

Planning for Effective Science Instruction

Component II of the Science Classroom Observation Protocol: Science Content is Intellectually Engaging

Name: _____

Curriculum Title: _____ Grade Level: _____

Target Lesson: _____

CTS Study Guide: _____ Page: _____

Element A: Science content is significant, accurate, and worthwhile

Indicators:

- Science content is explicit and apparent to students.
- Science content is primarily focused on big ideas supported by relevant concepts, facts, and terms.
- Science content is within the bounds of an agreed upon body of knowledge.
- Science content is accurate.
- Science content is developmentally appropriate and scaffolded appropriately.
- Science is portrayed as a dynamic body of knowledge that changes based on the best available evidence.

Drawing upon the indicators for this element of effective instruction (left-hand column) and what you learned from Section III of your CTS Summary, **identify a specific point in the lesson** where you can make the science content “**explicit and apparent to students.**”

Based upon your experiences in the Content Immersion, **brainstorm strategies** you could use to make the science content “**explicit and apparent to students.**”

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Element B: Science content builds on students' prior ideas or experiences.

- Indicators:
- Students reveal their preconceptions about the science content, the underlying related concepts, or the nature of science.
 - Students reveal their underlying thinking and reasoning and the source of their preconceptions.
 - Students recognize links between their preconceptions or previously learned science concepts and the activities or experiences in the science lesson.

Drawing upon the indicators for this element of effective instruction (left-hand column) and what you learned from Section IV of your CTS Summary, **identify a specific point in the lesson** where you can create an opportunity for students to **“reveal their preconceptions about the science content.”**

Based upon your experiences in the Content Immersion, **brainstorm strategies** you could use to allow students to **“reveal their preconceptions about the science content.”**

Element C: Science content is intentionally connected to the classroom activities and experiences.

- Indicators:
- Student actions and interactions focus on understanding important and relevant science content.
 - Students generate and explore questions about the science in the lesson.
 - Students can articulate the intended science content of a lesson, activity, or experience.

Drawing upon the indicators for this element of effective instruction (left-hand column) and what you learned from Section II and IV of your CTS Summary, **identify a specific point in the lesson** where you can create an opportunity for students to **“articulate the intended science content within the lesson, activity, or experience.”**

Based upon your experiences in the Content Immersion, **brainstorm strategies** you could use to allow students to **“articulate the intended science content within the lesson, activity, or experience.”**