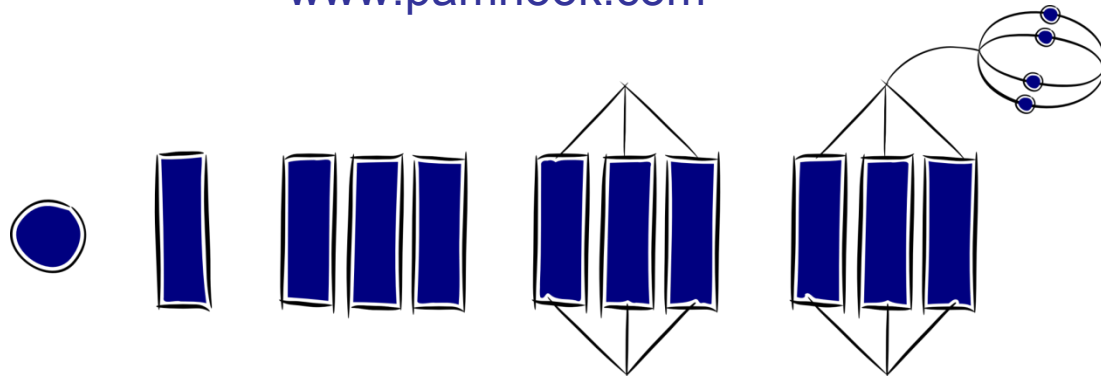


SOLO Taxonomy and Student ePortfolios

Pam Hook
www.pamhook.com



When ePortfolios disappoint.

“We concentrated on describing the digital products students could use rather than clarifying the intended learning outcomes.”



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YouTube, Blogger, Cmap, Twitter, Delicious and SlideShare versus learning outcomes

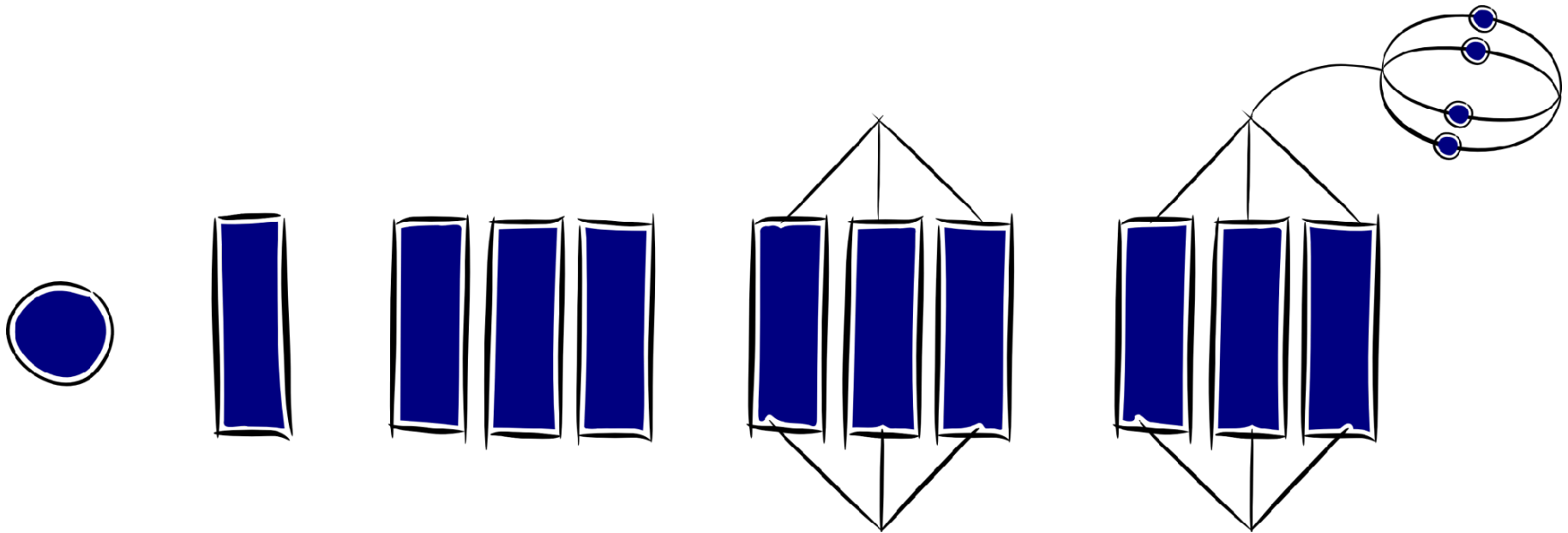
Designing ePortfolios for deep learning outcomes.



Using SOLO Taxonomy to clarify the
intended learning outcomes, assessment
tasks and success criteria used in
ePortfolios

SOLO Taxonomy - Biggs and Collis 1982

The Structure of Observed Learning Outcomes



Step 1. Identify the learning outcome focus/foci to be addressed in the ePortfolio.

For example, an ePortfolio learning outcome might be understanding of the concept - **Place** or of Te Ao Maori - **Turangawaewae**.



Step 2. Formulate some simple start up questions to explore the focus.

For example,

Where am I? Where is here? How did I get here? What is this place? – history, geography, local, national and global perspectives. How did this space become a place? Who discovered this place? How was it explored? How am I connected to this place? Who came to this place and when did they come - individuals and civilisations, migration stories, settlement,

Step 3. Unpack the essential understanding.

For example,

*Over time “**spaces**” change into “**places**”.*

*“**Place** is security **space** is freedom; we are attached to the one and long for the other.”*

Space and Place 1977

Yi-Fu Tuan P3



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Step 3. Unpack the essential understanding of the focus.

For example,

*At first only the point of entry is recognised; beyond lies **space**. In time more and more landmarks are identified and the subject gains confidence in movement. Finally the space consists of familiar landmarks and paths – in other words, **place**.*

Space and Place 1977
Yi-Fu Tuan P71



Step 4. Check for alignment with the NZC Key Competencies, Values and Learning Areas.

For example,
NZC: Social Studies

In the social sciences, students explore how societies work and how they themselves can participate and take action as critical, informed, and responsible citizens.

Level One

Understand how **places** in New Zealand are significant for individuals and groups.

Level Two

Understand how **places** influence people and people influence places.

Level Three

Social Studies

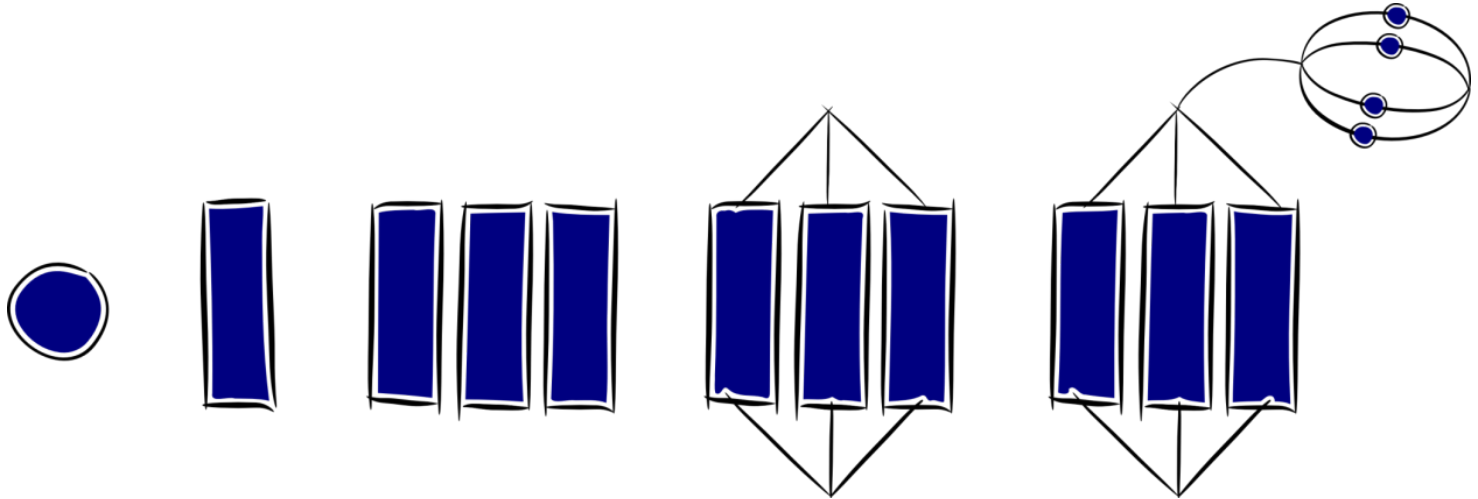
Understand how people view and use **places** differently.

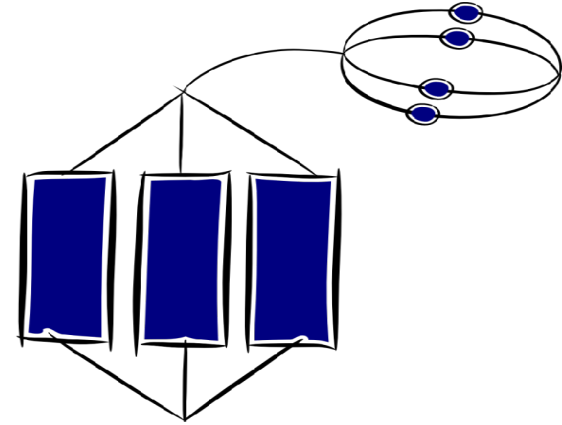
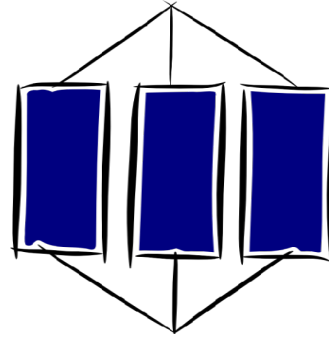
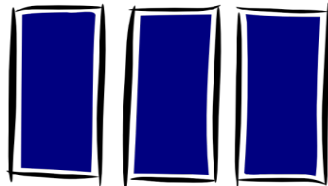
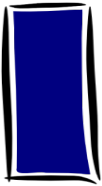
Level Four

Understand how exploration and innovation create opportunities and challenges for people, **places**, and environments.

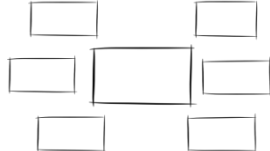


Step 5. Design for high expectations and understanding through ILOs aligned to learning verbs at different levels of SOLO Taxonomy.





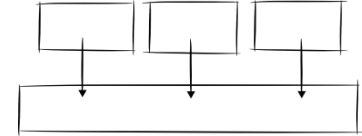
Define



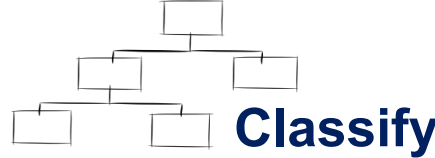
Describe



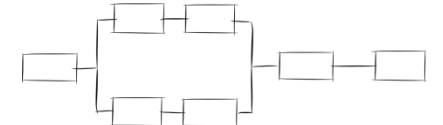
Sequence



Generalisation



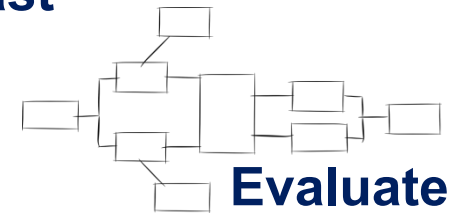
Classify



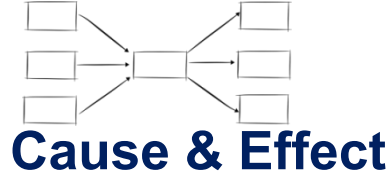
Prediction



Compare & contrast



Evaluate



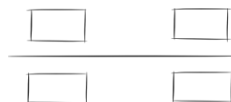
Cause & Effect



Analysis



Create



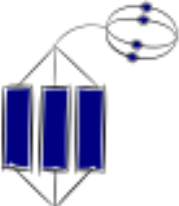




Analogy



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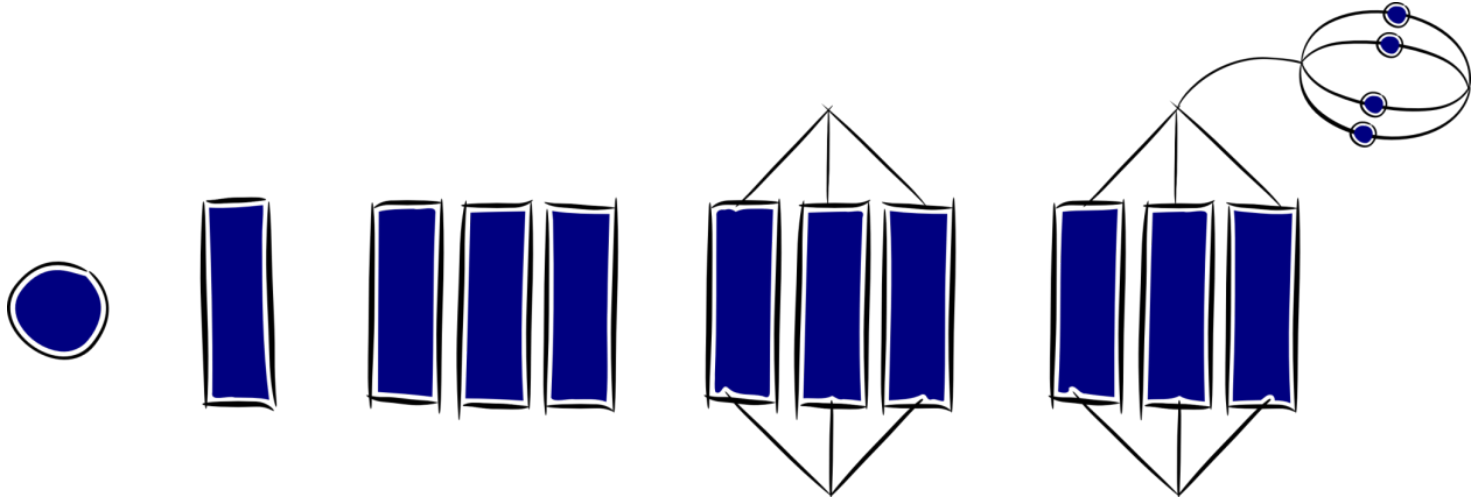
Use self assessment rubrics built against HOT Maps to create success criteria for each learning verb selected.



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Step 6. Challenge students to select ILOs across different levels of SOLO Taxonomy.



For example: Your ePortfolio content must cover at least five of the ILOs specified, taken across three levels of SOLO Taxonomy.

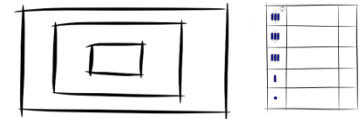


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Learning verbs for understanding at a multistructural level of SOLO.

ILO: Define [place or Turangawaewae]



**HOT DEFINE Map
and rubric**

Concept: Place

**Te Ao Maori:
Turangawaewae**

ILO: Define place.

[Learning outcomes recorded in ePortfolio define place through; geography, geology, biology, spirituality and people; the users and uses of a place; the explorers, innovators, and developers of a place; challenges and opportunities of a place; the past and present of a place, and yet to be explored spaces without landmarks, paths and people.]

HOT SOLO Multistructural Maps: define, describe,

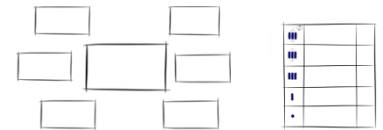
HOT SOLO Relational Maps: sequence, classify, compare and contrast, causal explanation, analysis, analogy,

HOT SOLO Extended Abstract Maps: generalise, evaluate, predict.



Learning verbs for understanding at a multistructural level of SOLO.

ILO: Describe [place or Turangawaewae]



Concept: Place

**Te Ao Maori:
Turangawaewae**

ILO: Describe place.

[Learning outcomes recorded in ePortfolio describe; the geography, geology, biology, spirituality and people of a place/s; the users and uses of a place; the explorers, innovators, and developers of a place; challenges and opportunities of a place; and the past and present of a place. They describe yet to be explored spaces without landmarks, paths and people.]

HOT SOLO Multistructural Maps: define, describe,

HOT SOLO Relational Maps: sequence, classify, compare and contrast, causal explanation, analysis, analogy,

HOT SOLO Extended Abstract Maps: generalise, evaluate, predict.



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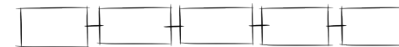
Learning verbs for understanding at a relational level of SOLO.

ILO: Sequence [space becomes place or space becomes Turangawaewae]



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**HOT SEQUENCE Map
and rubric**

■	
■	
■	
■	
■	

Concept: Place

**Te Ao Maori:
Turangawaewae**

ILO: Sequence space becomes place.

[Learning outcomes recorded in ePortfolio sequence the changes in geography, geology, biology, spirituality and people of a place over time. The changes in users and uses of a place. The changes in explorers, innovators, and developers of a place. The changes in challenges and opportunities of a place. The past and present of a place.]

HOT SOLO Multistructural Maps: define, describe,

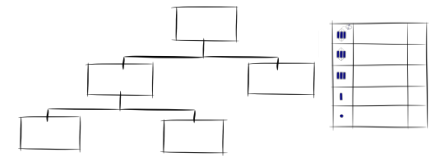
HOT SOLO Relational Maps: sequence, classify, compare and contrast, causal explanation, analysis, analogy,

HOT SOLO Extended Abstract Maps: generalise, evaluate, predict.



Learning verbs for understanding at a relational level of SOLO.

ILO: Classify [places or Turangawaewae]



**HOT CLASSIFY Map
and rubric**

Concept: Place

**Te Ao Maori:
Turangawaewae**

ILO: Classify places.

[Learning outcomes recorded in ePortfolio explore classifications and groupings of place based on similarities in geography, geology, biology, spirituality and people. Include classification of different places based on the users and uses of a place; the explorers, innovators, and developers of a place; the challenges and opportunities of a place and the past and present of a place.]

HOT SOLO Multistructural Maps: define, describe,

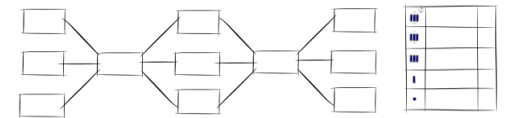
HOT SOLO Relational Maps: sequence, classify, compare and contrast, causal explanation, analysis, analogy,

HOT SOLO Extended Abstract Maps: generalise, evaluate, predict.



Learning verbs for understanding at a relational level of SOLO.

ILO: Compare and contrast [places or Turangawaewae]



**HOT COMPARE & CONTRAST Map
and rubric**

Concept: Place

**Te Ao Maori:
Turangawaewae**

ILO: Compare and contrast places.

[Learning outcomes recorded in ePortfolio explore the similarities and differences in; the geography, geology, biology, spirituality and people of a place; the users and uses of a place; the explorers, innovators, and developers of a place; the challenges and opportunities of a place and the past and present of a place.]

HOT SOLO Multistructural Maps: define, describe,

HOT SOLO Relational Maps: sequence, classify, compare and contrast, causal explanation, analysis, analogy,

HOT SOLO Extended Abstract Maps: generalise, evaluate, predict.

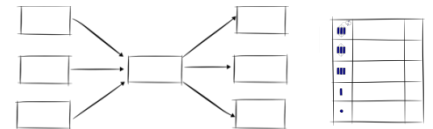


Learning verbs for understanding at a relational level of SOLO.

ILO: Explain the causes and consequences of
[space to place or space to Turangawaewae]



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**HOT CAUSE and EFFECT Map
and rubric**

Concept: Place

**Te Ao Maori:
Turangawaewae**

ILO: Cause and consequence of changing a space to a place.

[Learning outcomes recorded in ePortfolio explore the causes and consequences for the geography, geology, biology, spirituality and people of a space as it changes into a place. Including causes and consequences for the users and uses of a place; the explorers, innovators, and developers of a place; the challenges and opportunities of a place, in the past and present of a place.]

HOT SOLO Multistructural Maps: define, describe,

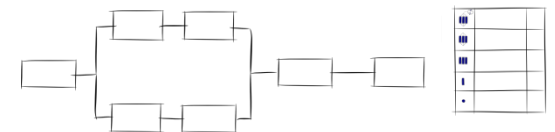
HOT SOLO Relational Maps: sequence, classify, compare and contrast, causal explanation, analysis, analogy,

HOT SOLO Extended Abstract Maps: generalise, evaluate, predict.



Learning verbs for understanding at an extended abstract level of SOLO.

ILO: Predict [future place or future Turangawaewae]



**HOT PREDICT Map
and rubric**

Concept: Place

**Te Ao Maori:
Turangawaewae**

ILO: Predict the future of a place.

[Learning outcomes recorded in ePortfolio predict the future geography, geology, biology, spirituality and people of a place. Predict future users and uses of a place. Suggest future explorers, innovators, and developers of a place. Forecast future challenges and opportunities of a place. Use possible and actual evidence from exploration of the past and present of a place to foretell the future of a place.]

HOT SOLO Multistructural Maps: define, describe,

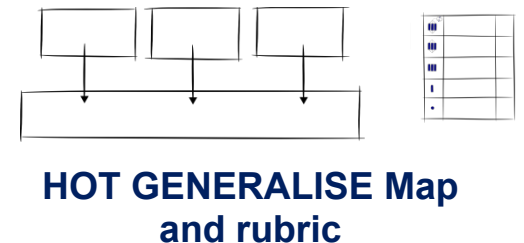
HOT SOLO Relational Maps: sequence, classify, compare and contrast, causal explanation, analysis, analogy,

HOT SOLO Extended Abstract Maps: generalise, evaluate, predict.



Learning verbs for understanding at an extended abstract level of SOLO.

ILO: Generalise [place or Turangawaewae]



Concept: Place

**Te Ao Maori:
Turangawaewae**

ILO: Generalise about place.

[Learning outcomes recorded in ePortfolio generalise about what geography, geology, biology, spirituality and people bring to our conceptual understanding of “place”. The insights that the users and uses of a place provide. The changes in perspective that the explorers, innovators, and developers of a place bring. The overall effect of challenge and opportunity on a place. How the past and present of a place helps us understand what place is or can be.]

HOT SOLO Multistructural Maps: define, describe,

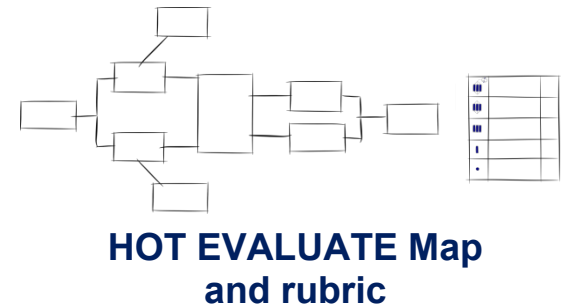
HOT SOLO Relational Maps: sequence, classify, compare and contrast, causal explanation, analysis, analogy,

HOT SOLO Extended Abstract Maps: generalise, evaluate, predict.



Learning verbs for understanding at an extended abstract level of SOLO.

ILO: Evaluate [place or Turangawaewae]



Concept: Place

**Te Ao Maori:
Turangawaewae**

ILO: Evaluate places.

[Learning outcomes recorded in the ePortfolio evaluate what is best about a place. How we judge a place using criteria based upon the geography, geology, biology, spirituality and people of a place; the users and uses of a place; the explorers, innovators, and developers of a place; the challenges and opportunities of a place and the past and present of a place.]

HOT SOLO Multistructural Maps: define, describe,

HOT SOLO Relational Maps: sequence, classify, compare and contrast, causal explanation, analysis, analogy,

HOT SOLO Extended Abstract Maps: generalise, evaluate, predict.



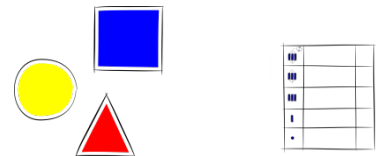
Learning verbs for understanding at an extended abstract level of SOLO.

ILO: Create [place or Turangawaewae]



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**HOT CREATE Map
and rubric**

Concept: Place

**Te Ao Maori:
Turangawaewae**

ILO: Create a place from a space.

[Learning outcomes recorded in the ePortfolio explore the criteria, strategies and processes used in creating a place from a space. Identifying the outcomes of what is created in terms of the geography, geology, biology, spirituality and people of the created place. The users and uses of the created place. The explorers, innovators, and developers of a created place. The challenges and opportunities of the created place. The past and present of a created place.]

HOT SOLO Multistructural Maps: define, describe,

HOT SOLO Relational Maps: sequence, classify, compare and contrast, causal explanation, analysis, analogy,

HOT SOLO Extended Abstract Maps: generalise, evaluate, predict.



When developing ePortfolio Assessment Tasks using SOLO Taxonomy ...

1. **Clarify** the purpose of the ePortfolio by ensuring alignment of purpose with intended learning outcomes and assessment tasks. Use learning verbs coded against SOLO Taxonomy.
2. **Expect** that learning outcomes in the ePortfolio will cover ILOs from all levels of SOLO Taxonomy.
3. **Explain** the success criteria for each intended learning outcome and learning verb.

When developing ePortfolio Assessment Tasks using SOLO Taxonomy ...

4. Differentiate ePortfolio content by providing examples of different digital applications, processes and products that will help students demonstrate outcomes that meet the success criteria.

5. Encourage students to think beyond the ePortfolio product suggestions and show their understanding in different ways.



transforming learning outcomes

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