

Professional Learning Community 1.3
Chapter 4 of Teaching Science is Phenomenal (TSiP)
Meaningful Student Performances in Science and Engineering
How Can Student Performances Lead to Evidence-Based Explanations?

Pre-Session and Review

Reading

1. Come to the PLC having read Chapter 4 of TSiP.
2. Select one lesson from the web site <https://sites.google.com/3d-grcscience.org/going3d> and review the examples of three-dimensional performances in that lesson.

A. Round Robin Style Discussion – The full group listens as individuals present their ideas specific to the questions below.

- a) How are science performances different than asking students to identify or describe something?
- b) How does making the classroom more “student centered” change the role of the teacher?

B. Whole Group Discussion – Bring science-specific examples and experiences from your teaching to support the discussion of the questions below.

Reflecting on Science and Engineering Practices

1. In this chapter the authors describe the process of science as “Investigation” that consists of a suite of science and engineering practice”. How does this way of describing science change the role of practice 3, *plan and carry out an investigation*?
2. Reflect on the vignette of the paper towels wicking up water. The teacher ends the class discussion and class period with the statement: “I want everyone to look for a phenomenon with the same causes as the wicking paper towel, and we will share tomorrow.” What is the significance of this instructional move?
3. Why is it important for teachers to use crosscutting concepts to prompt student performances?
4. Why do the authors place so much emphasis the teacher listening to students?
5. How are Gather, Reason, and Communicate performances different from one another, and what is the role of each in science investigation? Use the lesson you found at the Going 3D with GRC website for examples.

C. Individual Reflections – Write in Journal

- a) Reflect on how engaging student in “science performances” supports student learning beyond the classroom.
- b) How are “three-dimensional science performances” different from “science activities”?

ⁱ Use the back of the page to answer the questions.
