICT in this syllabus, it is recognised that as information technology has developed in recent years many teachers have incorporated a range of computing experiences into the classroom. These experiences may complement and enrich the experiences provided in the syllabuses.

The revision of this syllabus in the future will increase the level of ICT knowledge, skills and understandings expected of students.

Student should learn to:	Stage 4	Stage 5
Computing Capabilities from the NSW Government's *Plans for Education and Training 1999 – 2003* 1. *Use ICT to locate, access, evaluate, manipulate, create, store and retrieve and display information*	See above	See above
2. *Express ideas and communicate with others using ICT*	See above	See above
3. *Develop an awareness of the range of applications of ICT in society*	See above	See above
4. *Discriminate in the choice and use of ICT for a given purpose*	See above	See above
5. *Develop the confidence to explore, adapt and shape technological understanding and skills in response to challenges now and in the future*	See above	See above

Mapping ICT Skills: *Music 7–10 (Syllabus 1994, Outcomes 2000)* *Visual Arts 7–10 (Syllabus reprinted with new outcomes 1997)*

With regard to **Music**, a variety of computer hardware and software exists which is suitable for music education. Teachers are encouraged to use as broad a range of technology as is available to them in the classroom and in the wider school context.

Student should learn to:	Stage 4	Stage 5
Computing Capabilities from the NSW Government's *Plans for Education and Training 1999 – 2003* 1. *Use ICT to locate, access, evaluate, manipulate, create, store and retrieve and display information*	**Music** Concept: Tone Colour • sound production methods - electronic • sound source materials - electronic - synthetic	
2. *Express ideas and communicate with others using ICT*	**Music** Skills • performs using different types of technology *Learning Experiences* Performing/Composing/ Listening • using different types of technology **Visual Arts** Mandatory Course Requirements They must be provided with opportunities to: • experiment with and make use of a range of forms … Content – Forms One of the optional forms is electronic	
3. *Develop an awareness of the range of applications of ICT in society*	**Visual Arts** Frames – Cultural • the relationship of scientific and technological innovation and artistic practice	
4. *Discriminate in the choice and use of ICT for a given purpose*	**Music** Skills • experiments with different types of technology Knowledge and Understanding • understands that different forms of technology can contribute to composition	
5. *Develop the confidence to explore, adapt and shape technological understanding and skills in response to challenges now and in the future*		