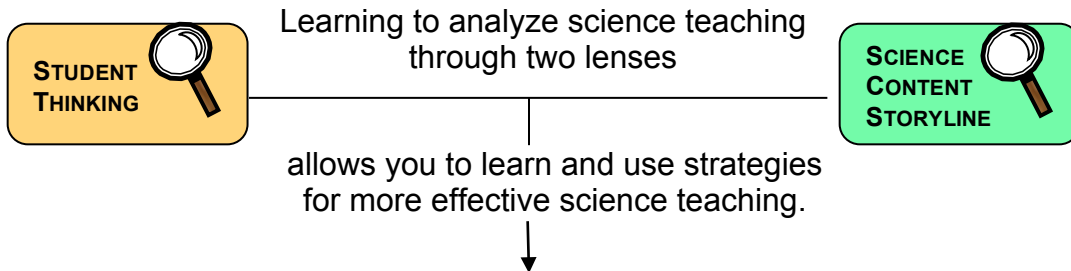


Strategies for Effective Science Teaching: The Student Thinking and Science Content Storyline Lenses

STeLLA Conceptual Framework



SCIENCE TEACHING

STRATEGIES TO REVEAL, SUPPORT, AND CHALLENGE STUDENT THINKING

1. Ask questions to elicit student ideas and predictions.
2. Ask questions to probe student ideas and predictions.
3. Ask questions to challenge student thinking.
4. Engage students in analyzing and interpreting data and observations.
5. Engage students in constructing explanations and arguments.
6. Engage students in using and applying new science ideas in a variety of ways and contexts.
7. Engage students in making connections by synthesizing and summarizing key science ideas.
8. Engage students in communicating in scientific ways.

STRATEGIES TO CREATE A COHERENT SCIENCE CONTENT STORYLINE

- A. Identify one main learning goal.
- B. Set the purpose with a focus question or goal statement.
- C. Select activities that are matched to the learning goal.
- D. Select content representations and models matched to the learning goal and engage students in their use.
- E. Sequence key science ideas and activities appropriately.
- F. Make explicit links between science ideas and activities.
- G. Link science ideas to other science ideas.
- H. Highlight key science ideas and focus question throughout.
- I. Summarize key science ideas.