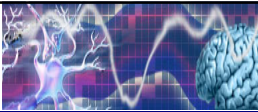
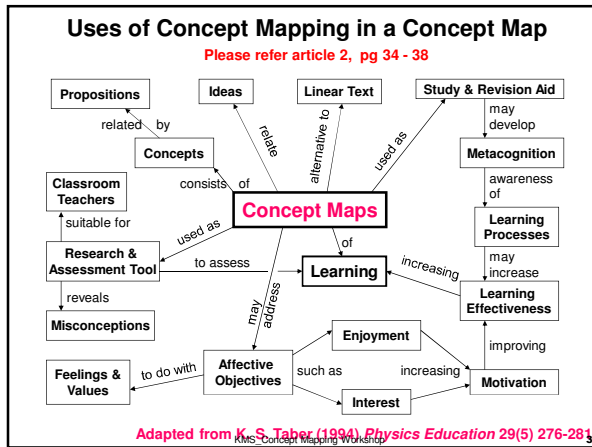
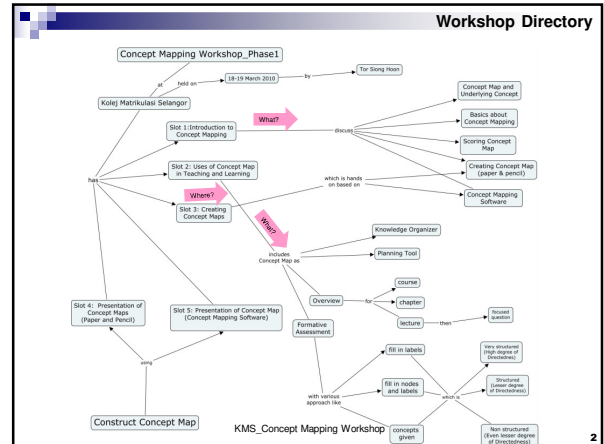


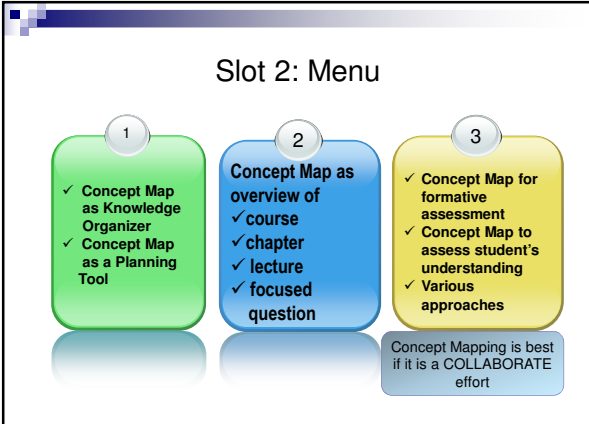
## Concept Mapping Workshop\_Phase 1

### Kolej Matrikulasi Selangor

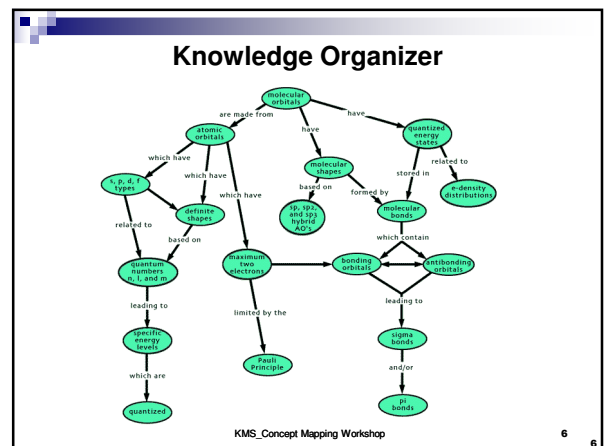
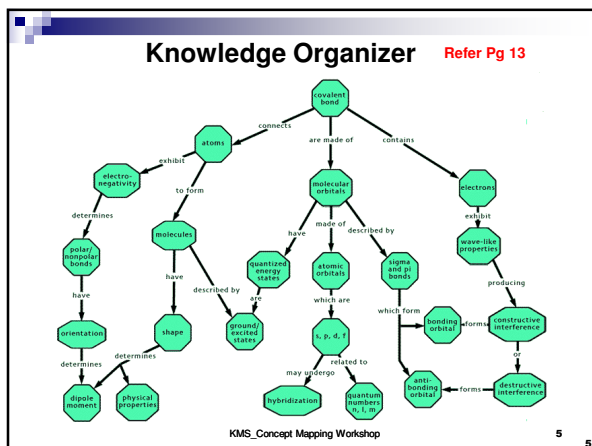
### Uses of Concept Map in Teaching & Learning

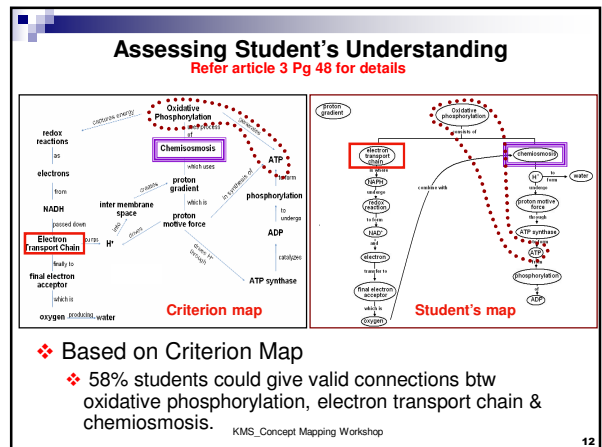
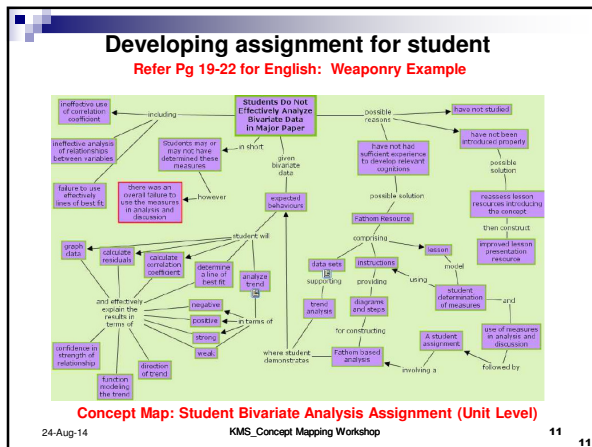
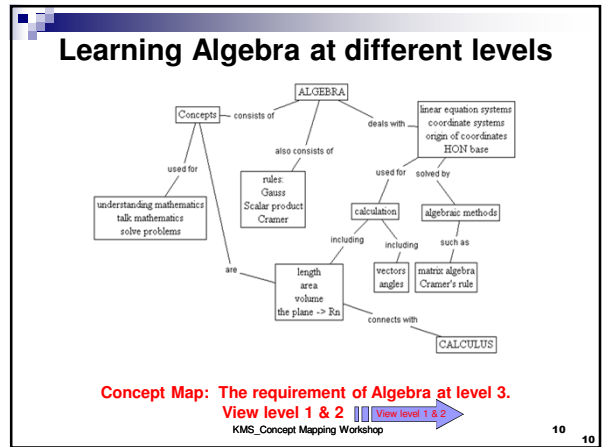
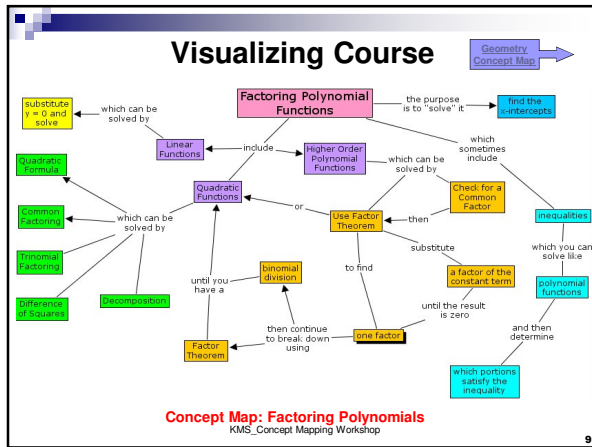
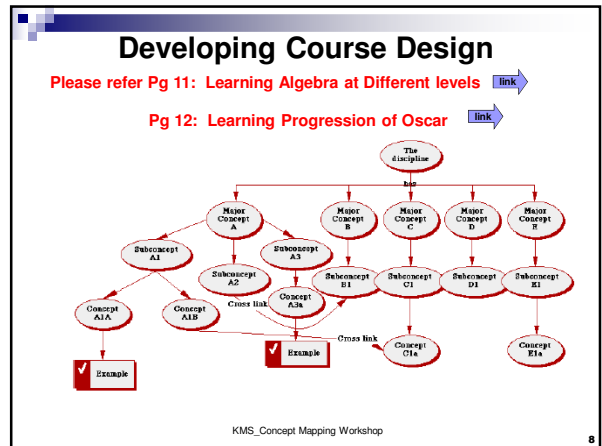
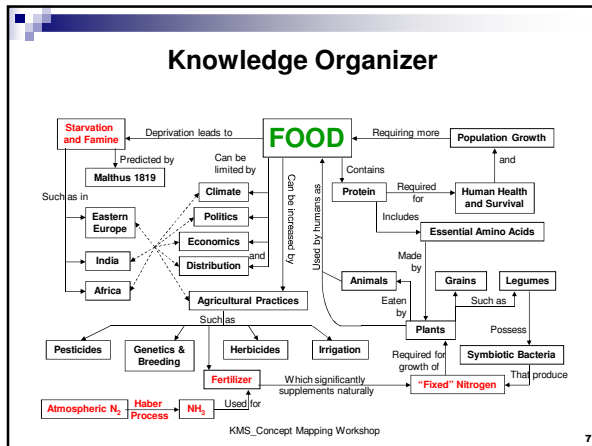



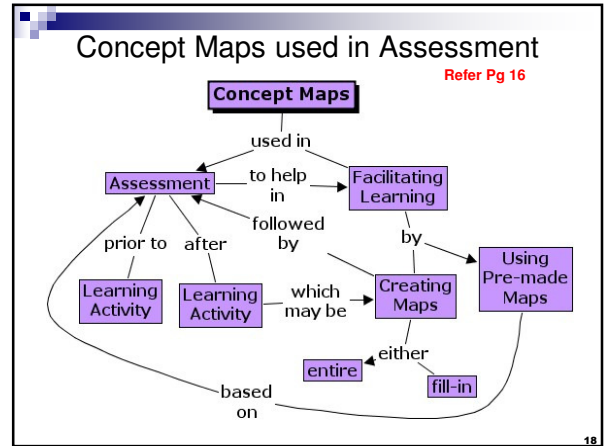
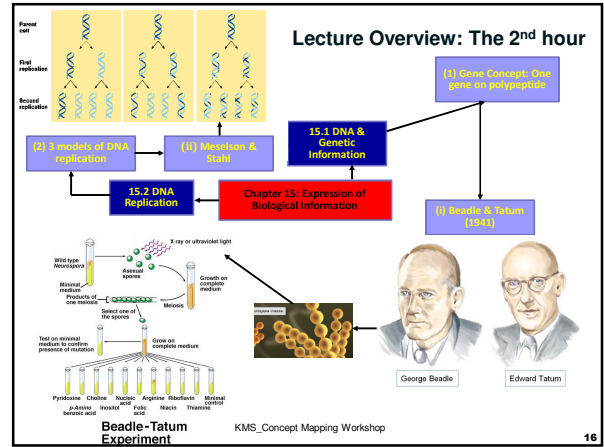
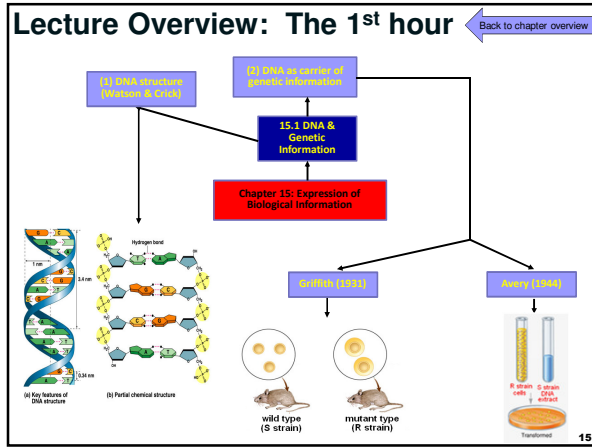
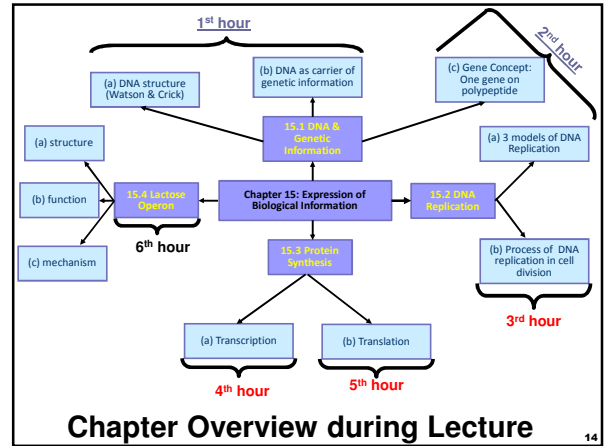
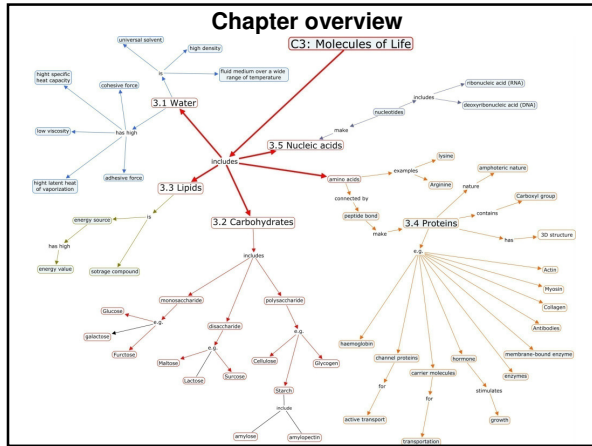
### Slot 2: Menu



Concept Mapping is best if it is a COLLABORATE effort







## Approaches in Concept Mapping

- map as navigator
- map as a guide or as expert knowledge
- partially complete map with a list of terms
- partially completed map to fill in
- list of words to construct a map from
- list of seed terms to use or draw from
- a question to resolve

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## Moving from high degree of directedness to Low degree of directedness

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### Fill in the nodes

Oxygen (O<sub>2</sub>)    Energy

2 pyruvate    Krebs cycle

Formation of acetyl coenzyme A    Glycolysis

Electron transport chain    Water (H<sub>2</sub>O)

32 ATP    2 acetyl coenzyme A

4 carbon dioxide (CO<sub>2</sub>)    Chemiosmosis

Glucose    8 reduced coenzymes

36 ATP

See another example of even higher degree of directedness

1. High degree of Directedness

### Fill in the missing nodes & linking phrases

2. Lesser Degree of Directedness

### Construct a Concept Map to describe Oxidative Phosphorylation using the list of terms

Chemiosmosis

electrons

phosphorylation

proton motive force

ATP synthase

inter membrane space

NADH

oxygen

ATP

H<sup>+</sup>

Electron Transport Chain

Oxidative Phosphorylation

proton gradient

final electron acceptor

water

ADP

redox reactions

3. Even lesser Degree of Directedness

### Construct a Concept Map to describe Oxidative Phosphorylation. (10marks)

4. Low Degree of Directedness

# Transferring Understanding from Diagram to Concept Map

Refer Pg 14

KMS Concept Mapping Workshop 25

## Conceptualizing Knowledge from Diagram to Concept Map

Oxidative phosphorylation

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### Formative Assessment: Higher Degree of Directedness

Refer Pg 15

**Example 1**

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### Formative Assessment: Lower Degree of Directedness

**Example 2**

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### Concept Map describing Oxidative Phosphorylation

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## When using concept mapping in teaching, PLEASE remember.....

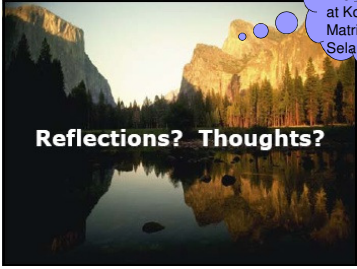
- Learning a new skill
- Practices organizing the concepts in different ways
- Improve with practice
- Long process, be patient

Last but not least, click on to:

□ <http://www.engr.ncsu.edu/learningstyles/lsweb.html> to know your learning style.

KMS Concept Mapping Workshop 30

Take the Challenge: Life ahead at Kolej Matrikulasi Selangor



**Reflections? Thoughts?**

*Any Questions?*

**Please answer the questionnaires?**

KMS Concept Mapping Workshop 31

**THANK YOU!**

for your attention throughout this

**Workshop**

on


**Concept Mapping: A Powerful Cognitive Tool**

from

**S.H. Tor**

ran a

can be contacted at



[tor\\_siong@kmpb.matrik.edu.my](mailto:tor_siong@kmpb.matrik.edu.my)

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