Literacy learning progression and Digital Technologies

Purpose of the literacy and numeracy progressions

The purpose and intent of the progressions are to provide a tool to:

- locate the literacy and numeracy development of students
- plan for student progress in literacy and numeracy
- facilitate shared professional understanding of literacy and numeracy development
- support a whole school approach to literacy and numeracy development.

Literacy and numeracy in the learning areas

The learning areas provide rich opportunities for extending and enriching literacy and numeracy. To effectively plan for differentiated teaching of literacy and numeracy in the learning areas, teachers draw on their knowledge of the Australian Curriculum and their knowledge of their students. Recognising that students learn at different rates, the progressions provide a continuum for teachers to identify and build on students' literacy and numeracy skills. The intention is that students will develop their literacy and numeracy expertise purposefully, in meaningful contexts.

Using this advice and the progressions to plan for student progress in literacy and numeracy

This advice illustrates how the progressions can be used in Digital Technologies to support student progress in literacy and numeracy. This advice:

- identifies the sub-elements of the progressions that are most relevant to studying Digital Technologies
- identifies some aspects of an achievement standard that include literacy or numeracy demands
- lists some relevant indicators at one or more levels of the progressions to illustrate how the progressions might be unpacked to support student progress in literacy and numeracy in the study of Digital Technologies.

Figure 1 illustrates how the progressions are to be used by teachers to identify where students are at on the literacy and numeracy continuum and plan for their ongoing development within the learning areas. Therefore, this advice can support use of the progressions in developing explicit and targeted programs to ensure students are able to access discipline-specific knowledge, concepts, understanding and skills. While advice is provided on the most relevant sub-elements of each progression for the discipline of Digital Technologies, whole school planning may address other sub-elements to progress students' literacy and numeracy.

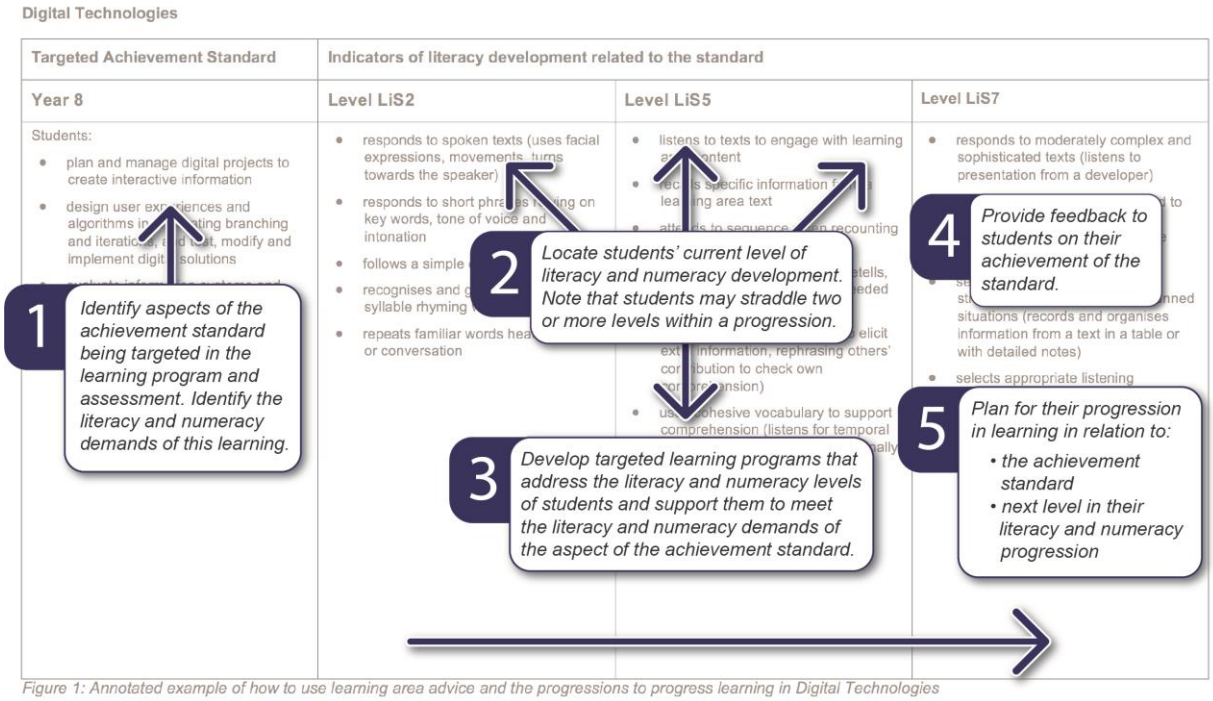

Figure 1: Annotated example of how to use learning area advice and the progressions to progress learning in Digital Technologies

Literacy in Digital Technologies

Students need to read, write, speak, listen, and use language effectively in all learning areas of the Australian Curriculum. Supporting students' literacy in learning areas will enhance and supplement the content learning by ensuring they have the literacy skills which allow them to access and understand the content area and demonstrate their knowledge and understanding. Learning in Digital Technologies requires students to listen to, read, understand and be able to use and evaluate a range of increasingly challenging informational texts. Students need to integrate and evaluate content presented in diverse media and formats, understand how to use a range of reading cues such as chapter headings and follow complex procedural and explanatory texts. Students need to be able to recognise and appropriately use technical symbols, icons and key terms which have more generic use as well as those that align with technical topics. Students will create clear and coherent informative, explanatory and persuasive texts using precise vocabulary and a range of visual and diagrammatic elements. Their texts will be developed and organised using a format and style appropriate to the purpose and audience. They will produce and publish a range of texts where information and ideas are relevant to the topic and supported by evidence and examples, where needed.

Planning for student progress in literacy in Year 8 Digital Technologies

The highlighted text below indicates where there are literacy demands in the Digital Technologies achievement standard.

By the end of Year 8, students distinguish between different types of networks and defined purposes. They explain how text, image and audio data can be represented, secured and presented in digital systems.

Students plan and manage digital projects to create interactive information. They define and decompose problems in terms of functional requirements and constraints. Students design user experiences and algorithms incorporating branching and iterations, and test, modify and implement digital solutions. They evaluate information systems and their solutions in

terms of meeting needs, innovation and sustainability. They analyse and evaluate data from a range of sources to model and create solutions. They use appropriate protocols when communicating and collaborating online

Using the literacy progression to support students in Digital Technologies

The most relevant sub-elements of the literacy progression for Design and Technologies are:

- Listening
- Speaking
- Interacting
- Understanding texts
- Creating texts.

These sub-elements are essential for students to develop discipline-specific knowledge, understanding and skills and to demonstrate the learning described in the Digital Technologies achievement standard. The following descriptions of the role of each sub-element in Digital Technologies are organised by productive and receptive modes:

- Receptive – Listening and Understanding texts
- Productive – Speaking, Interacting, and Creating Texts.

Literacy

Table 1: Literacy indicators related to the achievement standard

Targeted Achievement Standard	**Examples of how indicators relate to the AC standard.** *Individual student literacy may be at different levels of the progression as indicated in Figure 1.*				
Year 8	**Receptive**		**Productive**		
	Listening	**Understanding texts**	**Speaking**	**Interacting**	**Creating texts**
Students: explain how text, image and audio data can be represented, secured and presented in digital systems.		**UnT10** • reads and views moderately complex or some sophisticated texts • interprets abstract or more remote content • analyses visual text to identify point of view • recognises layers of meaning • synthesises information from a variety of complex texts	**SpK6** • uses technical vocabulary to demonstrate topic knowledge **SpK7** • uses ideas and language features appropriate to complex topics • uses language structures and features appropriate to learning area content	**InT7** • gives an extended explanation and evaluation of a complex concept, issue or process • justifies a personal stance after analysis of arguments on a particular issue using evidence and elaboration in a group situation	**Cr9** • develops ideas with details and examples • uses ideas derived from research • uses written and visual supporting evidence
plan and manage digital projects to create interactive information	**LiS7** • responds to moderately complex and sophisticated texts (listens to presentation from a developer) • identifies how vocabulary is used to impact on the	**UnT9** • compares and contrasts the use of visual elements in multimodal texts with similar purposes • interprets and integrates visual, auditory and print		**InT6** • questions others to evaluate accuracy of thinking or problem-solving processes (collaborates with STEM disciplines to formulate thinking)	**Cr9** • includes salient multimodal features to expand on written information (creates graphs and other technical diagrams from authentic data) • uses a range of learnt, technical and

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Year 8	**Receptive**		**Productive**		
	Listening	**Understanding texts**	**Speaking**	**Interacting**	**Creating texts**
	target audience (identifies the technical language used by a developer)	elements of multimodal texts • builds meaning by actively linking ideas from a number of texts or a range of digital sources • interprets point of view or perspective in a moderately complex text • justifies an opinion or response by citing evidence from a text • evaluates text for relevance to purpose and audience • classifies ideas or information for a set task or purpose			discipline-specific terms (adapt, survive) • uses words to express cause and effect (therefore)
define and decompose problems in terms of functional requirements and constraints		**UnT9** • evaluates text for relevance to purpose and audience • classifies ideas or information for a set task or purpose	**SpK6** • uses technical vocabulary to demonstrate topic knowledge	**InT7** • gives an extended explanation and evaluation of a complex concept, issue or process • justifies a personal stance after analysis	**CrT9** • uses words to express cause and effect (therefore)

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Year 8	**Receptive**		**Productive**		
	Listening	**Understanding texts**	**Speaking**	**Interacting**	**Creating texts**
			SpK7 • uses language structures and features appropriate to learning area content	of arguments on a particular issue using evidence and elaboration in a group situation	
design user experiences and algorithms incorporating branching and iterations, and test, modify and implement digital solutions	**LiS7** • selects appropriate listening strategies for planned and unplanned situations (records and organises information from a text in a table or with detailed notes)				
evaluate information systems and their solutions in terms of meeting needs, innovation and sustainability	**LiS9** • selects appropriate listening strategies for planned and unplanned situations (records and organises information from a text in a table or with detailed notes)	**UnT9** • builds meaning by actively linking ideas from a number of texts or a range of digital sources • interprets point of view or perspective in a moderately complex text • justifies an opinion or response by			**CrT9** • writes informative texts for a broad range of learning area purposes that describe, explain and document (describe and evaluate a solution) • selects structural elements to suit the purpose (a fact sheet includes an opening statement, labelled

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Year 8	**Receptive**		**Productive**		
	Listening	**Understanding texts**	**Speaking**	**Interacting**	**Creating texts**
		citing evidence from a text • evaluates text for relevance to purpose and audience • classifies ideas or information for a set task or purpose			diagrams and text boxes) • develops ideas with details and examples • uses ideas derived from research • uses written and visual supporting evidence
analyse and evaluate data from a range of sources to model and create solutions		**UnT9** • interprets and integrates visual, auditory and print elements of multimodal texts • builds meaning by actively linking ideas from a number of texts or a range of digital sources • interprets point of view or perspective in a moderately complex text • justifies an opinion or response by citing evidence from a text • evaluates text for relevance to		**InT6** • synthesises ideas from group discussion into a common theme or hypothesis • poses problems, hypothesises and formulates questions about abstract ideas in group situations • restates different views and makes suggestions to negotiate agreement • questions others to evaluate accuracy of thinking or problem-solving processes	**CrT9** • selects structural elements to suit the purpose (structures a design folio to record design process) • uses a range of learnt, technical and discipline-specific terms (discipline metalanguage) • uses written and visual supporting evidence • (uses images, diagrams, tables, animations to convey ideas in a digital folio or pitch) • uses ideas derived from research

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Year 8	**Receptive**		**Productive**		
	Listening	**Understanding texts**	**Speaking**	**Interacting**	**Creating texts**
		purpose and audience • classifies ideas or information for a set task or purpose • judiciously selects texts for learning area tasks and purposes • distils information from a number of sources according to task and purpose (uses graphic organisers)		**InT7** • gives an extended explanation and evaluation of a complex concept, issue or process (Developing a network system) • justifies a personal stance after analysis of arguments on a particular issue using evidence and elaboration in a group situation (clarifying the ethics behind protocols and decisions within a system)	
use appropriate protocols when communicating and collaborating online		**UnT10** • analyses the credibility and validity of primary and secondary sources	**SpK7** • selects voice appropriate to audience • uses ideas and language features appropriate to complex topics • uses a range of evaluative language to express opinions		**CrT9** • writes informative texts for a broad range of learning area purposes that describe, explain and document (develops project plan including timelines, schedules)

Targeted Achievement Standard	Examples of how indicators relate to the AC standard. *Individual student literacy may be at different levels of the progression as indicated in Figure 1.*				
Year 8	**Receptive**		**Productive**		
	Listening	**Understanding texts**	**Speaking**	**Interacting**	**Creating texts**
			or convey emotion (explains the significance or benefits of a system)		