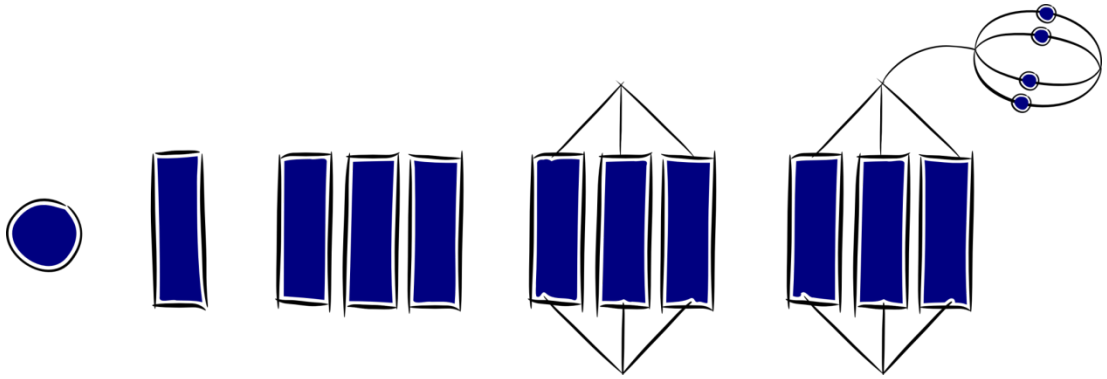
SOLO Taxonomy and Writing Learning Intentions

Pam Hook
www,pamhook.com



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Writing Learning Intentions.

Using SOLO Taxonomy coded HOT Maps as task descriptors

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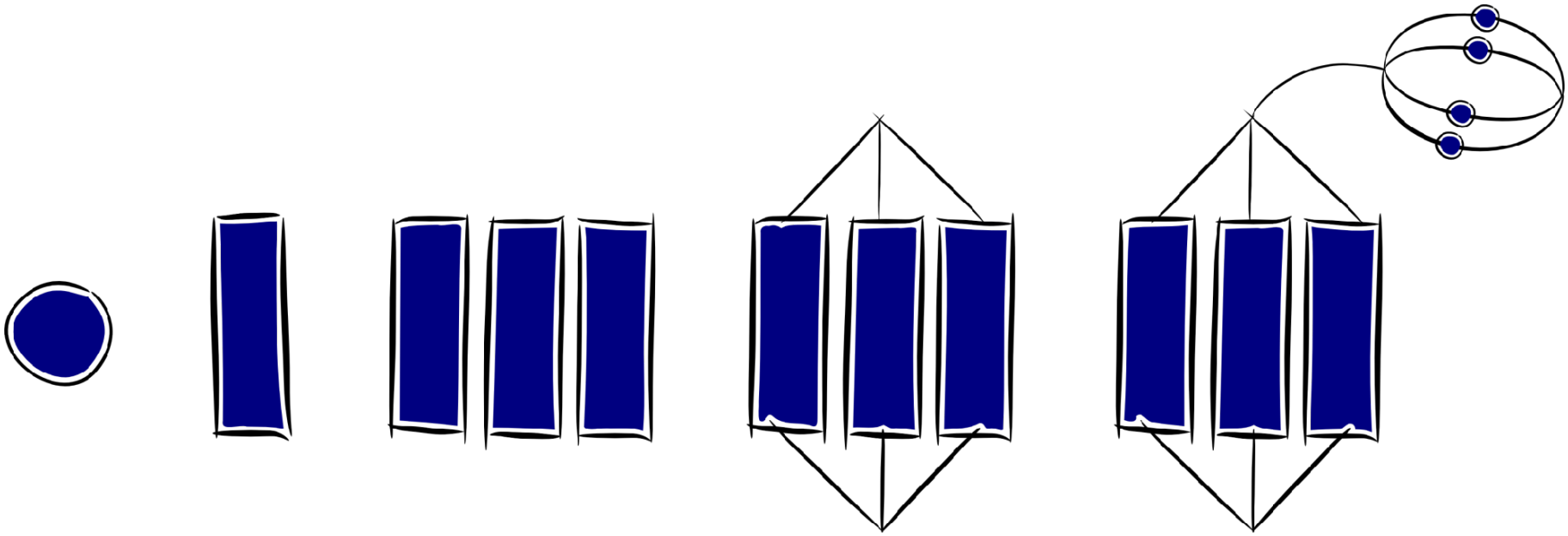
SOLO Taxonomy - Biggs and Collis 1982

The **S**tructure of **O**bserved **L**earning **O**utcomes



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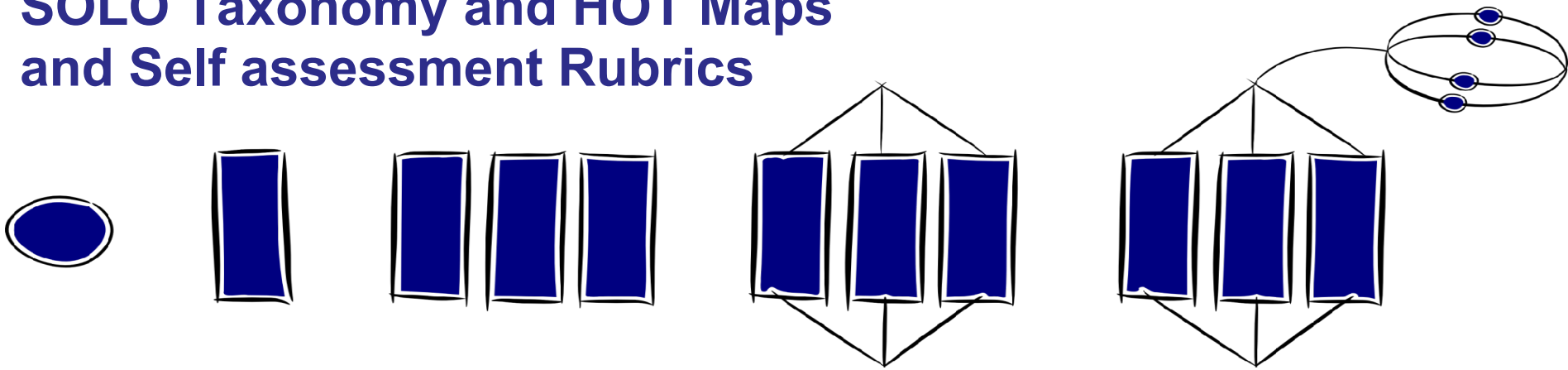
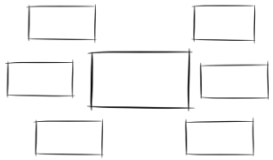
Biggs, J.B., and Collis, K.F. (1982) Evaluating the Quality of Learning-the SOLO Taxonomy (1st ed) New York: Academic Press.

SOLO Taxonomy and HOT Maps and Self assessment Rubrics

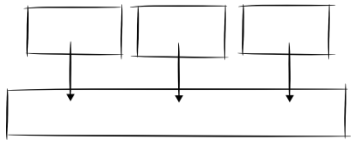


Define

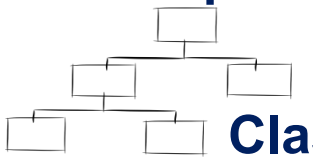


Describe

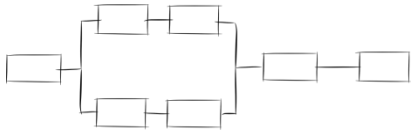
Sequence



Generalisation

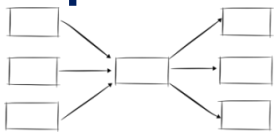


Classify

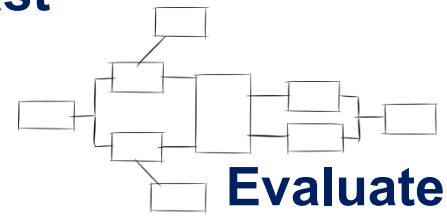


Prediction

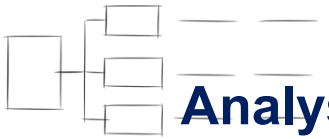
Compare & contrast



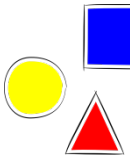
Cause & Effect



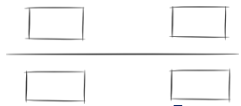
Evaluate



Analysis



Create



Analogy

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NZC: Essence Statement
Science
In science, students explore how both the natural physical world and science itself work so that they can participate as critical, informed, and responsible citizens in a society in which science plays a significant role.

Example Achievement Objective

NZC: Achievement Objective
Material World
Level One
Properties and changes of matter

- Observe, describe, and compare physical and chemical properties of common materials and changes that occur when materials are mixed, heated, or cooled.

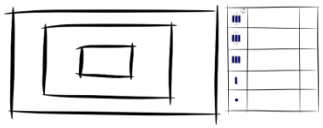
Refer: Ministry of Education. (2007). *The New Zealand Curriculum for English-medium teaching and learning in years 1–13* Wellington: Learning Media.

Writing Learning Intentions:

Read the NZC Achievement Objective and ask ...

What can be defined?

[SOLO multistructural LO]



HOT DEFINE Map and rubric

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Achievement Objective

Science
Material World
Level One
Properties and changes of matter

- Observe, describe, and compare physical and chemical properties of common materials and changes that occur when materials are mixed, heated, or cooled.

Learning Intentions

Define properties
Define physical properties
Define chemical properties
Define materials
Define common material
Define mixing/heating/coolingt.

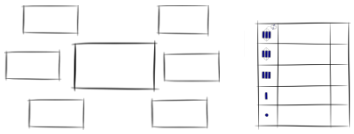
HOT SOLO Multistructural Maps: define, describe,
HOT SOLO Relational Maps: sequence, classify, compare and contrast, causal explanation, analysis, analogy,
HOT SOLO Extended Abstract Maps: generalise, evaluate, predict.

Writing Learning Intentions:

Read the NZC Achievement Objective and ask ...

What can be described?

[SOLO multistructural LO]



HOT DESCRIBE Map and rubric

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Achievement Objective

Science
Material World
Level One
Properties and changes of matter

- Observe, describe, and compare physical and chemical properties of common materials and changes that occur when materials are mixed, heated, or cooled.

Learning Intentions

Describe common materials
Describe physical properties of common materials
Describe chemical properties of common materials.

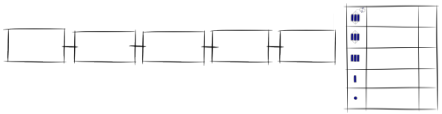
HOT SOLO Multistructural Maps: define, describe,
HOT SOLO Relational Maps: sequence, classify, compare and contrast, causal explanation, analysis, analogy,
HOT SOLO Extended Abstract Maps: generalise, evaluate, predict.

Writing Learning Intentions:

Read the NZC Achievement Objective and ask ...

What can be sequenced?

[SOLO relational LO]



HOT SEQUENCE Map and rubric

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Achievement Objective

Science
Material World
Level One
Properties and changes of matter

- Observe, describe, and compare physical and chemical properties of common materials and changes that occur when materials are mixed, heated, or cooled.

Learning Intentions

Sequence the changes when common materials are mixed [heated or cooled].

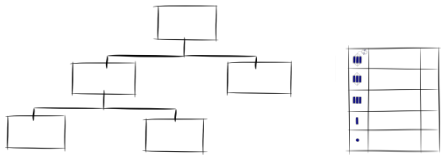
HOT SOLO Multistructural Maps: define, describe,
HOT SOLO Relational Maps: sequence, classify, compare and contrast, causal explanation, analysis, analogy,
HOT SOLO Extended Abstract Maps: generalise, evaluate, predict.

Writing Learning Intentions:

Read the NZC Achievement Objective and ask ...

What can be classified?

[SOLO relational LO]



HOT CLASSIFY Map and rubric

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Achievement Objective

Science
Material World
Level One
Properties and changes of matter

- Observe, describe, and compare physical and chemical properties of common materials and changes that occur when materials are mixed, heated, or cooled.

Learning Intentions

Classify the properties of common materials.

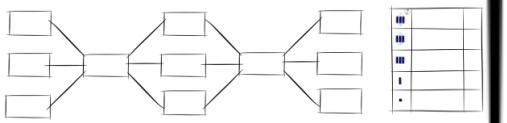
HOT SOLO Multistructural Maps: define, describe,
HOT SOLO Relational Maps: sequence, classify, compare and contrast, causal explanation, analysis, analogy,
HOT SOLO Extended Abstract Maps: generalise, evaluate, predict.

Writing Learning Intentions:

Read the NZC Achievement Objective and ask ...

What can be compared?

[SOLO relational LO]



HOT COMPARE CONTRAST
Map and rubric

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Achievement Objective

Science
Material World
Level One
Properties and changes of matter

- Observe, describe, and compare physical and chemical properties of common materials and changes that occur when materials are mixed, heated, or cooled.

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Learning Intentions

Compare & contrast physical and chemical properties of common materials.
Compare & contrast the changes that occur when common materials are mixed [heated or cooled].

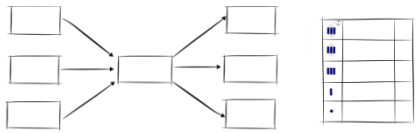
HOT SOLO Multistructural Maps: define, describe,
HOT SOLO Relational Maps: sequence, classify, compare and contrast, causal explanation, analysis, analogy,
HOT SOLO Extended Abstract Maps: generalise, evaluate, predict.

Writing Learning Intentions:

Read the NZC Achievement Objective and ask ...

What can be explained?

[SOLO relational LO]



HOT CAUSAL EXPLANATION
Map and rubric

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Achievement Objective

Science
Material World
Level One
Properties and changes of matter

- Observe, describe, and compare physical and chemical properties of common materials and changes that occur when materials are mixed, heated, or cooled.

Learning Intentions

Explain the causes of the changes that occur when common materials are mixed [heated or cooled]

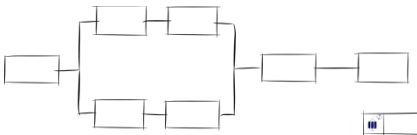
HOT SOLO Multistructural Maps: define, describe,
HOT SOLO Relational Maps: sequence, classify, compare and contrast, causal explanation, analysis, analogy,
HOT SOLO Extended Abstract Maps: generalise, evaluate, predict.

Writing Learning Intentions:

Read the NZC Achievement Objective and ask ...

What can be predicted?

[SOLO extended abstract LO]



HOT PREDICT Map and rubric

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Achievement Objective

Science
Material World
Level One
Properties and changes of matter

- Observe, describe, and compare physical and chemical properties of common materials and changes that occur when materials are mixed, heated, or cooled.

Learning Intentions

Predict what might happen when common materials are mixed [heated or cooled]

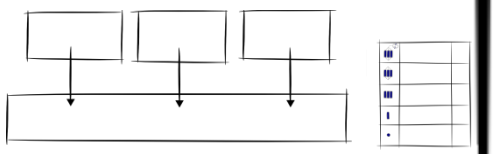
HOT SOLO Multistructural Maps: define, describe,
HOT SOLO Relational Maps: sequence, classify, compare and contrast, causal explanation, analysis, analogy,
HOT SOLO Extended Abstract Maps: generalise, evaluate, predict.

Writing Learning Intentions and Success Criteria:

Read the NZC Achievement Objective and ask ...

What can be generalised?

[SOLO extended abstract LO]



HOT GENERALISE
Map and rubric

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Achievement Objective

Science
Material World
Level One
Properties and changes of matter

- Observe, describe, and compare physical and chemical properties of common materials and changes that occur when materials are mixed, heated, or cooled.

Learning Intentions

Generalise about the changes that occur when common materials are mixed [heated or cooled]

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.

Writing Learning Intentions.

Using SOLO Taxonomy coded HOT Maps as task descriptors

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Achievement Objective

Science
Material World
Level One
Properties and changes of matter

- Observe, describe, and compare physical and chemical properties of common materials and changes that occur when materials are mixed, heated, or cooled.

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Learning Intentions

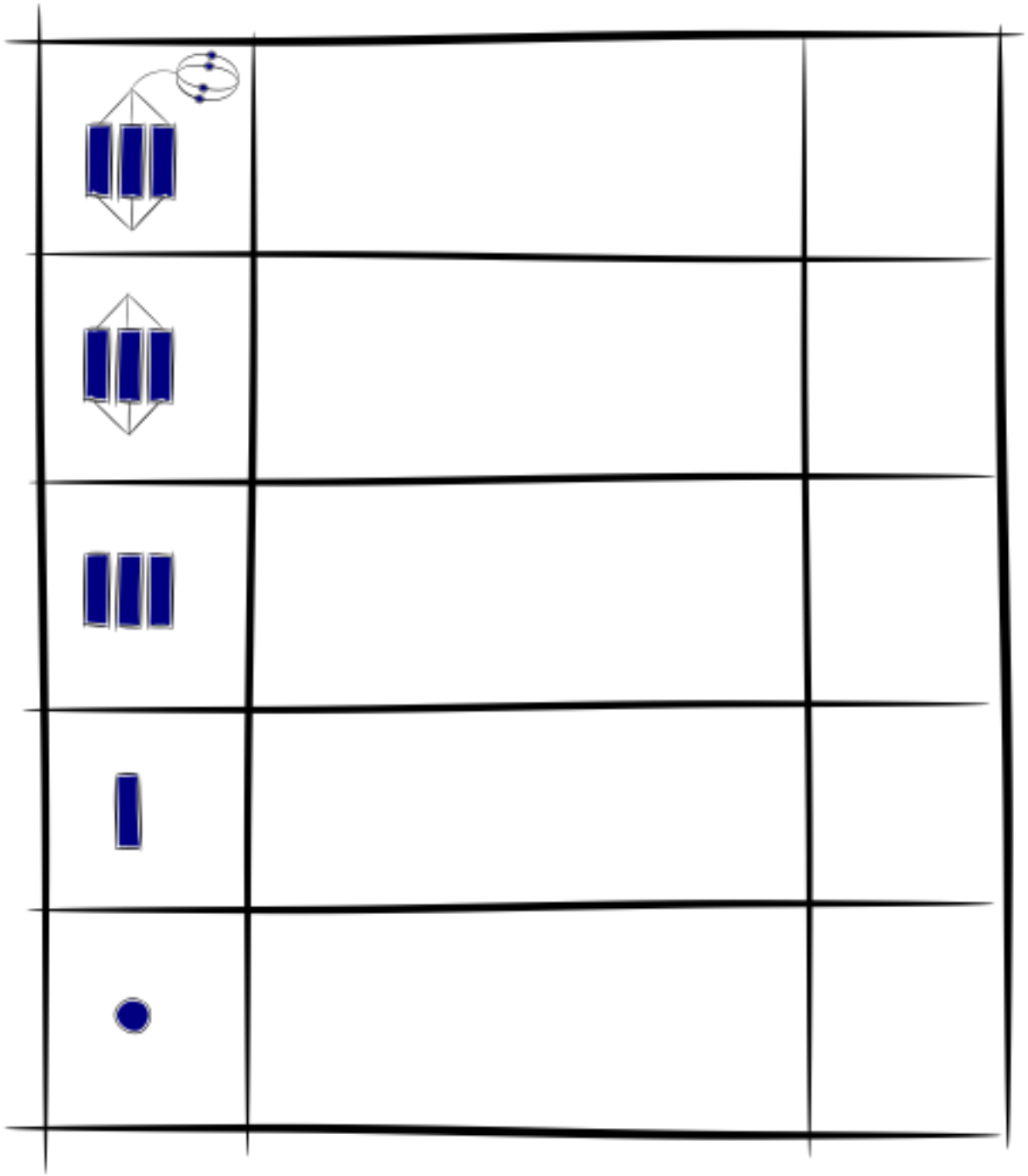
A pick ‘n mix of possible learning intentions

Define properties
Define physical properties
Define chemical properties
Define materials
Define common material
Define mixture/ heat.
Describe common materials
Describe physical properties of common materials
Describe chemical properties of common materials.

Sequence the changes when common materials are mixed [heated or cooled].
Classify the properties of common materials.
Compare & contrast physical and chemical properties of common materials.
Compare & contrast the changes that occur when common materials are mixed [heated or cooled].
Explain the causes of the changes that occur when common materials are mixed [heated or cooled]

Predict what might happen when common materials are mixed [heated or cooled]
Generalise about the changes that occur when common materials are mixed [heated or cooled]

Use self assessment rubrics built against HOT Maps to create Success Criteria for each Learning Intention selected.



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