National Assessment Program – ICT Literacy

Years 6 & 10

Assessment Framework 2017

Introduction

The National Assessment Program (NAP) began as an initiative of ministers of education in Australia to monitor outcomes of schooling specified in the 1999 Adelaide Declaration on National Goals for Schooling in the 21st Century (Adelaide Declaration). NAP was established to measure student achievement and to report this against key performance measures in relation to the national goals, using nationally comparable data in each of literacy, numeracy, science, information and communication technologies (ICT), and civics and citizenship.

In 2008, the Adelaide Declaration was superseded by the Melbourne Declaration on the Educational Goals for Young Australians (Melbourne Declaration). The work of NAP has continued and is refined, as necessary, to monitor and report on the goals specified in the Melbourne Declaration.

Under NAP, literacy and numeracy achievements are measured and reported via the National Assessment Program – Literacy and Numeracy (NAPLAN), and achievement in science, civics and citizenship, and ICT literacy are assessed under the NAP – sample assessment program. These assessments are developed and managed by the Australian Curriculum, Assessment and Reporting Authority (ACARA) under the auspices of the Education Council.

The first collection of data from students in the National Assessment Program – ICT Literacy (NAP – ICT Literacy) was in 2005; subsequent cycles of assessment have been conducted in 2008, 2011 and 2014. The fifth cycle of NAP – ICT Literacy takes place in 2017. The content specifications for the NAP – ICT Literacy assessment were established before the first assessment cycle in 2005 and have remained unchanged through all subsequent assessment cycles. However, since the inception of NAP – ICT Literacy the Australian Curriculum: ICT Capability and the Australian Curriculum: Digital Technologies have been developed. This assessment framework includes information on how the content assessed in NAP – ICT Literacy relates to the Australian Curriculum: ICT Capability and Australian Curriculum: Digital Technologies.

This assessment framework provides information about NAP – ICT Literacy, with a focus on what the program assesses. This framework contains:

- a brief background of NAP – ICT Literacy

- the definition of ICT literacy used in NAP – ICT Literacy

- a description of the components of ICT literacy assessed in NAP – ICT Literacy.

- information about how NAP – ICT Literacy relates to the Australian Curriculum: ICT Capability and Australian Curriculum: Digital Technologies

- information about how ICT literacy is assessed and reported in NAP – ICT Literacy

Appendixes include:

- a description of the process used to map NAP – ICT Literacy to the Australian Curriculum: ICT Capability and Australian Curriculum: Digital Technologies

- selected sample items from NAP – ICT Literacy

- work samples from the Australian Curriculum: Digital Technologies.

ICT literacy in the educational goals for young Australians

The Melbourne Declaration was adopted by the state, territory and Commonwealth ministers of education in December 2008. The declaration 'sets out educational goals for young Australians' (MCEETYA, 2008: 5). As part of its preamble, the Melbourne Declaration asserts:

> *Rapid and continuing advances in information and communication technologies (ICT) are changing the ways people share, use, develop and process information and technology. In this digital age, young people need to be highly skilled in the use of ICT. While schools already employ these technologies in learning, there is a need to increase their effectiveness significantly over the next decade.*

Goal 2 of the Melbourne Declaration states, among other things, that 'all young Australians become successful learners, confident and creative individuals, and active and informed citizens'.

The declaration goes on to elaborate that 'successful learners':

> *have the essential skills in literacy and numeracy and are creative and productive users of technology, especially ICT, as a foundation for success in all learning areas.*

This goal continues a theme from the earlier Adelaide Declaration, which gave rise to the first cycle of the National Assessment Program – ICT Literacy in 2005. The Adelaide Declaration stated that when students left school they should be 'confident, creative and productive users of new technologies, particularly information and communication technologies, and understand the impact of those technologies on society' (MCEETYA, 1999).

What is ICT literacy?

The Council of Australian Governments (COAG) Education Council for use in the National Assessment Program defines ICT literacy as:

> *The ability of individuals to use ICT appropriately to access, manage and evaluate information, develop new understandings, and communicate with others in order to participate effectively in society.*

This definition, together with an elaboration through a set of six ICT literacy processes (Table 1) and three key outcomes organised into strands (page 6), forms the basis of the NAP – ICT Literacy assessment framework, which has provided the foundation of the student assessment across all five cycles of NAP – ICT Literacy.

Continuing advances in hardware and software technologies have meant that the environments in which ICT literacy can be demonstrated are in constant flux. Despite this, the core capabilities that are the basis of the NAP – ICT Literacy assessments have remained consistently relevant to the field and are congruent with curriculum developments in Australia, including the articulation of ICT capability and computational thinking in the Australian Curriculum (ACARA, 2017).

The decision to focus on ICT literacy as an essential skill across all learning areas, for all students, reflects the wide prevalence and use of ICT in society and the value of ICT literate citizens. As technologies change, it is increasingly important that these skills are adaptive and transferable and that ICT literacy is used as a tool to assist and transform learning in conjunction with other essential skills, such as literacy, numeracy and problem solving.

What are the components of ICT literacy?

ICT literacy comprises the application of processes in order to achieve outcomes associated with three *strands* of achievement. The NAP – ICT Literacy processes and strands are presented in the following sections.

NAP – ICT Literacy processes

NAP – ICT Literacy includes six processes, these are listed and described in Table 1 below.

Table 1: Processes assessed in NAP – ICT Literacy

Process	Description
Accessing information	identifying information requirements and knowing how to find and retrieve information)
Managing information	organising and storing information for retrieval and reuse
Evaluating	reflecting on the processes used to design and construct ICT solutions and judgements regarding the integrity, relevance and usefulness of information
Developing new understandings	creating information and knowledge by synthesising, adapting, applying, designing, inventing or authoring
Communicating	exchanging information by sharing knowledge and creating information products to suit the audience, the context and the medium
Using ICT appropriately	critical, reflective and strategic ICT decisions and considering social, legal and ethical issues

NAP – ICT Literacy strands

The NAP – ICT Literacy assessment content is organised according to three strands: *working with information, creating and sharing information* and *using ICT responsibly*. These strands were developed to describe discrete constructs. Strands A and B are logical process groupings of ICT use while Strand C focuses on understandings of responsible ICT use.

The following is a description of the three strands of the NAP – ICT Literacy assessment framework.

Strand A: Working with information

This strand includes identifying the information needed; formulating and executing a strategy to find information; making judgements about the integrity of the source and content of the information; and organising and storing information for retrieval and reuse.

Strand B: Creating and sharing information

This strand includes adapting and authoring information; analysing and making choices about the nature of the information product; reframing and expanding existing information to develop new understandings; and collaborating and communicating with others.

Strand C: Using ICT responsibly

This strand includes understanding the capacity of ICT to make an impact on individuals and society, and the consequent responsibility to use and communicate information legally and ethically.

Figure 1 shows the relationship between the three strands and the six ICT literacy processes. The six processes are discernible across all the strands; however, their prominence may vary amongst the strands. The organisation of the assessment framework into three strands is intended to assist with the development of assessment tasks and the subsequent interpretation of student responses to the assessment tasks.
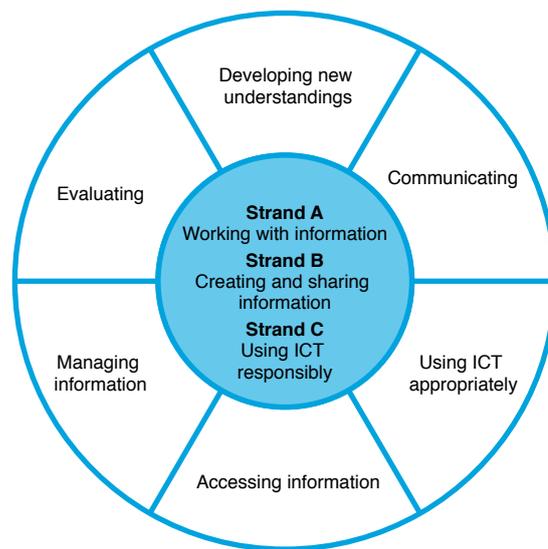
Figure 1: The ICT Literacy assessment framework processes and strands

How is ICT literacy applied in the student assessment?

The ICT literacy processes described in this framework are applied across all learning and real-life situations, are not restricted to using particular technologies, software and information products, and are evident in a range of contexts and environments that a student may use.

When developing assessment tasks, evidence of ICT literacy may be drawn from and applied across the range of technical environments, information products, software and contexts shown in Table 2.

Table 2: ICT literacy as applied in the NAP – ICT Literacy student assessment

| Technical environments	The possible range of technical environments is: • desktop • tablet • world wide web NAP – ICT Literacy can be completed by students using stand-alone computers (including tablets). World wide web environments are simulated when used in the assessment.
Information products	Information products are made use of, adapted and created by students completing the assessment. They include and combine elements of numerical data, text, images, sounds and video. Examples of information products include: • print-based forms, such as documents that may contain text, illustrations, graphs, etc. • digital forms, such as multimedia, presentations, web pages that may contain text, sound, video, etc. • graphical and symbolic forms, such as charts, graphs, maps, etc. • pictorial forms, such as photographs, drawings, etc.
Software	The range of software students work with in NAP – ICT Literacy includes: • Internet and sourcing applications, such as email, browsers, online services and e-commerce • social networking • word processor • spreadsheet • database • multimedia tools • file management tools The assessment tasks are constructed to provide equitable access for all students regardless of software platforms and brands that students have access to in their school.
Contexts	The range of contexts students work with in NAP – ICT Literacy includes: • personal/social • educational (cross-curricular) • community.

How does NAP – ICT Literacy relate to the Australian Curriculum?

The NAP – ICT Literacy assessment framework processes were originally developed for the first assessment cycle in 2005 before the ICT Capability and Digital Technologies content descriptions were available.

Consequently, as related curriculum content is published by ACARA, the NAP – ICT Literacy assessment framework processes are mapped accordingly. The relationship between the Australian Curriculum and the NAP – ICT Literacy assessment framework was reviewed in 2014, to acknowledge the Australian Curriculum: ICT Capability (as shown in the NAP ICT Literacy 2014 National Report), and in 2017, to acknowledge the Australian Curriculum: Digital Technologies released in 2015.

Figure 2 shows the relationships between each of the curricula for ICT Capability and Digital Technologies and the NAP – ICT Literacy assessment framework. In Figure 2, the dashed line surrounding the NAP – ICT Literacy processes is used to show that, while these processes are described separately, they are reported using a single score.
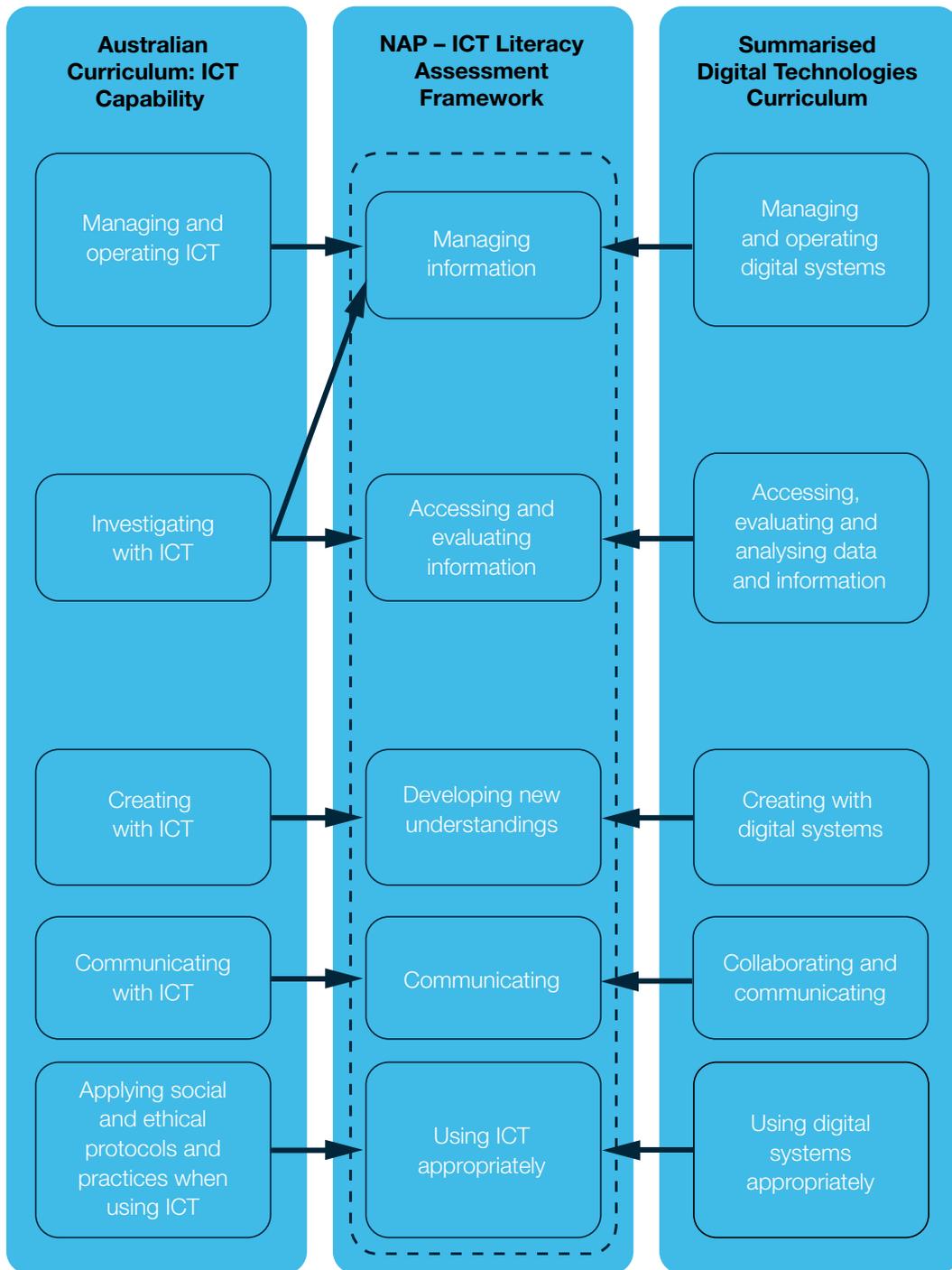
Figure 2 Mapping of the NAP – ICT Literacy assessment framework, the Australian Curriculum: ICT Capability and the Australian Curriculum: Digital Technologies

Appendix 1 explains in detail the steps involved for mapping the content descriptions with assessment framework processes. Appendix 3 shows work samples from the Australian Curriculum: Digital Technologies website that illustrate the links between the assessment framework processes and the summary statements.

How is ICT literacy assessed?

NAP – ICT Literacy consists of test modules made up of individual tasks. Each module follows a linear narrative sequence, in which students complete tasks that contribute to the development of a final information product (such as a presentation, a poster, or an animated video). The modules are designed to reflect students' typical 'real-world' use of ICT and include a range of school-based and out-of-school-based themes. Students are allocated 25 minutes to complete each module; this time is controlled automatically by the online testing system. Each student completes four modules.

The tasks include a broad range of response formats including:

• multiple choice

• drag and drop (matching information)

• simple software commands (such as saving a file to a location)

• short constructed text responses

• construction of information products.

Some tasks are automatically scored, while other tasks that produce responses stored as text, including the information products, are coded by trained markers. Sample tasks are provided in Appendix 2. Example test modules from previous NAP – ICT Literacy assessment cycles are on the National Assessment Program website: https://www.nap.edu. au/nap-sample-assessments/the-tests

Further examples of the type of assessment tasks, along with examples of the marking keys used to score students' responses in the 2017 assessment, will be posted on the National Assessment Program website following release of the NAP – ICT Literacy 2017 public report.

How is student achievement reported in NAP – ICT Literacy?

Although three strands have been used to describe ICT literacy (and to guide creation of the assessment tasks), when reporting the results of the national sample assessment a single measure of ICT literacy (the NAP – ICT Literacy scale score) is used to summarise student achievement. Student scores are reported on the NAP – ICT Literacy scale, established in 2005 on the basis of the test contents and psychometric data collected during the inaugural NAP – ICT Literacy assessment. The scale comprises six achievement levels that are used to describe the achievement of students at both Year 6 and Year 10. The scale is reviewed and revised in light of data collected in each new cycle of NAP – ICT Literacy. Each achievement level comprises a description of the key characteristics of student ICT – Literacy achievement at the level and is illustrated by examples of student achievement on tasks targeted at the level.

Furthermore, two of the achievement levels are identified as proficient standards, one for Year 6 and a second for Year 10. The key performance measure for ICT is the percentage of students achieving at or above the proficient standard.

The NAP – ICT Literacy public reports contain full details of the NAP – ICT Literacy achievement scale, the achievement levels, the proficient standards and of student achievement across the four previous cycles of NAP – ICT Literacy.

The NAP – ICT Literacy public reports for 2005, 2008, 2011 and 2014 can be downloaded from the NAP website: https://www.nap.edu.au/results-and-reports/national-reports

Appendix 1: Summary of method used to map the NAP – ICT Literacy assessment framework processes against the elements of the ACARA ICT Capability and Digital Technologies curriculum

Presented here is an explanation of how the organising elements of the Australian Curriculum: ICT Capability and the Australian Curriculum: Digital Technologies were mapped to the NAP – ICT Literacy assessment framework. The mapping was conducted in three steps.

STEP 1 – Labelling the NAP – ICT Literacy and the Australian Curriculum: ICT Capability processes

The sub-processes embedded in each of the NAP – ICT Literacy assessment framework and the Australian Curriculum: ICT Capability were identified and labelled for later reference. For example, the 'accessing information' process from the NAP – ICT Literacy assessment framework comprises 'identifying information requirements and knowing how to find and retrieve information'. This consists of three separate sub-processes. These were extracted and labelled as:

- » 2.1 Identifying the information needed
- » 2.2 Knowing how to find information
- » 2.3 Retrieving information

The ICT Capability organising element, 'investigating with ICT' contains the following key criteria: define and plan information searches; locate, generate and access data and information; and select and evaluate data and information. The first and third of these consist of closely related processes. The second criterion can be seen to consist of three separate sub-processes. The sub-processes are hence defined as:

- » B1. Define and plan information searches
- » B2a. Locate data and information
- » B2b. Generate data and information
- » B2c. Access data and information
- » B3. Select and evaluate data and information

To improve the comparability of the ICT Capability organising elements with the NAP – ICT Literacy processes, the two processes of 'accessing information' and 'evaluating information' were grouped together to better align with the ICT Capability criterion 'investigating with ICT'. It can be seen that the process of 'accessing and evaluating information' is a coherent whole. In real-world contexts, when one looks for information, one must also necessarily make judgements regarding the integrity, relevance and usefulness of the information.

STEP 2 – Summarising and labelling the Australian Curriculum: Digital Technologies

The Australian Curriculum: Digital Technologies is divided into two strands – knowledge and understanding, and processes and production skills – each comprising a number of content descriptions.

The core conceptual content of the Australian Curriculum: Digital Technologies content descriptions across year levels was distilled and compared to the NAP – ICT Literacy processes. The Australian Curriculum: Digital Technologies content that was judged to be within scope of the NAP – ICT Literacy processes was then used as the basis of Australian Curriculum: Digital Technologies summary statements that could be mapped to the NAP – ICT Literacy processes.

For example, for the *Digital Technologies knowledge and understanding* strand there are two content descriptions across year levels 5 and 6, and 9 and 10 respectively:

- Examine the main components of common digital systems and how they may connect together to form networks to transmit data (ACTDIK014)
- Investigate the role of hardware and software in managing, controlling and securing the movement of and access to data in networked digital systems (ACTDIK034)

The two content descriptions across the year levels were classified as *managing and operating digital systems.* The Digital Technologies content descriptions that were judged to be within scope of the NAP – ICT Literacy processes and the derived summary Digital Technologies statements are presented in Table A1.1 (page 11).

Digital Technologies summary statements were established only for content that was deemed to be within the scope of the existing NAP – ICT Literacy assessment framework. Digital Technologies content that was judged to be out of scope of the NAP – ICT Literacy processes, and consequently not summarised for mapping against the NAP – ICT Literacy processes, is presented in Table A1.2 (page 12).

STEP – 3 Mapping the NAP – ICT Literacy processes against the Australian Curriculum: ICT Capability and the Australian Curriculum: Digital Technologies

Steps 1 and 2 resulted in the content of the Australian Curriculum: ICT Capability and Australian Curriculum: Digital Technologies being summarised, organised and described in a way that supported their mapping against the NAP – ICT Literacy assessment framework. For the Australian Curriculum: ICT Capability, the resulting summaries are described as organising element processes. For the Australian Curriculum: Digital Technologies they are described as summary statements.

Step 3 comprised the mapping of each of the organising element processes and summary statements to the NAP – ICT Literacy assessment framework processes and sub-processes.

In most cases there is a logical one-to-one match between an ICT Literacy sub-process, an ICT Capability organising element process and a Digital Technologies summary statement.

OUTCOMES OF STEP 1

The final grouping obtained for the NAP – ICT Literacy sub-processes is shown below.

1. Managing information

1.1 Organising information

1.2 Storing information for retrieval and reuse

1.3 Reflecting on the processes used to design and construct ICT solutions

Process 1 – Sample test question

2. Accessing and evaluating information

2.1 Identifying the information needed

2.2 Knowing how to find information

2.3 Retrieving information

2.4 Making judgements regarding the integrity, relevance and usefulness
    of information

Process 2 – Sample test question

3. Developing new understandings

3.1 Creating information and knowledge by synthesising, adapting, applying, designing,
    inventing or authoring

Process 3 – Sample test question

4. Communicating with others

4.1 Exchanging information by sharing knowledge

4.2 Creating information products to suit the audience, the context and the medium

Process 4 – Sample test question

5. Using ICT appropriately

5.1 Using ICT responsibly by considering social, legal and ethical issues

Process 5 – Sample test question

OUTCOMES OF STEP 2

The Australian Curriculum: Digital Technologies content descriptors that were judged to be within scope of the NAP – ICT Literacy processes and the derived summary Digital Technologies statements are presented in Table A1.1 below.

Table A1.1: Australian Curriculum: Digital Technologies content descriptors and derived summary statements to be mapped to the NAP – ICT Literacy processes

Content descriptions (Y5/6)	Content descriptions (Y9/10)	Summary statements
Digital Technologies knowledge and understanding		
Examine the main components of common digital systems and how they may connect together to form networks to transmit data (ACTDIK014)	Investigate the role of hardware and software in managing, controlling and securing the movement of and access to data in networked digital systems (ACTDIK034)	**S1. Managing and operating digital systems** S1.1 Understanding digital systems
Digital Technologies processes and production skills		
Acquire, store and validate different types of data, and use a range of software to interpret and visualise data to create information (ACTDIP016)	Develop techniques for acquiring, storing and validating quantitative and qualitative data from a range of sources, considering privacy and security requirements (ACTDIP036)	**S2. Accessing, evaluating and analysing data** S2.1 Acquiring and evaluating data S2.2 Analysing data and information
Design a user interface for a digital system (ACTDIP018)	Design the user experience of a digital system by evaluating alternative designs against criteria including functionality, accessibility, usability, and aesthetics (ACTDIP039)	**S3. Creating with digital systems** S3.1 Generating ideas and designing graphical solutions S3.2 Creating digital solutions
Plan, create and communicate ideas and information, including collaboratively online, applying agreed ethical, social and technical protocols (ACTDIP022)	Plan and manage projects using an iterative and collaborative approach, identifying risks and considering safety and sustainability (ACTDIP044)	**S4. Collaborating and communicating** S4.1 Planning and managing projects S4.2 Exchanging information by sharing knowledge
Plan, create and communicate ideas and information, including collaboratively online, applying agreed ethical, social and technical protocols (ACTDIP022)	Plan and manage projects using an iterative and collaborative approach, identifying risks and considering safety and sustainability (ACTDIP044)	**S5. Using digital systems appropriately** S5.1 Applying social, ethical and technical protocols S5.2 Evaluating the impact of digital solutions on society

The Australian Curriculum: Digital Technologies content that was judged to be out of scope of the NAP – ICT Literacy processes, and consequently not summarised for mapping against the NAP – ICT Literacy processes, is presented in Table A1.2 below.

Table A1.2: Australian Curriculum: Digital Technologies content descriptors judged to be out of scope of the NAP – ICT Literacy processes

Content descriptions (Y5/6)	Content descriptions (Y9/10)
Examine how whole numbers are used to represent all data in digital systems (ACTDIK015)	Analyse simple compression of data and how content data are separated from presentation (ACTDIK035)
	Analyse and visualise data to create information and address complex problems, and model processes, entities and their relationships using structured data (ACTDIK037)
Define problems in terms of data and functional requirements drawing on previously solved problems (ACTDIP017)	Define and decompose real-world problems precisely, taking into account functional and non-functional requirements and including interviewing stakeholders to identify needs (ACTDIK038)
Implement digital solutions as simple visual programs involving branching, iteration (repetition), and user input (ACTDIP020)	Implement modular programs, applying selected algorithms and data structures including using an object-oriented programming language (ACTDIL041)

OUTCOMES OF STEP 3

The mapping of the Australian Curriculum: ICT Capability and summary statements of the Australian Curriculum: Digital Technologies to the NAP – ICT Literacy processes is shown in Table A1.3.

Table A1.3: Mapping of the Australian Curriculum: ICT Capability and the Australian Curriculum: Digital Technologies summary statements to the NAP – ICT Literacy processes.

Australian Curriculum: ICT Capability organising elements	NAP – ICT Literacy assessment framework processes	Australian Curriculum: Digital Technologies summary statements
A. Managing and operating ICT	**1. Managing information**	**S1. Managing and operating digital systems**
A1. Select and use hardware and software	1.1 Organising information	
A2. Understand ICT systems	1.2 Storing information for retrieval and reuse	S1.1 Understanding digital systems
A3. Manage digital data	1.3 Reflecting on the processes used to design and construct ICT solutions	
B. Investigating with ICT	**2. Accessing and evaluating information**	**S2. Accessing, evaluating and analysing data**
B1. Define and plan information searches	2.1 Identifying the information needed	
B2a. Locate data and information	2.2 Knowing how to find information	
B2b.Generate data and information		
B2c. Access data and information	2.3 Retrieving information	S2.1 Acquiring and evaluating data

Australian Curriculum: ICT Capability organising elements	NAP – ICT Literacy assessment framework processes	Australian Curriculum: Digital Technologies summary statements
B3. Select and evaluate data and information	2.4 Making judgements regarding the integrity, relevance and usefulness of information	S2.2 Analysing data and information
C. Creating with ICT	**3. Developing new understandings**	**S3. Creating with digital systems**
C1. Generate ideas, plans and processes	3.1 Creating information and knowledge by synthesising, adapting, applying, designing, inventing or authoring	S3.1 Generating ideas and designing graphical solutions
C2. Generate solutions to challenges and learning area tasks		S3.2 Creating digital solutions
D. Communicating with ICT	**4. Communicating with others**	**S4. Collaborating and communicating**
D1. Collaborate, share and exchange	4.1 Exchanging information by sharing knowledge	S4.1 Planning and managing projects
D2. Understand computer mediated communications	4.2 Creating information products to suit the audience, the context and the medium	S4.2 Exchanging information by sharing knowledge
E. Applying social and ethical protocols and practices when using ICT	**5. Using ICT appropriately**	**S5. Using digital systems appropriately**
E1. Recognise intellectual property	5.1 Using ICT responsibly by considering social, legal and ethical issues	S5.1 Applying social, ethical and technical protocols
E2. Apply digital information security practices		
E3. Apply personal security protocols		
E4. Identify the impacts of ICT in society		S5.2 Evaluating the impact of digital solutions on society

This table was used as the basis for the fields 'Framework process targeted', the 'Australian Curriculum: ICT Capability element' and (where relevant) the 'Australian Curriculum: Digital Technologies reference' in the meta-data for the items being developed for the 2017 NAP – ICT Literacy assessment. This mapping has assisted test developers and reviewers in ensuring that all relevant aspects of ICT literacy are covered in the assessment.

School summary reports will reference the Australian Curriculum: ICT Capability and the Australian Curriculum: Digital Technologies drawn from the meta-data.

Appendix 2: Sample test questions for assessment framework processes

The following sample questions were drawn from previous cycles of NAP – ICT Literacy. Additional examples are on the National Assessment Program website: https://www.nap.edu.au/nap-sample-assessments/the-tests

NAP – ICT Literacy assessment framework process	Australian Curriculum: ICT Capability organising element
1. Managing information	**A. Managing and operating ICT**
Response format: short constructed text response	

In this task, students had received an email with instructions attached in two file formats: .txt and .pdf. The students were asked to specify an advantage of sending information in the .pdf format (compared with the .txt format)

NAP – ICT Literacy assessment framework process	Australian Curriculum: ICT Capability organising element
2. Accessing and evaluating information	**B. Investigating with ICT**

Response format: short constructed text response

In this task, students had previously posted information about an upcoming band performance on a social media website. Students were then asked to create three tags for their post. This skill requires students to understand the purpose of tags as keyword links to content.
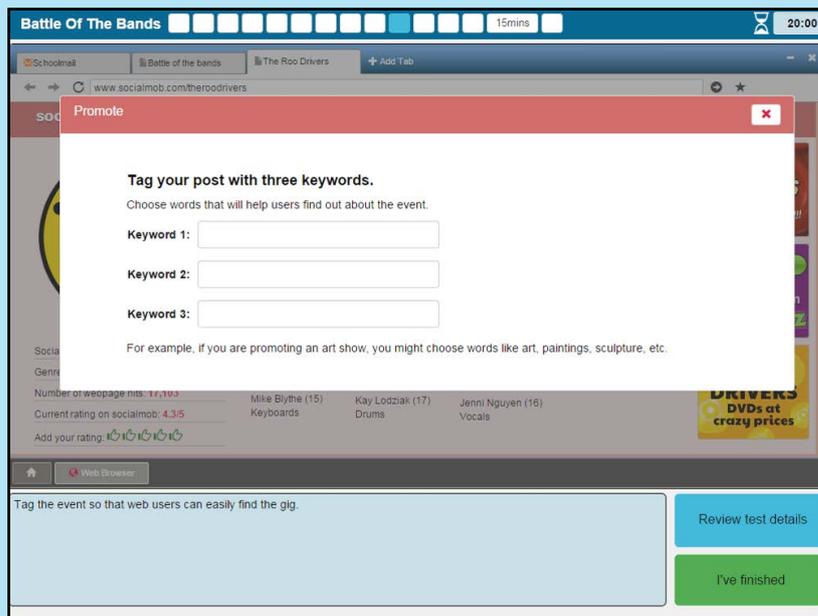
NAP – ICT Literacy assessment framework process	Australian Curriculum: ICT Capability organising element
3. Developing new understandings	**C. Creating with ICT**

Response format: information product (web page)

In this task, students were provided with a set of instructions and visual web design software and instructed to create a new web page within the school website to promote the current year's annual art show. Students completed a combination of technical tasks (such as importing images) and design tasks (such as aligning text and images to create a balanced web page layout). The final web page was assessed against 11 discrete criteria relating to the students' use of the available information and software features to support the communicative purpose of the web page.
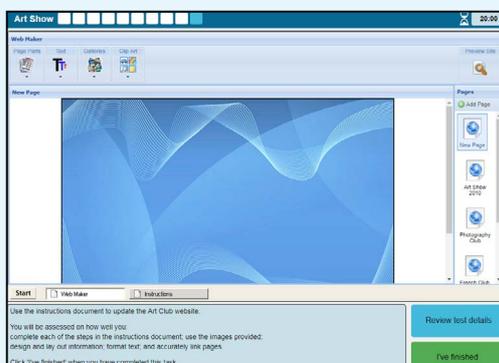
Screen 1: A new blank web page in the visual web design software used to create the Art Show web page
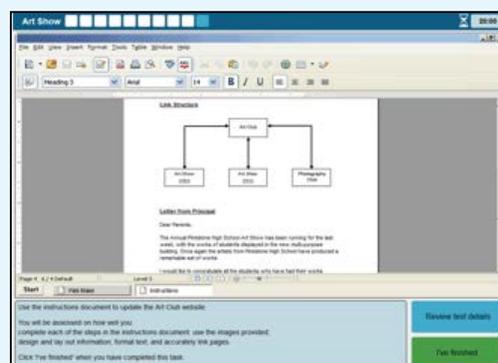
Screen 2: A web design brief containing instructions for creating the Art Show web page

NAP – ICT Literacy assessment framework process	Australian Curriculum: ICT Capability organising element
4. Communicating with others	**D. Communicating with ICT**

Response format: short constructed text response

In this task, students had set up an online survey for members of their class and were then provided with a screen option to 'send' an email to a user group called 'DL-All School'. They were asked to give two reasons why it might be a problem to send their email to this list.
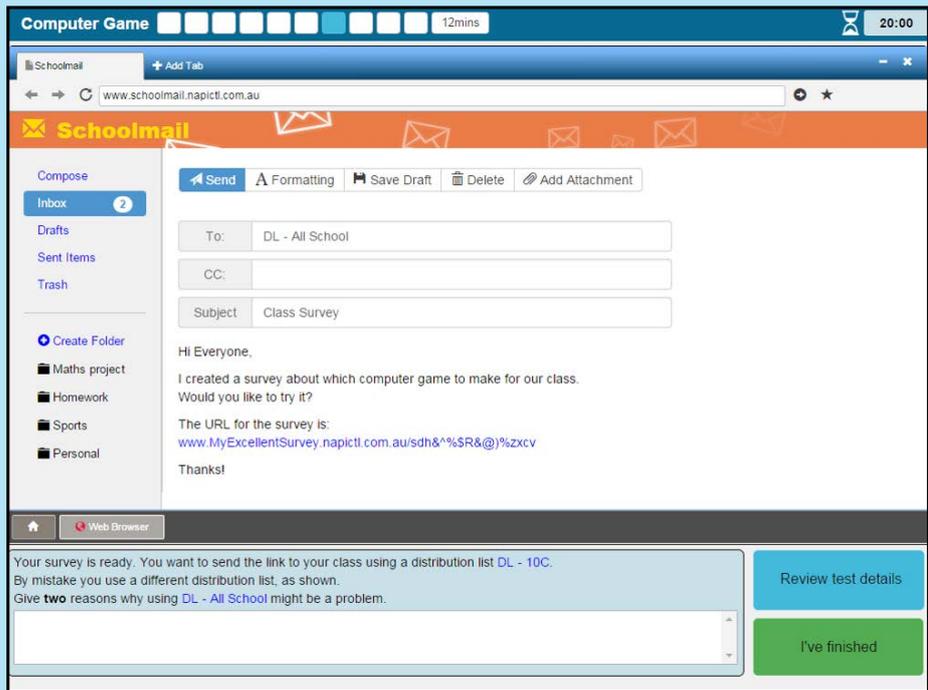
5. Using ICT appropriately	E. Applying social and ethical protocols and practices when using ICT

Response format: constructed response

In this task, students were asked to identify the role of the highlighted page elements on the right-hand panel of the social media website. By recognising that these elements are (advertising) banners for external websites, students are demonstrating familiarity with the conventions associated with the placement, content and format of digital advertisements.

Appendix 3: Australian Curriculum: Digital Technologies curriculum work samples

The following work samples were selected from the Australian Curriculum: Digital Technologies section of the Australian Curriculum website:

https://www.australiancurriculum.edu.au/f-10-curriculum/technologies/digital-technologies/

They illustrate examples of overlap between the Australian Curriculum: Digital Technologies and the NAP – ICT Literacy processes.

NAP – ICT Literacy assessment framework process	Australian Curriculum: Digital Technologies summary statement
1. Managing information	**S1. Managing and operating digital systems**

Year levels: 9 to 10
Related content description: ACTDIL034
Students explain the control and management of networked information systems and the security implications of the interactions between the hardware, software and users.

Network Topology: School

Black - Provider
Orange - Direct Tunnel
Blue - Relayed Tunnel
Green - Receiver

The school network is a tree topology network. This means the topology follows the shape of the image on the right which is known as the tree topology.

Work Sample 5 – Investigation: Secure networks
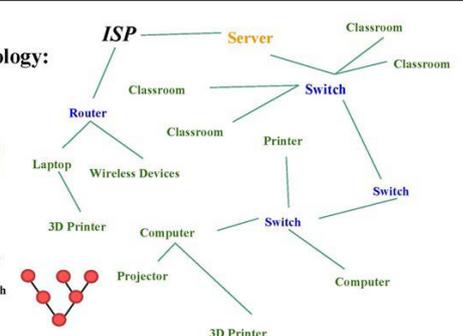
Work sample annotations:

- Explains how the security protocols used protects data of different types being transferred

- Explains some possible improvements to security protocols

- Explains clearly the implications to devices and data of poor security protocols

NAP – ICT Literacy assessment framework process	Australian Curriculum: Digital Technologies summary statement
2. Accessing and evaluating information	**S2. Accessing, evaluating and analysing data**

Year levels: 9 to 10
Related content descriptions: ACTDIP036, ACTDIP042, ACTDIP037
Students created a survey to elicit information about teenage views on a specific topic. They created a database with tables, forms, queries and reports to collate, represent and present the data. Students established a privacy policy, and shared and collaborated online to collect survey data. They interpreted the data and drew conclusions from the findings. They evaluated the solution in terms of risk, sustainability and the potential of the survey to inform innovation and enterprise.
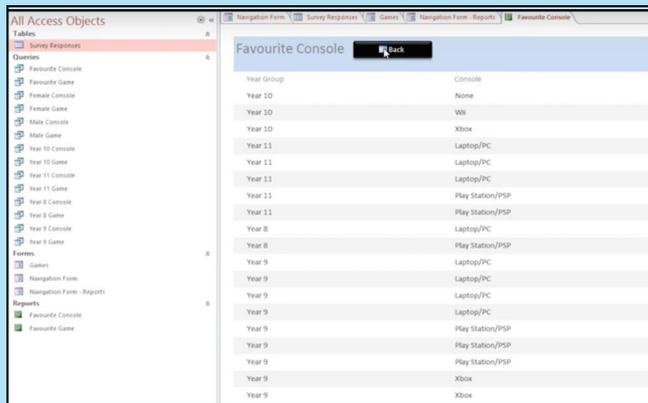
Work Sample 6 – Digital project: Database

Work sample annotations:

- Creates a survey to elicit appropriate data to address the brief (database)

- Sorts the data in list view (database)

- Creates some reports to represent collected data (database)

- Uses query wizard to create queries

- Identifies risks presented when collecting data (evaluation)

- Creates a basic privacy policy for participants (policy)

References

Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) (2008). *Melbourne Declaration on Educational Goals for Young Australians*. Carlton: Curriculum Corporation.
http://www.curriculum.edu.au/verve/_resources/National_Declaration_on_the_Educational_Goals_for_Young_Australians.pdf

Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) (1999). *National Goals for Schooling in the Twenty First Century*. Melbourne: Curriculum Corporation.
http://www.scseec.edu.au/archive/Publications/Publications-archive/The-Adelaide-Declaration.aspx

Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) (2007). *National Assessment Program – ICT Literacy Years 6 & 10 2005 Report*, Carlton: Curriculum Corporation.
http://www.nap.edu.au/_resources/2005_ICT_Public_Report_file_main.pdf

Australian Curriculum and Reporting Authority (ACARA) (2012). Australian Curriculum: Information and Communication Technology (ICT) capability. Available: https://www.australiancurriculum.edu.au/f-10-curriculum/general-capabilities/information-and-communication-technology-ict-capability/

Australian Curriculum and Reporting Authority (ACARA) (2014). Australian Curriculum: Digital Technologies. https://www.australiancurriculum.edu.au/f-10-curriculum/technologies/digital-technologies/rationale

Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) (2005). *National Assessment Program – Information and Communication Technology Literacy 2005 Years 6 and 10. An Assessment Domain for ICT Literacy.* https://www.iste.org/docs/pdfs/australia_ict_assessment.pdf?