

Curriculum Topic Study- Bridging the Gap Between Standards and Practice

Saturday, April 2, 2005

2:00-2:20

Welcome, Introductions, and Goals for the Symposium

2:20 – 2:30

Video Engagement: “Fly Me to the Moon”

Participants will:

- Examine reasons why teaching does not always result in learning.
- Identify the need for tools like Curriculum Topic Study.

2:30 – 2:45

Curriculum Topic Study Overview

Participants will:

- Learn what Curriculum Topic Study (CTS) is.
- Identify uses for CTS in improving content knowledge, curriculum, instruction, and assessment.
- Become familiar with the resources used in CTS.
- Examine a CTS Guide.

2:45 – 4:20

Experiencing a Curriculum Topic Study (CTS) Cycle of Inquiry, Study, and Reflection

Participants will:

- Use the topic of “Physical Properties and Change” to engage in a CTS,
- Identify and discuss instructional implications related to the topic, “Physical Properties and Change.”
- Identify and discuss concepts and specific ideas related to the topic, “Physical Properties and Change,” relevant to their grade level.
- Identify and discuss common misconceptions and developmental implications related to the topic, “Physical Properties and Change.”
- Identify and discuss connections among ideas related to the topic, “Physical Properties and Change.”
- Examine examples of student work that reflect the findings of the CTS topic “Physical Properties and Change” in a K-12 physical and biological context.
- Reflect on implications for your own K-12 curriculum, instruction, and assessment.

4:20- 4:35

A Whirlwind Tour of the CTS Book- *Science Curriculum Topic Study- Bridging the Gap Between Standards and Practice*

Participants will:

- Become aware of the variety of tools and processes used in Curriculum Topic Study.
- Consider next steps for utilizing the resources and other topics in the CTS book in a curricular, instructional, assessment, or professional development context.

4:35-4:45

The W”hole” Picture

Participants will:

- Use a metaphor to reflect on how CTS expands their knowledge of standards-based content and pedagogical content knowledge of a topic.

4:45-5:00

Evaluation and Book Raffles

Learning Outcomes:

- Participants will be able to explain how CTS can be used to consider instructional implications for teaching a topic.
- Participants will be able to explain how CTS can be used to identify and/or clarify concepts and specific ideas in national and state standards.
- Participants will be able to explain how CTS can be used to identify potential misconceptions and learning difficulties.
- Participants will be able to explain how CTS can be used to identify connections among ideas in a topic.
- Participants will be able to explain how CTS can be used to improve K-12 coherency of curriculum and instruction.

Standards Addressed:

Content Standard B: Physical Science

K-4 Properties of Objects and Materials

- Objects have many observable properties including size, weight, shape, color, and temperature. Those properties can be measured using tools such as rulers, balances, and thermometers.
- Objects can be described by the properties of the materials from which they are made, and those properties can be used to separate or sort a group of objects or materials.

- Materials can exist in different states- solid, liquid, and gas. Some common materials, such as water, can be changed from one state to another by heating or cooling.

5-8 Properties and Changes of Properties in Matter

- A substance has characteristic properties, such as density, a boiling point, and solubility, all of which are independent of the amount of the sample.

9-12 Structure and Properties of Matter

- When elements are listed in order according to the number of protons, repeating patterns of physical and chemical properties identify families of elements with similar properties.
- The physical properties of compounds reflect the nature of the interactions among its molecules.