

Knowledge Building Basics

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Key Ideas of KB

- “Ideas” are REAL things—like mobile phones they can be improved
- GOAL is to improve the ideas the community is using
- GOAL is academic and personally relevant knowledge

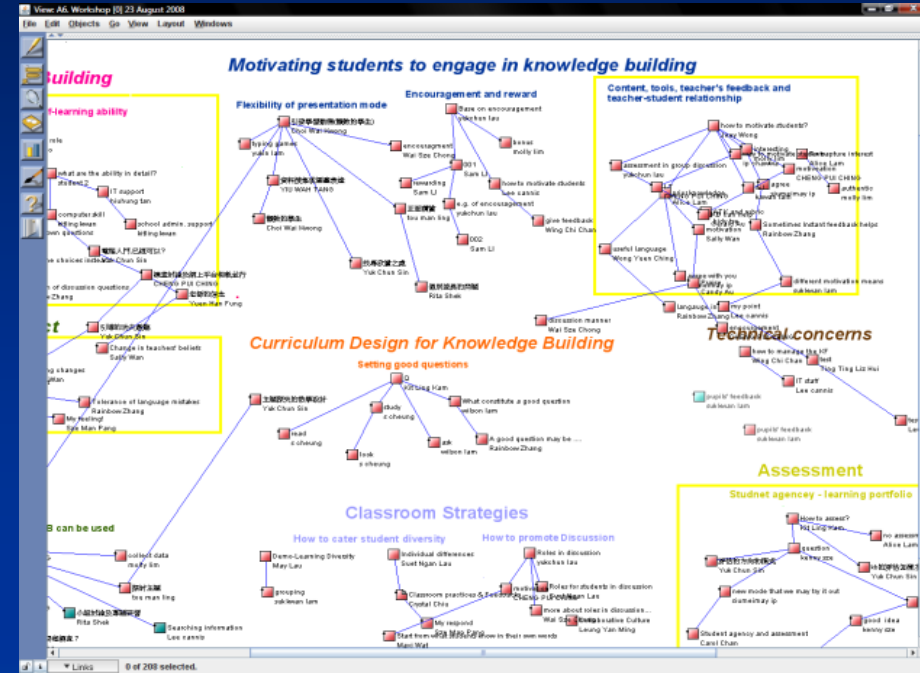
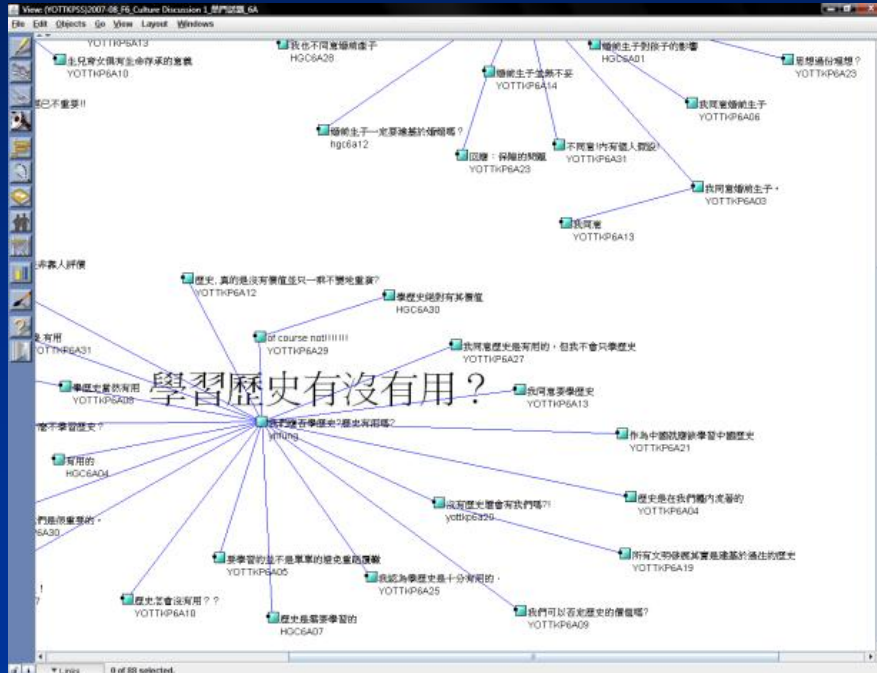
The “Culture”

- Ability to work together
- Self-evaluation & reflection
- Ideas seen as shared rather than personal

How do we Improve the Community's Ideas?

- Find out the ideas the community uses
- Raise questions about them
 - What is this idea good for?
 - Does this idea help us understand ...?
 - What problems are there with this idea?
- Study relevant sources
- Try ideas out in new situations
- Synthesize ideas
- REFLECT—are we getting anywhere?

Two Views



Towards Better Databases

- View design
- Using scaffolds in notes
- Linking notes
- Synthesis and identifying rise-above

BUILD A RESOURCE FOR LEARNING

View Design

- **No magic teacher question** that leads to KB
- Set a task that requires students to **explain** rather than one that only requires facts or argument
- **Collaborate with students**. How can a topic be framed so that it is likely to engage students?

Self-generated Questions

Let's discuss about the Tropical Rain Forest (TRF) in our planet

C. TRF: New Themes (1)

Rise Above: Rich & Poor: New Themes (1)



Click here to continue the tour

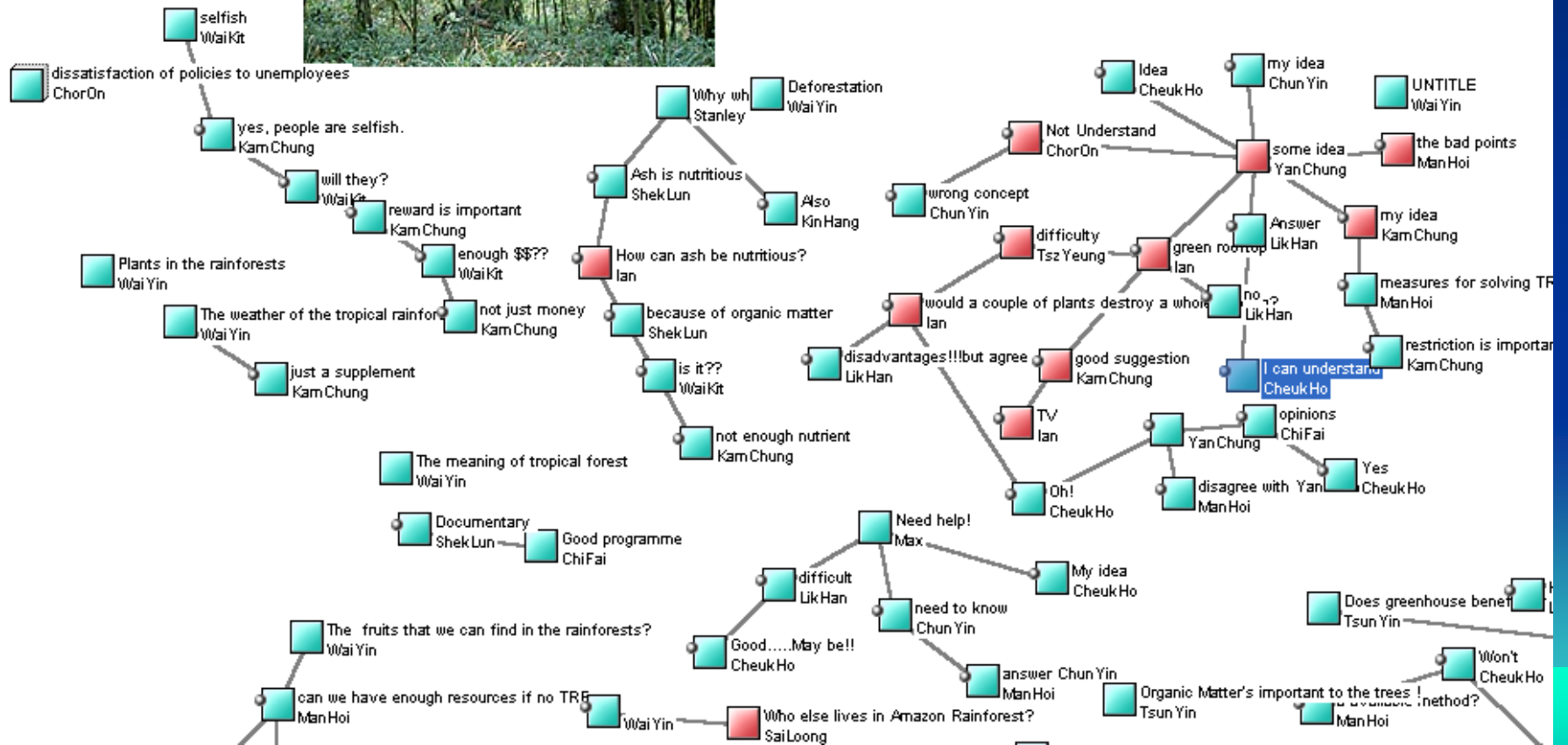
SI Students' Work

Other views for discuss

A. Rich & Poor (No. 1-14)

B. World Ocean (No.15-29)

SI Curriculum Design: World Problem



Student Questions

- **WHY** does it rain so much in the Spring?
- **WHY** is it so hard to build a solar cooker that goes above 40 degrees?
- **HOW** can global warming be slowed down
- **HOW** do we judge the value of art?
- **WHY** are some companies innovative while others are not?
- **HOW MUCH** does it rain at different times of the year?
- **WHAT** are 3 factors that lead to global warming
- **WHICH** companies are most successful?
- **WHERE** did civilization begin?
- **WHEN** did the most powerful earthquake happen?
- **WHAT** are 2 ways to make a fortune?

Use Scaffolds

- Why scaffolds are needed
 - Focuses thought when writing note
 - Provides clue about response needed
- E.g. “I Need to Understand”
 - SAYS: This note will have a conceptual question
 - REQUIRES: (eventually) an explanation
- E.g. “My Theory”
 - SAYS: The content of this note is a conjecture
 - REQUIRES: explanation, trying out, evaluation

Scaffolds

- What did I learn?)
- What did we do that worked?)
- What didn't work and why?)
- What could we change next time?)
- It will be better if)

My theory

I need to understand

New information

This theory cannot explain

A better theory

Putting our knowledge together

Source of Information

Examples

Knowledge Forum scaffolds

- (我的立場/我同意/我不同意)
- (我的觀點)
- (我的新看法)
- (我的理據/原因/詳盡討論)
- (參考資料/新資訊)
- (我的問題)
- (比較)
- (集合我們的意見)

- My Idea)
- This Idea Cannot Explain)
- A Better Explanation)
- Evidence: Support My Explanation)
- Reason: Support My Idea)
- Example)
- New Information)
- Putting our knowledge together)
- I Need To Understand)
- I agree)
- I do not agree)

**Teacher-designed
scaffolds**

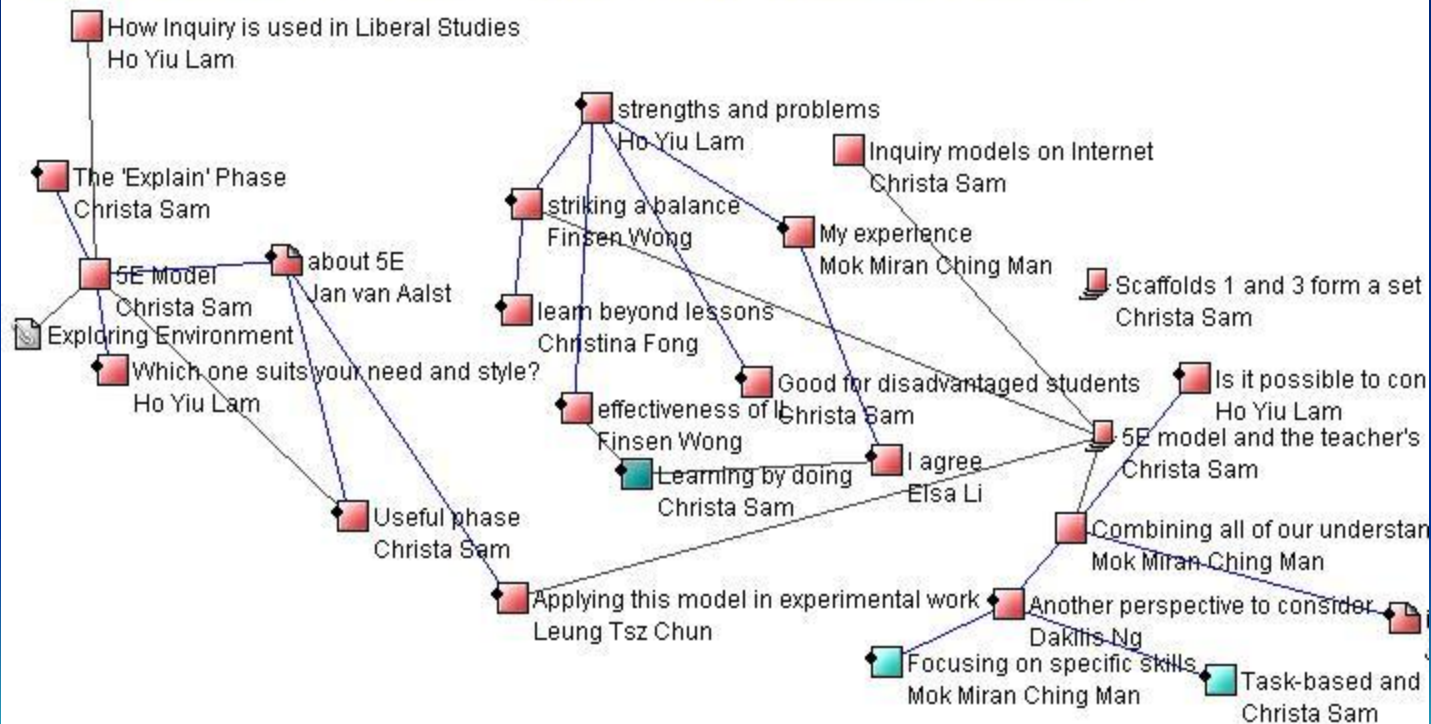
Linking Ideas

- Why links are important
 - Provides way to respond to more than 1 note
 - Can be used for synthesis
 - Shows the inter-relatedness of ideas
- How to make links: Drag a note into the note you are writing

View with 2 types of Links

Build-on & Reference

The purpose of this view is to consider various practical issues of inquiry learning. What problems and strengths do you see? How might we think about them?



Synthesis & Rise-Above

Synthesis

- WHAT: Notes that review the state of knowledge
- HOW: links + explanation
- EXAMPLE: portfolio note, summary note

Rise-above

- WHAT: Note that refer to several earlier ideas and introduces new idea
- HOW: special note type
- EXAMPLES
 - “These are examples of the same idea, which is ...”
 - “I have created a scheme of 3 types of stories, with examples from our writing.”

Synthesis & Rise-Above

- Why they are important
 - They show what is being learned
 - Without them we just have a lot of notes and links
- When they part of the process from early
 - They slow down growth of the database
 - They accelerate learning

Portfolio Note Sample

Note 1—Greenhouse effect and desertification

There are series of notes discussing what is the relationship between greenhouse effect and desertification. Different people have different opinion. Therefore I do a summary for the related notes.

Jessica 1

This set of note was started my Chun Hang' s question.

Chun Hang 2

He asked how the desertification could be stopped naturally. Then I chose the note of Hei Lam, Kai Leung, and Man Yiu, Chiu Wah and mine for the answer of his question.

Jessica 3 Jessica 4 Chiu Wah 5 Hei Lam 6 Kai Leung 7 Man Yiu 8

But, all these answer were not responded to Chun Hang' s question, I just think their answers are related and quite suitable to be the answer. Therefore, I combined them.

I chose this set of notes because it fulfilled the principle 3

references

Collaborative Efforts After reading the related notes about greenhouse effect and desertification, I found that there are some views are similar, but it is so fragment. Therefore, I organized them and wrote it into a paragraph, also I added some of my opinion in it. I think my summary suit the Principle 3. My summary note has the efforts of summarizing various ideas of classmates into a better theory.

I collected the views from different classmates, e.g. Kai Leung thought that greenhouse would change the rainfall pattern and would make some place have more rainfall and some would had less rainfall. And Chiu Wah thought that greenhouse effect would bring more rainfall, and the rainwater would help to decrease the size of the desert, so the problem of desertification would hinder. In fact, I think that, to certain extent, the relationship between greenhouse effect and desertification can be very complex , so when I did the summary, I wrote the answer in more aspects, so I think, after getting various opinion, this note is detail enough. Of course, there maybe some wrong information, but I thin this note can still fulfilled the Principle

Keywords



Add-->

Scaffolds

Build On



Connections

Close



Old Virus D...

eleee 在...

Knowle...

Jessica L...

未命名 ...

Microso...

May Por...



AM 10:20

Rising Above

Views | New Note | Connections | My Reader | Display Tool | Search | Media

You may start to ask some simple questions related to your daily experience. Besides, you are encouraged to build-on others' notes instead of using annotation. Annotation is used for quick or short comments. As I said before, use 'keywords' and 'scaffolds (orange bar)' and give titles of your notes. This can facilitate the search in the future.

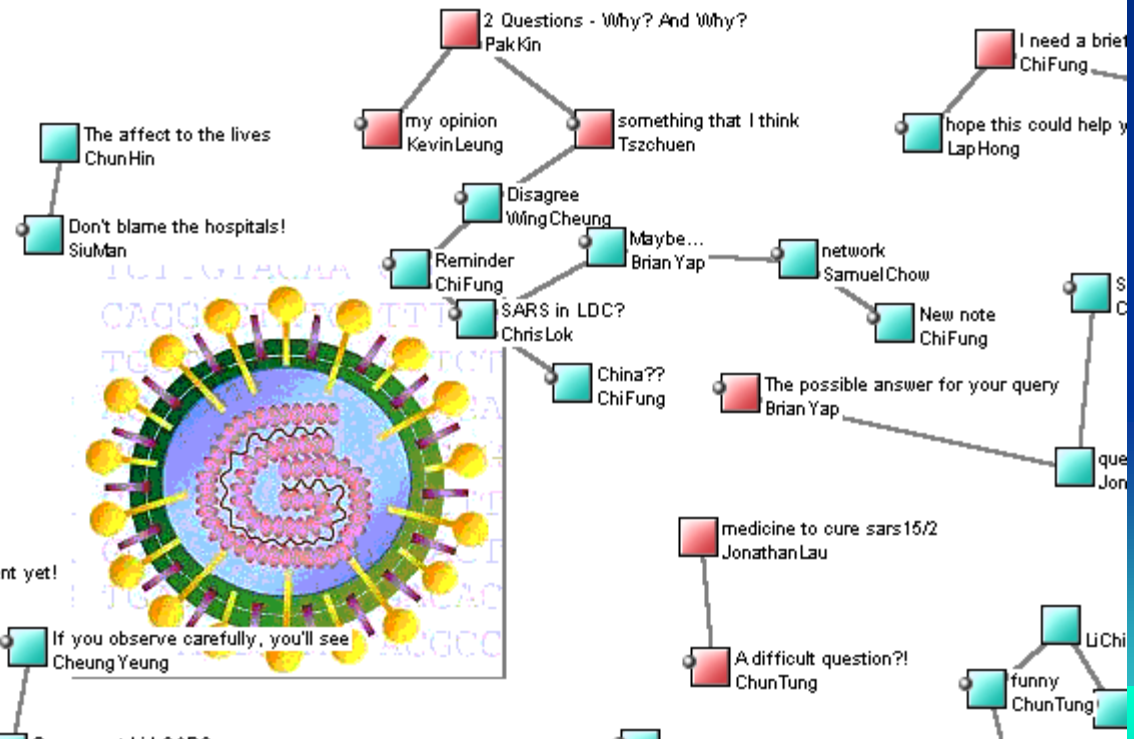
World Problems & How to Face Them?

Welcome

How much do you know about SARS caused by the coronavirus? How can we fight them? Will SARS come back in the future?

Some discussion have been moved to the following new views by Mr. Lee on 27 February 2004.

- A1. Causes of SARS (Feb 04)
- A2. Impacts of SARS (FEB 04)
- A3. Preventions of SARS (Feb 04)
- A4. What have we learnt from SARS?



Conclusion:

Build a Resource for Learning

- Make the database **useful**
 - A place for working on ideas
 - A reference to the state of knowledge
- Only if the database is useful can you integrate it with **classroom learning** and **the curriculum**