

Developing an implementation plan for Australian Curriculum v9.0

A resource to support Member schools



THE ASSOCIATION OF
INDEPENDENT SCHOOLS
OF THE ACT

This booklet has been prepared with the understanding that personnel in independent schools will implement v9.0 of the Australian Curriculum to the best of their abilities, within the context of each school and in keeping with the intent of the revised curriculum.

Ultimately 'the proprietor of a registered school must ensure that the school has a curriculum framework in place for the organisation and implementation of the school's educational program'. ACT Education Amendment Act 2022 Part 2.2 (2.10 Curriculum)

Background

The Australian Curriculum v9.0 was approved by Education Ministers on Friday 1st April 2022. Following this decision, the ACT Minister for Education Yvette Berry MLA agreed on a proposed ACT cross-sectoral implementation timeline. This agreed timeline is for schools to transition to Australian Curriculum v9.0 by the commencement of Term One 2024.

ACTIONS

AISACT provided our schools with a memo (19 August 2022) outlining these expectations. On the assumption that schools will therefore use 2023 to familiarise themselves with the Australian Curriculum v9.0, AISACT provides the following advice to School and Curriculum Leaders:

- Independent schools will be expected to commence implementation of all learning areas across K– Year 10 by the commencement of 2024. However, Independent schools may choose to begin implementation of v9.0 of the Australian Curriculum earlier than 2024.

PURPOSE

The intention of this document is to support School and Curriculum Leaders to develop their context-specific plan for implementation of Australian Curriculum v9.0. AISACT encourages Curriculum Leaders in all independent schools across the ACT to have an explicit, written implementation plan on how your school will implement v9.0 across eight learning areas in Years K – 10.

In this document, School and Curriculum Leaders will find:

- Advice about the broader landscape in which the implementation work sits
- Information about what is NEW in the v9.0 Australian Curriculum that School and Curriculum Leaders will need to consider
- Questions about the context of their school that School and Curriculum Leaders may consider in informing their decisions.
- Suggestions about the decisions that will need to be made.

The broader landscape

School and Curriculum Leaders are reminded that implementation of the Australian Curriculum v9.0 will occur in addition to NAPLAN being brought forward to mid-March from 2023.

(Note at this stage, ACARA has not made any announcement about when NAPLAN will be based on v9.0 of English and Mathematics).

Questions to consider:

As a School or Curriculum Leader, consider the impact that bringing NAPLAN forward to mid-March will have on your teachers and students.

Will this decision have implications for current educational programs including current assessment schedules?

Support from ACARA

ACARA is developing resources to support teachers implementing the new Australian Curriculum. These will include:

- work samples that will illustrate the features of student work “at” the achievement standard **ONLY**
- a “road map” of professional learning (self-paced and online) to be provided that will allow teachers to more deeply explore aspects of the Australian Curriculum v9.0 website (see below)
- Illustrations of practice that demonstrate connections between curriculum areas such as the connection between mental health in HPE and the Arts (it will be some time before these are available)
- Examples and advice for teachers on how to embed Aboriginal and Torres Strait Islander perspectives into the curriculum in authentic and respectful ways.



What is NEW in Australian Curriculum v9.0

Overview

The redevelopment of v9.0 of the Australian Curriculum has meant changes in:

- Eight learning areas from K – Year 10
- Five general capabilities (GCs) (plus Literacy and Numeracy)
- Three cross curriculum priorities (CCPs)

There has been considerable change in ALL areas of the Australian Curriculum.

To find out what changes have occurred go to [Home | V9 Australian Curriculum](#) and then go to the **DOWNLOADS** button from the menu across the top of the page. Choose the learning area (LA), general capability (GC) or cross curriculum priority (CCP) that you are interested in and then **drop down the menu to choose “comparative information”**. Please note, the examples given below are for illustrative purposes only and do not represent all the changes in the curriculum. AISACT is aware that other jurisdictions across Australia are focusing significant attention on the following changes:

1. Aboriginal and Torres Strait Islander Histories and Cultures.

The expectations of what teachers will do in reference to this CCP have been escalated.

There is now an expectation that teachers will explicitly teach about Aboriginal and Torres Strait Islander Histories and Cultures in English; the Arts; and HaSS. This change is especially evident in new mandatory units in History Year 7 and Year 10.

2. Mathematics

There are big changes to maths across all year levels (this will be addressed in more detail shortly).

3. Science

There have been large moves of content knowledge from one year to another (this will be addressed in more detail shortly).

4. Phonics

There is an increase in focus on explicit teaching of phonics in early years.

5. HPE Consent education

Consent education (or education about respectful relationships) has had an increased focus in HPE.

Question to consider

Which of these five areas do you think will be most significant for your school? Have your teachers indicated any other areas of the new curriculum that they are concerned about?

Changes to the Aboriginal and Torres Strait Islander Histories and Cultures CCP

Some key changes to the Aboriginal and Torres Strait Islander Histories and Cultures CCP are outlined below:

- A focus on the plurality of Aboriginal and Torres Strait Islander PEOPLES
- Recognition that Aboriginal and Torres Strait Islander peoples have *significant, diverse and resilient living communities within contemporary society* (i.e., learning about contemporary Aboriginal and Torres Strait Islander communities as well as about the First Nations Peoples of the past)
- The oldest continuing living culture in the world
- “truth-telling” including acknowledging the “invasion” of Australia by Colonial powers.

These changes have been captured in the comparison table in Appendix 1.

What does this look like in the curriculum?

For example, the following content descriptions give some indication of how this CCP is represented across the curriculum:

Kindergarten English.

share ideas about stories, poems and images in literature, reflecting on experiences that are similar or different to their own by engaging with texts by First Nations Australian, and wide-ranging Australian and world authors and illustrators AC9EFLE01

Year 7 Dance

investigate the diversity of dance choreographed and/or performed by First Nations Australians considering culturally responsive approaches to Indigenous Cultural and Intellectual Property rights AC9ADA8E02

Year 2 HaSS

the interconnections of First Nations Australians to a local Country/Place AC9HS2K04

What does this mean for teachers?

AISACT is aware that some teachers may be challenged in trying to accommodate this new element to their curriculum. For example, where does a Kindergarten teacher find authentic, engaging, age-appropriate texts for use in their class, that are written by First Nations authors? ACARA is working on resources to support teachers.

Understanding the new v9.0 Mathematics

There are some significant changes in the new v9.0 mathematics curriculum compared to v8.4.

These changes are in two ways:

- Movement of content of what is to be taught to different year levels and
- Additional focus on mathematical skills
 - more emphasis on the proficiencies being embedded across the curriculum and
 - additional mathematical processes of mathematical modelling; computational thinking; statistical investigations; probability experiments and simulations
 - additional focus on digital tools in mathematics.

For a more detailed explanation, see the descriptions of these in Appendix 2.

What does this look like in the curriculum?

Content that has been changed from one year to another

The changes below are only a **small sample** of the many changes that have occurred from v8.4 to v9.0 in mathematics. To find all changes please go to the Downloads section of the v9.0 Australian Curriculum website and then choose mathematics and then choose “comparative information”.

Extract from achievement standard	Version 8.4	Version 9.0
Kindergarten	<i>Students count to and from 20 and order small collections.</i>	<i>They use subitising and counting strategies to quantify collections. Students compare the size of collections to at least 20.</i>
Year 1	<i>Students count to and from 100 and locate numbers on a number line.</i>	<i>Students partition collections into equal groups and skip count in twos, fives or tens to quantify collections to at least 120.</i>
Year 4	<i>Students locate familiar fractions on a number line</i>	<i>Students count and represent fractions on a number line.</i>
Year 9	<i>They make the connections between algebraic and graphical representations of relations (this was in Year 10 in v8.4).</i>	<i>Students describe the effects of variation of parameters on functions and relations, using digital tools, and make connections between their graphical and algebraic representations.</i>

Added expectations around what students will DO in mathematics

In addition to knowledge being moved to earlier year levels, students in the v9.0 mathematics curriculum are also being asked to DO more in their skills. The table below summarises a **small sample** of these changes.

Year 1 achievement standard	<i>They compare and order objects and events based on the attributes of length, mass, capacity and duration, communicating reasoning.</i>
Year 2 content description	<i>use mathematical modelling to solve practical problems involving additive and multiplicative situations, including money transactions; represent situations and choose calculation strategies; interpret and communicate solutions in terms of the situation</i>
Year 5 content description	<i>solve problems involving division, choosing efficient strategies and using digital tools where appropriate; interpret any remainder according to the context and express results as a whole number, decimal or fraction</i>
Year 6 content description	<i>They use mathematical modelling to solve financial and other practical problems involving percentages and rational numbers, formulating and solving the problem, and justifying choices.</i>

What this means for teachers?

Teachers of mathematics may require support to implement the new mathematics curriculum as intended – especially if the teacher is ‘out-of-field’. The professional association of Australian Association of Mathematics Teachers (AAMT) has been invited to provide some support.

Changes to science content

Below is a summary of the movement of content in science from v8.4 to v9.0. As can be seen, there are some significant shifts that will need to be accommodated by teachers. A unit on “day and night” from Year 3 that is now moved to Year 6 will not be able to be taught in the same way. The new Year 6 unit will require significant redevelopment to meet the needs of a target audience that is three years older. Similarly, a unit on the solar system from Year 5 cannot be simply “dropped” into a Year 2 class. The Year 2 teacher will need to significantly adapt the Year 5 unit to meet the needs of Year 2 students.

- Daily and seasonal changes K → Year 1
- Observation of external features of living things Year 1 → K
- Changes in the sky and landscape Year 1 → Year 2
- Sound Year 1 → Year 2
- Physical changes to materials Year 1 → Year 2
- Life cycles Years 2 and 4 → Year 3
- Use of Earth’s resources Year 2 → Year 3
- Pushes and pulls Year 2 → Year 1
- Grouping organisms based on features Year 3 → K
- Day and night Year 3 → Year 6
- Changes to the Earth’s surface Year 4 → Year 5
- Solar system Year 5 → Year 2
- Water cycle Year 7 → Year 4

- Particle theory Year 8 → Year 7
- Matter and energy in ecosystems Year 9 → Year 7
- Plate tectonics Year 9 → Year 8
- Conservation of energy Year 10 → Year 9
- The carbon cycle Year 10 → Year 9
- Making predictions and describing patterns and relationships Band 3/4 → Band 1/2
- How people use data to develop scientific explanations Band 5/6 → Band 3/4
- The building of science knowledge through collaboration Band 7/8 → Band 5/6

What does this mean for teachers?

Primary teachers may need to rethink their science programs. Units of work that have been in place may need to be moved to a different year level.

The chances are high of students ‘missing out’ on some content or experiencing a duplication of content. Independent schools will need to think carefully about how they manage the transition from v8.4 to v9.0.

Changes in phonics

The English curriculum has removed any reference to teachers teaching “predicative” texts that students might ‘read’ from memory or by interpreting the graphics accompanying the text. Instead, the focus is on students developing phonic knowledge and phonemic awareness to support their reading.

What does this look like in the curriculum?

The table below gives **some examples** of the changes that have occurred in the early years to accommodate more focus on phonics.

Version 8.4	Version 9.0
Kindergarten - Understand how to use knowledge of letters and sounds including onset and rime to spell words AC ELA 1438	use knowledge of letters and sounds to spell words AC9EFLY13
Year 1 - Read decodable and predictable texts using developing phrasing, fluency, contextual, semantic, grammatical and phonic knowledge and emerging text processing strategies, for example prediction, monitoring meaning and rereading (AC ELY 1659)	read decodable and authentic texts using developing phonic knowledge, phrasing and fluency, and monitoring meaning using context and grammatical knowledge AC9E1LY04
Year 2 - Read less predictable texts with phrasing and fluency by combining contextual, semantic, grammatical and phonic knowledge using text processing strategies, for example monitoring meaning, predicting, rereading and self-correcting (AC ELY 1669)	read texts with phrasing and fluency, using phonic and word knowledge, and monitoring meaning by re-reading and self-correcting AC9E2LY04

What does this mean for teachers?

Some teachers may require professional learning to upskill them in phonics approaches.

Consent education in HPE

Under significant pressure from Ministers, ACARA has increased the references to “consent” in the HPE curriculum. Students learn about the importance of giving informed consent, of how to say “no” and how to respect those who have said “no”.

What does this look like in the curriculum?

See for example the content description below from Year 7 HPE.

*examine the roles of respect, empathy, power and coercion in developing respectful relationships
AC9HP8P04*

What does this mean for teachers?

School and Curriculum Leaders are encouraged to evaluate the capacity of your teachers to implement these changes. Will your teachers need support?

Catering for the transition from v8.4 to v9.0

In planning units of work from v9.0 teachers will need to think about those students who are ‘caught up’ in the transition. This will apply to all learning areas but will have particular impact on students in mathematics and science.

We have approached ACARA directly for advice in this area. Following is the response (direct quotes in italics) from the two curriculum specialists responsible for mathematics and science:

Mathematics (Rachael Whitney-Smith)

All mathematical process content descriptions form a developmental sequence that assumes the learning of content from prior years, for example, the mathematical modelling process content at Year 10 assumes a student has been learning to model mathematically since Year 1. By Years 9 and 10, the mathematics v9.0 relies on students’ development of their computational thinking skills in order to use computational thinking as a problem-solving process. Their algorithmic thinking and reasoning rely on their prior knowledge of following, designing and creating algorithms. While transitioning from v8.4 to v9.0 the level of sophistication that students are at in respect to these concepts should be considered and expectations adjusted to accommodate any gaps students may have.

Content re-sequenced to a later year will not impact significantly on the sequence of learning, as covering this again will consolidate understanding and quite likely not require as long to cover.

Content that has been re-sequenced to an earlier year level, will form part of the assumed knowledge for the following year. If this content has not been covered during the transition period, it will need to be incorporated into the next year’s content or it will form a gap in the student’s progression of learning. For example:

- Students in Year 1 in v8.4 need to be able to count to 100 but in v9.0 they must be able to count to at least 120. Therefore in the transition year those students who move into Year 2 will not have the same foundation of number up to 120 that is expected with the new v9.0 curriculum.
- *a mastery of addition and related subtraction facts to 20 has been moved from Year 4 to Year 3, if students are being taught the mathematics v9.0 in Year 4 for the first time, it is assumed they have this mastery and the Year 4 content relies on them being able to extend and apply their addition and related subtraction facts to working with two and three digit numbers.*

Science (Simon Collier)

The changes in Science are not as significant as those in mathematics.

- *The content and achievement have changed in detail and even though a concept may have been moved, the depth and expectation is different, for example*
 - *v8.4 Year 1: Daily and seasonal changes in our environment affect everyday life*
 - *v8.4 Year 2: Observable changes occur in the sky and landscape*
 - *v8.4 Year 3: Earth's resources are used in a variety of ways*
- - *v9.0 Year 2: recognise Earth is a planet in the solar system and identify patterns in the changing position of the sun, moon, planets and stars in the sky*
 - *v9.0 Year 3: compare the observable properties of soils, rocks and minerals and investigate why they are important Earth resources*
- *If there is a concern about repeating content, then the elaborations can be used to explore other opportunities to teach the content, or the focus could be more explicitly on Science as a human endeavour or Science Inquiry and students use the Science knowledge and understanding as context.*

Languages update

- Public consultation for next 5 languages open until 9 August
- surveys and jurisdiction and sector submissions

Phase 2 2022	Phase 3 2022-23	Phase 4 2023
Second-language (SL) pathway curriculum <ul style="list-style-type: none"> • German • Indonesian • Korean • Modern Greek • Spanish <div style="border: 1px solid orange; padding: 2px; display: inline-block; margin-top: 10px;"> <i>Consultation feedback due now</i> </div>	<div style="border: 2px solid orange; border-radius: 50%; padding: 5px; display: inline-block; margin-bottom: 10px;"> Background-learner pathway framework </div> Background-language (BL) curriculum <ul style="list-style-type: none"> • Arabic • <i>Chinese - see Phase 4</i> • Hindi • Turkish • Vietnamese 	<ul style="list-style-type: none"> • Auslan – first and second-learner pathways • Chinese – first and BL pathways
	Classical Languages framework <ul style="list-style-type: none"> • Classical Languages curriculum 	<ul style="list-style-type: none"> • Aboriginal and Torres Strait Islander Languages framework – first, second, revival

Some questions for consideration within the context of each school

School and Curriculum Leaders are encouraged to consider the following questions about what might influence their decisions as an implementation plan is developed.

WHO WILL DO THE WORK?	
<i>What human resources do you have on hand to support implementation of the Australian Curriculum? Do you have Heads of Department, Curriculum Leaders in sub-schools or Lead Teachers who can support smaller groups of teachers?</i>	
<i>How will you utilise your learning support resources so that students who require support or extension with their learning are considered in the new units of work?</i>	
WHAT WILL YOU DO?	
<i>Will your school start with English and Mathematics?</i>	
<i>Will your staff review their current units first?</i>	
<i>Will your teachers begin with the units that only need ‘tweaking’?</i>	
<i>What will your school do about textbooks/resources that are currently aligned to AC v8.4?</i>	
WHEN WILL YOU DO IT?	
<i>What is your school’s realistic timeline?</i>	
OTHER CONSIDERATIONS?	
<i>Have your teachers considered the implications of what needs to happen during the TRANSITION between v8.4 and v9.0, eg. students in Year 4 who will not experience the Space unit because it has been moved from Year 5 to Year 2. Will it “matter” that Year 4 students miss out on Space? Is it reasonable or even possible, to try to “catch up” all students on all topics?</i>	

Once School and Curriculum Leaders have thought through all the issues outlined above, that will impact on their implementation plans; a table similar to the one below could be useful.

When	2022	2023	2024
Who			
What			
Accountability / Evaluation? (How will you know if they have been successful?)			

For further information please contact:

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Appendix 1.

Table 1: Comparison of version 8.4 and version 9.0 organising ideas of the Aboriginal and Torres Strait Islander Histories and Cultures cross-curriculum priority

Country/Place	Country/Place
Australia has 2 distinct Indigenous groups: Aboriginal Peoples and Torres Strait Islander Peoples, and within those groups there is significant diversity. (OI.1)	First Nations communities of Australia maintain a deep connection to, and responsibility for, Country/Place and have holistic values and belief systems that are connected to the land, sea, sky and waterways. (A_TSICP1)
Aboriginal and Torres Strait Islander communities maintain a special connection to and responsibility for Country/Place. (OI.2)	The occupation and colonisation of Australia by the British, under the now overturned doctrine of <i>terra nullius</i> , were experienced by First Nations Australians as an invasion that denied their occupation of, and connection to, Country/Place. (A_TSICP2)
Aboriginal and Torres Strait Islander Peoples have holistic belief systems and are spiritually and intellectually connected to the land, sea, sky and waterways. (OI.3)	The First Peoples of Australia are the traditional owners of Country/Place, protected in Australian Law by the <i>Native Title Act 1993</i> which recognises pre-existing sovereignty, continuing systems of law and customs, and connection to Country/Place. This recognized legal right provides for economic sustainability and a voice into the development and management of Country/Place. (A_TSICP3)
Culture	Culture
Aboriginal and Torres Strait Islander societies have many Language Groups. (OI.4)	First Nations Australian societies are diverse and have distinct cultural expressions such as language, custom and beliefs. As First Nations Peoples of Australia they have the right to maintain, control, protect and develop their cultural expressions, while also maintaining the right to control, protect and develop culture as Indigenous Cultural and Intellectual Property. (A_TSIC1)
Aboriginal and Torres Strait Islander Peoples' ways of life are uniquely expressed through ways of being, knowing, thinking and doing. (OI.5)	First Nations Australians' ways of life reflect unique ways of being, knowing, thinking and doing. (A_TSIC2)
Aboriginal and Torres Strait Islander Peoples live in Australia as first peoples of Country or Place and demonstrate resilience in responding to historic and contemporary impacts of colonisation. (OI.6)	The First Peoples of Australia (Aboriginal Peoples) belong to the world's oldest continuous cultures. First Nations Australians demonstrate resilience in the maintenance, practice and revitalisation of culture despite the many historic and enduring impacts of colonisation, and continue to celebrate and share the past, present and future manifestations of their cultures. (A_TSIC3)
People	People
The broader Aboriginal and Torres Strait Islander societies encompass a diversity of nations across Australia. (OI.7)	Australia has 2 distinct First Nations Peoples; each encompasses a diversity of nations across Australia. Aboriginal Peoples are the first peoples of Australia and have occupied the Australian continent for more than 60,000 years. Torres Strait Islander Peoples are the First Nations Peoples of the Torres Strait and have occupied the region for over 4,000 years. (A_TSIP1)
Aboriginal and Torres Strait Islander Peoples' family and kinship structures are strong and sophisticated. (OI.8)	First Nations Australians have sophisticated political, economic and social organisation systems, which include family and kinship structures, laws, traditions, customs, land tenure systems and protocols for strong governance and authority. (A_TSIP2)
The significant contributions of Aboriginal Peoples and Torres Strait Islander Peoples in the present and past are acknowledged locally, nationally and globally. (OI.9)	The significant and ongoing contributions of First Nations Australians and their histories and cultures are acknowledged locally, nationally and globally. (A_TSIP3)

Appendix 2: Additional processes in mathematics

The following section is new in the mathematics curriculum.

Mathematical processes

Mathematical processes refer to the thinking, reasoning, communicating, problem-solving and investigation process skills involved in working mathematically. Opportunities to learn process skills have been embedded into the Mathematics curriculum content across the strands, building in sophistication across the years of schooling. The mathematical processes of mathematical modelling, computational thinking, statistical investigation, probability experiments and simulations are mathematical problem-solving and investigation processes that students learn to use in mathematics, and that draw upon students' mathematical process skills and proficiency in mathematics in an interconnected way.

Mathematical modelling

Students develop an understanding of mathematical modelling when they use mathematics to gain insight into and make predictions about real-world phenomena. Mathematical models are used to inform judgements and make decisions in personal, civic and work life. When using mathematical modelling to solve problems, students make assumptions, recognise, connect and apply mathematical structures. The modelling process utilises mathematics to formulate, analyse, solve, interpret, generalise and communicate their results in response to a real-world situation. Mathematical modelling is an essential dimension of the contemporary discipline of mathematics and is key to informed and participating citizenship.

Computational thinking

Students develop computational thinking through the application of its various components: decomposition, abstraction, pattern recognition, use of models and simulations, algorithms and generalisation. Computational thinking approaches involve experimental and logical analysis, empirical reasoning and computer-based simulations. The simulations can then be used to generate and test hypotheses and conjectures, identify patterns and key features (or counterexamples), and dynamically explore variation in the behaviour of structures, systems and scenarios.

Statistical investigation

Students develop the ability to conduct statistical investigations through informal exploration in the early years. Later they use guided processes, which progressively lead them to conduct and review their own statistical investigations and to critique others' processes and conclusions. Statistical investigation deals with uncertainty and variability in categorical (nominal or ordinal) or numerical (discrete or continuous) data arising from observations, surveys or experiments and can be initiated by a specific question, a situation, or an issue.

Probability experiments and simulations

Students develop an understanding of experimentation through exploration and play-based learning in the early years. They progress to conducting chance experiments and probability simulations in the later years of primary. Experimentation and simulation in mathematics can involve the use of digital and other tools, often to generate large sets of data for consideration, drawing on the interconnections between *Statistics and Probability*. Experimenting in mathematics requires students to plan what to do and evaluate what they find out using mathematical reasoning.

Computation, algorithms and the use of digital tools in mathematics

The capacity to purposefully select and effectively use the functionality of a digital device, platform, software or digital resource is a key aspect of computational thinking in the Mathematics curriculum. Digital tools can be used effectively to learn and apply mathematics in and across all of the strands. The use of digital tools addresses elements of the Digital Literacy general capability. The functionalities may be accessed through hand-held devices such as calculators (arithmetic 4 operation, scientific, graphics, financial, CAS) and measurement tools (digital scales and other digital measuring devices), software on a computer or tablet (spreadsheet, dynamic geometry, statistical, financial, graphing, computer-algebra), an application on a personal device, virtual and augmented reality technologies or tools accessed from the internet or cloud. Different digital tools or platforms can carry out computations and implement algorithms using numerical, textual, statistical, probabilistic, financial, measurement, geometrical, graphical, logical and symbolic functionalities.

The term "computation" is used in mathematics to refer to operations, transformations, procedures and processes that are applied to mathematical objects to produce an output or result. A computation may be an arithmetic calculation; an algorithm; the graph of a relation, function, network or set of data; a set, list, sequence or table of values; a diagram or shape; or a solution to an algebraic equation.

The objects of computations may be sets of numbers, text, data, points, shapes and objects in space, images, diagrams, networks, or symbolic and logical expressions, including equations.

Some computations may be dynamic; that is, they enable parameters, conditions and constraints to be varied and the corresponding results to be progressively shown. Examples include the effect of varying an outlier on the mean of a data set, the behaviour of an algorithm under different sets of inputs, sorting or ordering the elements of a set, observing the relative frequency of an event as the number of experiments increases, manipulating a shape in 2 dimensions or an object in 3 dimensions and observing any symmetries, or transforming the graph of a function by varying defining parameters; for example, the effect of changing the gradient of a linear function.

An algorithm is a precise description of the steps and decisions needed to solve a problem or a set of rules to follow in order to accomplish a task. Algorithms often involve iterative (repetitive) processes and can be represented as text, in diagrams, or symbolically such as flowcharts and pseudocode. As students develop a conceptual understanding of how an algorithm works and fluency with using algorithms appropriately, they can reason and solve problems using algorithms as part of a computational thinking process.

Appendix 3: Resource – Achievement standard evidence template

Achievement standard evidence template

This template is a suggested approach that teachers might use to help consider and plan for, the types of evidence and observations you expect to see when students demonstrate an aspect of the achievement standard.

Planning with 'the end in mind' shifts thinking from 'what will we provide?', and 'what are the learning activities?' to 'what do we really want the student to know, understand, and be able to do?'

<ul style="list-style-type: none"> • What year level or band? 	<ul style="list-style-type: none"> • What aspect or chunk of the achievement standard are you focusing on? 	<ul style="list-style-type: none"> • Which content descriptions will need to be addressed to allow students to provide the evidence of this aspect? 	<ul style="list-style-type: none"> • Which evidence types will provide you with the best evidence? • How will that evidence type be expressed by the student? 	<ul style="list-style-type: none"> • How will you know when you have evidence AT standard? • What are the observations you will note? • What are the criteria you expect to see/hear/observe? • Which content description does the annotation link with?
Year / band	Achievement standard statement	Content descriptions	Evidence type and expression	Observations (Indicators and basis for annotations)

Appendix 4: Current requirements from the Australian Government

Australian Education Regulation 2013 Select Legislative Instrument No. 195, 2013

Part 5 Division 3

Subdivision G—Reports to person responsible for students at a school Section 59 Student reports

(1) For paragraph 77(2)(f) of the Act, an approved authority for a school must provide a report to each person responsible for each student at the school in accordance with this section.

(2) A report must be readily understandable to a person responsible for a student at the school.

(3) A report must be given to each person responsible for the student at least twice a year.

(4) For a student who is in any of years 1 to 10, the report must:

- a) give an accurate and objective assessment of the student's progress and achievement, including an assessment of the student's achievement:
 - (i) against any available national standards; and
 - (ii) relative to the performance of the student's peer group; and
 - (iii) reported as A, B, C, D or E (or on an equivalent 5 point scale) for each subject studied, clearly defined against specific learning standards; or
- b) contain the information that the Minister determines is equivalent to the information in paragraph (a).

(5) For paragraph (4)(b), the Minister may, in writing, determine information that the Minister considers is equivalent to the information in paragraph (4)(a).