Nanyang Girls' High School and Hwa Chong Institution
Integrated Programme Conference on Education 2018

Using Concept-Based Curriculum and Instruction to Deepen Disciplinary Literacy and Build Interdisciplinary Connections in Chemistry

• Guiding Questions •

1 – Factual Questions

a) What is the *three-dimensional curriculum*, and why is it important to your students?

b) What reasons can you think of to support Concept-Based Curriculum and Instruction?

c) What is a conceptual lens, and how does it facilitate deeper thinking amongst your students?

d) For Concept-Based Curriculum and Instruction, why is it better for teaching and learning to be *inductive*, rather than *deductive*?

2 – Conceptual Questions

a) Why is conceptual transfer a key indicator of deeper understanding?

b) Think about the different macroconcepts and microconcepts that apply to your discipline. How do the macroconcepts bring *breadth* of understanding, and how do the microconcepts bring *depth* of understanding?

c) What are some important generalisations for your discipline? How would you guide your students to uncovering these generalisations?

3 – Controversial / Debatable / Provocative Questions

a) What are your beliefs about teaching and learning? How do these beliefs shape your classroom practice and expectations towards your students?

b) Why are some curriculum changes – changes to pedagogy – difficult to implement?

c) What are the long-term consequences if our students do *not* learn deeply / learn well?

4 – Shared Thoughts and Reflections

Please click on the link given below if you have any thoughts or reflections about using concepts in the teaching and learning of Chemistry.

Please click on this link to share your thoughts and reflections.

Dr. Chris Slatter – Nanyang Girls' High School – 2018.