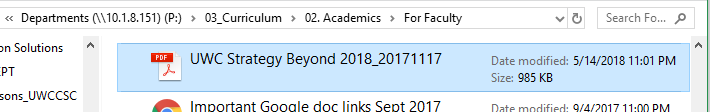
Thinking Skills Lesson Plan

Class time: 55 mins x 6

Teaching Principles: The skills are aligned with the Approaches to Teaching and Learning for Diploma Programme. Students will practice thinking routines and Visible Thinking in the course.

Formative assessment on the skills as identified in the learning targets.

Pre-Lesson Requirements:   
Through MB or otherwise share with students the following:   
(a) document on all thinking routines used in this course  
(b) list of homework for the entire course (if available)

(c) The UWC strategic plan and beyond ppt – 2016 version   


## Lesson 1:

**Essential Question: How do we describe the world around us with numbers?   
Learning Target: I can use a Concept Map to organize ideas.**

**Thinking routine: Concept Map, What Make you said that?, Headline.**

Essential Question, Learning Target and routines can be posted in class.

Requirements: Pre-reading Thinking Routines, post-it notes &   
The UWC strategic plan and beyond ppt – 2016 version (see above)  
A3 sized papers and color pens.   
  
**Introduction** (10 mins)

Highlight the essential question and learning target for the students. Briefly explain the concept of Essential Question and Learning Target.

Instruct the student of the Concept Map routine, refer them to the pre-reading handout.

Walk them through the process of generating a map. Suggested example: “What is UWC?”

If time allows then show another map of a different theme.

**Activity** (15 mins) In small group of 3 perhaps, students will make a concept map to respond the essential question “**How do we describe the world around us with numbers?** ”

**Discussion** (20 mins)

Discuss some of the elements identified on the Class Concept Map.   
Basic idea here is to help students to clarify the use of numbers. Especially the use of and the importance of statistics in our daily life.  
Use “What makes you said that?” to support students to justify their thinking with evidence.

**Reflection** (10 mins)

Explain what is the “headline routine” assign students to summarize their understanding of the lesson in a “headline.” **Written on post-it notes**. Completed Headlines are posted in class.

Closure: Read to class one or two of the headlines.

**Homework:** Review the routines in this class. Read the See-explain-wonder routine.  
(Optional) Respond to “Did I meet the learning target for lesson 1?” Learning target response to be written on an exit ticket for teacher.

Time expectation: 15 minutes.

## Lesson 2

**Essential Question: “How do numbers use to describe UWC?”**

**Learning target: “I can use See-think-wonder routine in thinking.”  
Thinking routine: See-explain-wonder routine.**

**Requirement:** The UWC strategic plan and beyond ppt – 2016 version (see above)

**Introduction and Review** (10 mins)

Discuss some of the responses from the homework. Or get students to point out the important features of see-explain-wonder routine.

**Guided Activity** (15 mins)

Highlight the essential question and learning target for the students.   
Provide access to the UWC strategic plan and beyond either digitally or as ppt projection.

Implement the See-Explain-Wonder routine with some pre-identified numbers.

“Take a minute to look at this numbers and think quietly/”  
“Please explain what you see.” Do this with a few people to draw out different perspectives.   
“What do you wonder next given what you see?” Provide time to think quietly for 1-2 minutes, ask people to write down their thoughts and share with neighbors. Pick a few people to feedback.

**Consolidation activity** (20 mins)

Task 1: Repeat the exercise above with another slide. Show a slide and get everyone to write down what they see, explanation and wonder.

Task 2: Allow them to pick their own figures and repeat the exercise above.

**Reflection** (15 mins) Remind students explicitly that reflection is part of IB ATL under thinking, part of IB Profile and is assessed in IB Internal Assessment under criterion D.

1. Reflect on the following:

“How to use the See-Explain-Wonder routine?” and  
“Why is See-Explain-Wonder routine useful?”

1. Use “Headline” to summarize the lesson.
2. “Did I meet the learning target for lesson 2?”

Sample responses. The first part can be posted in class either by students or teacher.

|  |
| --- |
| Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Lesson: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Write down a “ “Headline” to summarize the lesson.  Written Responses to “How to use the See-Explain-Wonder routine?” and “Why is See-Explain-Wonder routine useful?” |
| Cut here and submit both slips. This can be done in another wasy.  Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Lesson: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  “Did I meet the learning target for lesson 2?” Yes Not Yet Explain your response here or provide a strategy to meet the learning target if your answer is “Not Yet.” |

**Homework:** Review this lesson and read Claim-Support-Question routine.

Time expectation: 30 mins.

## Lesson 3

**Essential Question: “How do I know which source is trustworthy?”**

**Learning targets: “I can carry out research from relevant and trustworthy sources?”**

**Prompt: “How much time should high school students spend on homework each day?”  
Requirement: access to internet**

**Introduction and Review** (5 mins)

Discuss some of the responses from lesson 2

**Activity** (20 mins)

Highlight the essential question and learning target for the students.

### Introduce [**The CRAAP Test - Evaluating Sources - Research Guides at ...**](https://researchguides.ben.edu/source-evaluation)

https://researchguides.ben.edu/source-evaluation

**Whole Group Project** (25 mins)

Get each group of 3 students to research a response to **“How much time should high school students spend on homework each day?”**

Aim: In the next day, each group will need to give a 3 minutes presentation. One student for a minute to response the following: What is the answer to the question? What sources are used to arrive at the answer? How did they evaluate the sources?

**Reflection** (10 mins)

Remind students of the “What I used to think… Now I think… What will I do in the future…”

regarding what they know about research skills. Respond to “Did I meet the learning target of lesson 3?” Use the sample response in lesson 2.

Homework: watch <https://emedia.rmit.edu.au/learninglab/content/oral-presentations-part-1-4>

## Lesson 4

**Essential Question: “How do I communicate effectively in Mathematics?”  
Learning target: “I can support my claims with relevant evidence.”**

**Introduction (10 mins)  
To check and review the major points on effective communication say in oral presentation   
possible source:** <https://emedia.rmit.edu.au/learninglab/content/oral-presentations-part-1-4>

**Presentation** (20 mins)

Presentation from Lesson 3.  
Each group will need to give a 3 minutes presentation. One student for a minute to response the following: What is the answer to the question? What sources are used to arrive at the answer? How did they evaluate the sources?

**Whole Group Discussion** (15 mins)

“What do you think about their evaulations?”  
“Which group is most convincing? Why?”   
“What is effective mathematical communication?”

**Reflection** (10 mins)

Students write their responses to “What I used to think… Now I think… What will I do in the future…”

On communication skills

Respond to “Did I meet the learning target of lesson 4?” Use the sample response in lesson 4 above.