Talk Science Pathway

Welcome to Step 6 Try It

Study Guide—Complete Step 6 before teaching Section 3 of the Grade 4 Curriculum

Use the Step 6 "Independent Web Study" and "In Your Classroom" to prepare for a productive study group discussion.

Independent Web Study

Study the Scientist Case: Linda Grisham—Liquid Materials Investigations

The third section of the curriculum—Liquid Materials—focuses on ideas about liquid volume, and its measurement. Students learn that the relationship between weight and volume (heaviness for size) is a property of oil and water that is independent of sample size. Look at the learning goals for Investigations 3.1-3.3. What ideas are highlighted? Based on your review of the goals and the Scientist Case, what understandings will you emphasize during each investigation discussion?

Study the Classroom Case: The Role of Consolidation Discussions

To consolidate their learning students must have a chance to explain their understanding, replicate their procedures in words, explain why they did what they did, and share their findings. How does Candace use the following questions to help her students' consolidate their learning?
What did we do? Why did we do it? What did we find out?
Is there something from this case that you might want to incorporate into your discussions?

Study the Talk Strategy: Students Deepen Their Reasoning

Become familiar with two talk moves that help students to deepen their reasoning: Asking for evidence or reasoning, and challenge or counterexample. Identify one of the two moves that you'll begin to make a regular part of your teaching. Begin using this strategy in the classroom this week.

In Your Classroom

Audio or Videotape an All-class Discussion

Tape a science discussion. (Place the recorder or camera so that it will pick up both your voice and the students' voices.) After class, listen to sections of the tape. Can you catch yourself encouraging students to deepen their reasoning? Can you catch yourself (or students) asking for evidence or reasons based on the investigation experience? Can you catch yourself (or students) challenging or providing a counterexample in response to student explanations? What evidence do you see that students are reasoning more deeply?

Identify a question or dilemma that arose from your independent study and your experience in the classroom. Plan to talk about your experience in the study group. You may want to identify a short interchange from the tape (~30 seconds) to share during the study group meeting.

Study Group Meeting

Learn with Colleagues: Share classroom evidence, successes, and challenges

What did you do differently to help students to reason more deeply? How did you encourage students to use evidence? Were you able to gently challenge or put forward counterexamples that caused students to rethink their ideas? How did this work?

Prepare for a 5-minutes discussion of your experience. (There may or may not be time for everyone to share experiences in every study group, but preparing to discuss your own experience will contribute to discussion of others' experiences.)

Possible Discussion Protocol

1. Plan a core question for discussion.
2. Share experience (2 or 3 minutes). If feasible, share a short audio or video clip to anchor the discussion (~30 – 40 seconds).
3. Respond to colleagues questions
4. Listen while colleagues discuss the issue.
5. Summarize how you are thinking now. What are the implications?