

# LEARNING DESIGN AND MANAGEMENT PLANNING PROCESS FOR QUEENSLAND SCHOOLS

0. Scope and Sequence



1. Determine the standards that will be assessed in the unit and create clear WALT & WILF Proficiency Scales



2. Generate formal Formative Assessment tasks for each WALT and develop Model Responses across the WILF proficiency scale. Combine Formative Assessment tasks into a Summative Assessment task.



3. Develop instruction for each WALT/WILF



4. Adjust for ACARA General Capabilities & Compose Instruction

## INTRODUCTION

I have previously created a [guide](#) that I would describe as a qualitative approach to Learning Design and Management, because Proficiency Scales, in the guide, are designed to move up a Cognitive Taxonomy. In this guide, Proficiency Scales are adapted from QCAA [Standards Elaborations](#) and I would describe this as roughly a quantitative approach.

### 0. Scope and Sequence

This should be done before planning any units and is based on the principles of a Guaranteed and Viable Curriculum as outlined by [Marzano](#). Copy and paste Standard Elaboration (SE) at level 'C' into a table similar to the one below and then colour code by term.

Science understanding				Science as a human endeavour
Chemical sciences	Physical sciences	Earth and space sciences	Biological sciences	Nature and development of science; Use and influence of science
description of techniques to separate pure substances from mixtures	representation and prediction of the effects of unbalanced forces, including Earth's gravity, on motion	<p>explanation of how the relative positions of Earth, the sun and moon affect phenomena on Earth</p> <p>analysis of how the sustainable use of resources depends on the way they are formed and cycle through Earth systems</p>	prediction of the effect of human and environmental changes on interactions between organisms classification and organisation of diverse organisms based on observable differences	<p>description of situations where scientific knowledge from different science disciplines and diverse cultures has been used to solve a real-world problem</p> <p>explanation of possible implications of the solution for different groups in society</p>

Science inquiry skills				
Questioning and predicting	Planning and conducting	Processing and analysing data and information	Evaluating	Communicating
identification of questions that can be investigated scientifically	planning of fair experimental methods that: <ul style="list-style-type: none"> <li>– identify variables to be changed and measured</li> <li>– select equipment that improves fairness and accuracy</li> <li>– describe how safety is considered</li> </ul>	drawing on evidence to support conclusions through: <ul style="list-style-type: none"> <li>• description of trends in data</li> <li>• summaries of data from different sources</li> </ul>	reference to the quality of data when suggesting improvements to methods	communication of ideas, methods and findings using scientific language and appropriate representations

# 1. Determine the standards that will be assessed in the unit and create clear WALT & WILF Proficiency Scales

[NOTE: WALT = We Are Learning To; WILF = What I'm Looking For]

This step is very important, not only because it is the roadmap to everything else, but also because it forms the basis for of the Self and Metacognitive Systems in [The New Taxonomy of Educational Objectives](#) (Marzano & Kendall, 2007). This step is quite involved, depending on the Learning Goal associated with the Standard. See WALT and [WILF the Easy and Rigorous Way](#) for guidance.

## Proficiency Scales Template

Dimension	4. Innovating	3.5 Applying	3. Proficient	2. Developing	1. Beginning
	<b>WALT</b>				
	<b>WILF</b>				

## Example

Dimension	4. Innovating	3.5 Applying	3. Proficient	2. Developing	1. Beginning
Application and analysis	<b>WALT</b>				
	discerning and thorough analysis of relevant information, including primary and secondary data on health issues	effective analysis of relevant information, including primary and secondary data on health issues	analysis of information, including primary and secondary data on health issues	simple analysis of provided information, including primary or secondary data on health issues	
	<b>WILF</b>				
	<ul style="list-style-type: none"> <li>I can form conclusions about the level of risk taking behaviours</li> </ul>	<ul style="list-style-type: none"> <li>I can sort the primary data into risk taking behaviour categories.</li> </ul>	<ul style="list-style-type: none"> <li>I can define risk taking behaviours</li> <li>I can collect primary data</li> </ul>	<ul style="list-style-type: none"> <li>I can collect some primary data</li> <li>I can recall a few risk taking behaviours, but not all.</li> </ul>	

## 2. Generate formal Formative Assessment tasks for each WALT and develop Model Responses across the WILF proficiency scale. Combine Formative Assessment tasks into a Summative Assessment task.

This step is about making sure that you are front-loading your assessment. I.e. Developing your summative assessment first and then backwards mapping the skills that are to be assessed into your explicit instruction. It is also about [Visible Learning](#), monitoring student progress and providing feedback opportunities. The aim here is to create mini formative assessment tasks that have the same demands and rigour as the eventual summative task. The best way to do this is:

1. Develop Summative Assessment Task – make sure there are clear WALTs and WILFs and Model Responses (in PLC teams where appropriate).
2. Break Summative Assessment Task into a logical sequence of Formative Assessment Tasks and just modify the context or content so as to avoid duplicating the Summative Assessment task.
3. Modify parts of the Summative Assessment Model Responses, to bring them in-line with the content and context of the Formative Assessment Task and plan to explicitly teach to and model the Formative Assessment Task in order to make Model Responses visible.

## 3. Develop instruction for each WALT/WILF

By now you should have a logical sequence of Formative Assessment Tasks, with clear Learning Intentions (WALTs) and visible Success Criteria (WILFs and Model Responses). Now you need to identify the learning resources that will be required and list the sequence of instruction and learning experiences.

### Example

	4. Innovating	3.5 Applying	3. Proficient	2. Developing	1. Beginning
<b>Knowledge and understanding -Technologies and society</b>	<b>WALT</b>				
	<u>comprehensive explanation of:</u> <ul style="list-style-type: none"> <li>• factors that influence the design of products, services and environments to meet present and future needs.</li> </ul>	<u>detailed explanation of:</u> <ul style="list-style-type: none"> <li>• factors that influence the design of products, services and environments to meet present and future needs.</li> </ul>	<u>explanation of:</u> <ul style="list-style-type: none"> <li>• factors that influence the design of products, services and environments to meet present and future needs.</li> </ul>	<u>description of:</u> <ul style="list-style-type: none"> <li>• factors that influence the design of products, services and environments to meet present and future needs.</li> </ul>	<u>statements about:</u> <ul style="list-style-type: none"> <li>• factors that influence the design of products, services and environments to meet present and future needs.</li> </ul>
	<b>WILF</b>				
	I explained: <ul style="list-style-type: none"> <li>✓ sustainable housing</li> <li>✓ energy-efficient house design</li> </ul>	I explained: <ul style="list-style-type: none"> <li>✓ sustainable housing</li> </ul>	I explained: <ul style="list-style-type: none"> <li>✓ sustainable housing</li> </ul>		

## LEARNING SEQUENCE

1. INVESTIGATE - What is sustainability?

Instructions: Summarize the information contained in the "My Sustainable House" game.

Resources: <http://www.mysusthouse.org/game.html>

2. INVESTIGATE - What is sustainable housing?

Instructions: Read the article supplied and answer the questions, with full sentences.

[LITERACY: COMPREHENDING]

- a. What does 'sustainable' mean?
- b. What features make a building sustainable?
- c. Why do we need sustainable buildings?
- d. What is a 'zero energy' building?
- e. How can your choice of whitegoods cut down on energy and water usage?
- f. What natural phenomena are renewable energies produced by?

Resources: [SUSTAINABLE HOUSING](#) article

3. INVESTIGATE - What is sustainable housing?

[LITERACY: COMPOSING]

Instructions: Copy the picture supplied into an image editing app. Annotate the image to describe and promote the features and benefits of sustainable buildings.

Resources:



4. Discover - energy-efficient house design

Instructions: Find out more about star ratings for housing design. List features that make a house energy efficient.

Resources:

[Step Zero: What to Do Before Searching](#)

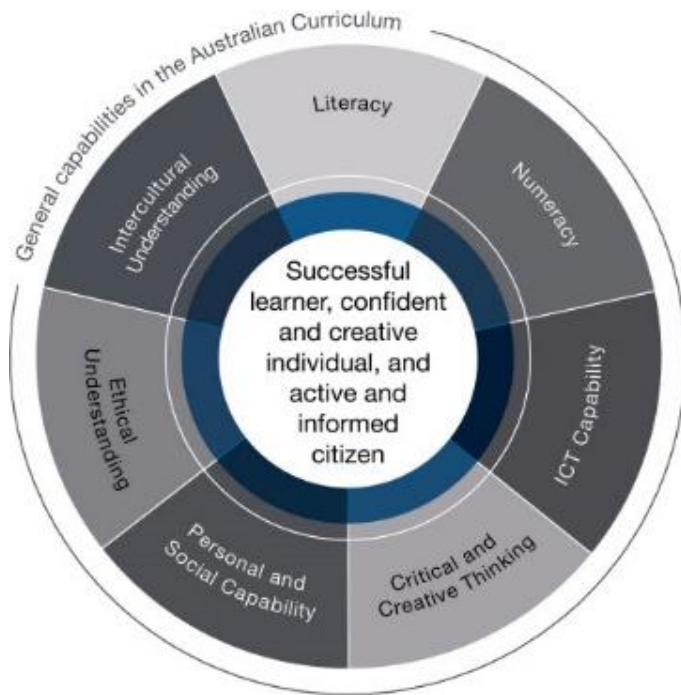
[How to search on Google](#)

[Google Advanced Search](#)

## 4. Adjust for ACARA General Capabilities & Compose Instruction

QCAA Underpinning Factors:

- ✓ Critical Thinking
- ✓ Creative Thinking
- ✓ Communication
- ✓ Collaboration and Teamwork
- ✓ Personal and Social skills
- ✓ ICT Skills



OR

Much of your instruction may not need any further adjustments, for many of these factors and capabilities, as the demands are already part of the instruction.

### CRITICAL AND CREATIVE THINKING

Your instruction so far should already account for these because it will be based on the cognitive verbs explicitly stated in your WALT/WILF. However, you may like to look for more targeted learning opportunities using this [CCE Tool](#).

### LITERACY

You need to go back through your instruction so far and add additional strategies, such as those associated with reading to learn. For example, the reading comprehension activity could be augmented with scanning and a detailed read. Therefore, the LEARNING SEQUENCE would be edited to read:

2. INVESTIGATE - What is sustainable housing?

Instructions: *With the questions below in mind, scan the article supplied and highlight key terms to locate related information.* Then answer the questions, with full sentences.

[LITERACY: COMPREHENDING]

- a. What does 'sustainable' mean?
- b. What features make a building sustainable?
- c. Why do we need sustainable buildings?
- d. What is a 'zero energy' building?
- e. How can your choice of whitegoods cut down on energy and water usage?
- f. What natural phenomena are renewable energies produced by?

Resources: [SUSTAINABLE HOUSING](#) article

## NUMERACY

On the surface, numeracy may seem to be unnecessary in many circumstances. However, numeracy also refers to the collection, interpretation and evaluation of data. The Learning Intention below would be an example of an analysis intention requiring numeracy skills.

Dimension	A	B	C	D
Application and analysis	<i>discerning and thorough analysis</i> of relevant information, including primary and secondary data on health issues	<i>effective analysis</i> of relevant information, including primary and secondary data on health issues	<i>analysis</i> of information, including primary and secondary data on health issues	<i>simple analysis</i> of provided information, including primary or secondary data on health issues

Go back and make necessary adjustments to your instruction.

## COLLABORATION, PERSONAL AND SOCIAL SKILLS

This is a good opportunity to develop much needed 21<sup>st</sup> Century Skills. In this case, be guided by the [21st Century Learning Design Rubric](#):

- 1
  - Students are NOT required to work together in pairs or groups.
- 2
  - Students DO **work together**
  - BUT they DO NOT have shared responsibility.
- 3
  - Students DO have **shared responsibility**
  - BUT they ARE NOT required to make substantive decisions
- 4
  - Students DO have **shared responsibility**
  - AND they DO make **substantive decisions** together about the content, process, or product of their work
  - BUT their work is not interdependent.
- 5
  - Students DO have **shared responsibility**
  - AND they DO make **substantive decisions** together about the content, process, or product of their work
  - AND their work is **interdependent**.

As an example, from the LEARNING SEQUENCE initially outlined, the following changes could be made to incorporate collaboration and Social Skills (in the form of peer feedback).

### 3. INVESTIGATE - What is sustainable housing?

[LITERACY: COMPOSING]

Instructions: In pairs, copy the picture supplied into an online whiteboard. Annotate the image to describe and promote the features and benefits of sustainable buildings.

Resources:



<http://stoodle.ck12.org/> – online collaborative whiteboard

<http://www.sketchlot.com/> – A web whiteboard for schools. No Student sign up!

<http://www.scrawlar.com/index.php>

### 4. Discover - energy-efficient house design

Instructions: Find out more about star ratings for housing design. List features that make a house energy efficient. Add your list to our class Padlet. Then provide 3 stars and a wish comments to three others.

Resources:

[Step Zero: What to Do Before Searching](#)

[How to search on Google](#)

[Google Advanced Search](#)



## ICT CAPABILITY

Much of what you have planned can now be enhanced with ICT and Digital Pedagogy. Some useful resources are:

- [Australian Curriculum ICT Capability](#) – The ICT Capability is unpacked with strategies and resources listed.
- [EdTechTools](#) – list of web 2.0 EdTechTools, curated with the Maker (1982) model.

Now, go back through your instruction and 'digitise' some of your learning experiences. In the example below, these changes have been highlighted in red.

### 1. INVESTIGATE - What is sustainability?

Instructions: Summarize the information contained in the *"My Sustainable House" game*.

Resources: <http://www.mysusthouse.org/game.html>

### 2. INVESTIGATE - What is sustainable housing?

Instructions: *With the questions below in mind, scan the article supplied and highlight key terms to locate related information.* Then answer the questions, with full sentences. *Post your answers on our blog.*

[LITERACY: COMPREHENDING]

- What does 'sustainable' mean?
- What features make a building sustainable?
- Why do we need sustainable buildings?
- What is a 'zero energy' building?
- How can your choice of whitegoods cut down on energy and water usage?
- What natural phenomena are renewable energies produced by?

Resources: [SUSTAINABLE HOUSING article](#)

### 3. INVESTIGATE - What is sustainable housing?

[LITERACY: COMPOSING]

Instructions: *In pairs, copy the picture supplied into an online whiteboard.* Annotate the image to describe and promote the features and benefits of sustainable buildings.

Resources: Image of house

<http://stoodle.ck12.org/> – online collaborative whiteboard

<http://www.sketchlot.com/> – A web whiteboard for schools. No Student sign up!

<http://www.scrawlar.com/index.php>

### 4. Discover - energy-efficient house design

Instructions: Find out more about star ratings for housing design. List features that make a house energy efficient. *Add your list to our class Padlet.* Then provide 3 stars and a wish comments to three others.

Resources:

[Step Zero: What to Do Before Searching](#)

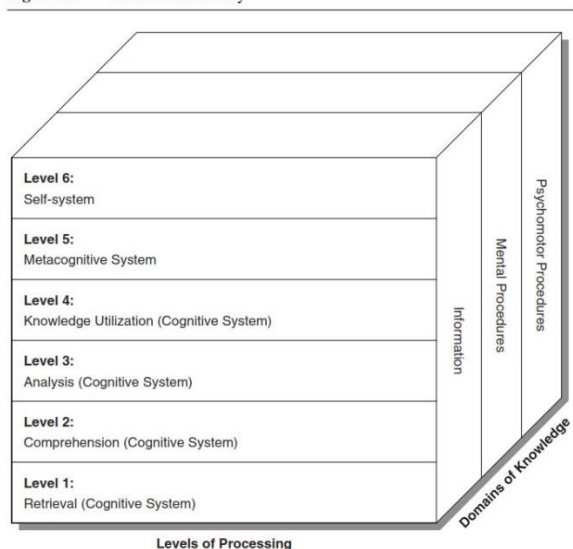
[How to search on Google](#)

[Google Advanced Search](#)

## PERSONAL AND SOCIAL SKILLS AND ETHICAL UNDERSTANDING

The QCAA bases all its new Senior Syllabi on The New Taxonomy of Educational Objectives (Marzano and Kendall). Eventually, the CCE's will be replaced by Cognitive Verbs, based on this taxonomy. Key to this new taxonomy is the Self System.

Figure 1.2 The New Taxonomy



Copyright © 2007 by Corwin Press. All rights reserved. Reprinted from *The New Taxonomy of Educational Objectives* (2nd ed.), by Robert J. Marzano and John S. Kendall. Thousand Oaks, CA: Corwin Press, www.corwinpress.com. Reproduction authorized only for the local school site or nonprofit organization that has purchased this book.

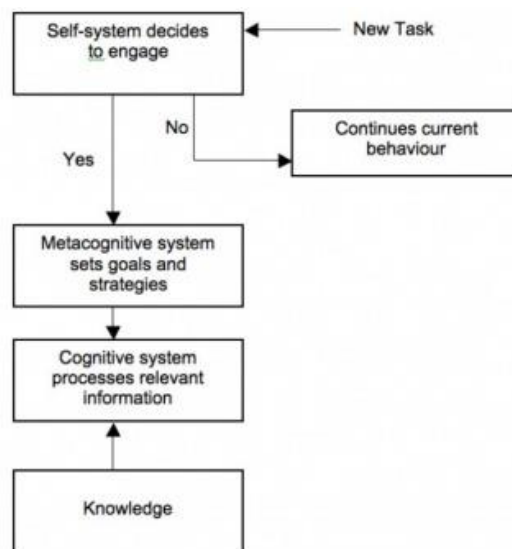


Figure 3 Taken from *The New Taxonomy* 2007 Page 11

The idea here is that learning does not occur at all unless a student decides to engage in learning. This underpins the whole WALT/WILF and monitoring/reflection/feedback loop. So students need to be given opportunities to set and track their own learning goals. This has been found to be very [effective](#). To facilitate this, they also need opportunities for feedback (feedup, feedback and feedforward), from teachers as well as peers. This has also been found to be very [effective](#).

Level	1. Person	2. Task * (Shallow Learning)	3. Process ** (Deep Learning)	4. Self-Regulation *** (Independent Learning)
Where am I going? (Goal setting) FEEDUP	Teacher gives encouragement "Work Hard/ Try your best"	Pupils know and understand what task needs to be completed.	Pupils know and understand the underlying processes involved in completing the task.	Pupils are able to set and/or reference their own learning goals (including success criteria).
How am I doing? (Feedback) FEEDBACK	Teacher gives affirmation and praise.	Teacher informs pupils as to whether the task is correct or incorrect.	Teacher supports and confirms the pupils' ability to sift and sort the underlying processes in the task.	Pupils fit the effective learner profile; They know how they are progressing, can assess and support themselves. They understand and exploit peer assessment and meta-cognition skills. Teacher affirms this.
What do I do next? FEED FORWARD	Teacher gives further encouragement regarding future learning.	Teacher explains the next task.	Teacher explains the next steps in terms of processes and strategies.	Pupils are able to identify their own next steps. Teacher affirms this.

*Tips and Strategies you could employ*

- [An Easy Way to Track Learning in a Contemporary Classroom](#)
- [Tracking Learning in a Blended Classroom using Journals](#)
- [Peer Review Process: Student Guide](#)
- [TAG Feedback Sentence Starters](#)

Now add these strategies to your instruction

**Putting it all together in our Instructional Framework**

As a PLC, this may be something that you leave to individual teachers. However, for consistency and rigor across classes, developing a complete instructional package is far more effective. An even more efficient way to do this is to build a Virtual Classroom with the sequenced instruction and resources. This way, teachers can copy chunks of content into their own virtual classroom and classes can collaboratively learn, track and monitor their progress.

<b>Lesson Opening</b>	<p><b>WARM UPS – Engage, Revise, Revisit</b> Interactive review of skills and knowledge — purpose is to automatize Quick pace motivating. Build links from previous learning to new learning.</p>	<b>CHECK FOR UNDERSTANDING</b>
	<p><b>WALT (We Are Learning To...)</b> Learning objectives &amp; goal of lesson</p>	
	<p><b>WILF (What I'm Looking For,...)</b> Explicitly state and display clear success criteria</p>	
	<p><b>TIB (This Is Because,...)</b> Long term goal and importance of the learning to the real world/future learning</p>	
<b>Teaching Sequence – Body of Lesson Gradual Release of Responsibility</b>	<p><b>I DO (My turn) – Teacher Models</b> Provide step-by-step demonstrations — modelling and explanation</p>	<b>CHECK FOR UNDERSTANDING</b>
	<p><b>WE DO (Together) – Guided Practice</b> Provide guided, collaborative and supported practice</p>	
	<p><b>YOU DO (Your turn) – Independent Practice</b> provide independent practice — monitor, check understanding and give feedback</p>	
<b>Plough Back</b>	<p><b>LOOKING BACK - REVIEW &amp; REFLECTION</b></p> <p><b>LOOKING FORWARD – PREVIEW &amp; WHERE TO NEXT</b></p>	

## Last Word

This process of designing and managing learning really only works with a collaborative Professional Learning Community (PLC). Then, within this cycle, the front loading of assessment needs to be completed before the program of instruction starts and not developed in an ad hoc manner while the program is running. A PLC cannot review and reflect on Formative Assessment tasks that have not been developed. This means that a complete unit of instruction needs to be developed and resourced by a PLC before the start of a new term. Then teachers are free to facilitate learning rather than scrambling every day to develop lesson plans that may or may not be based on a rigorous learning intention.

