PPAT® Assessment

Library of Examples – Science

Task 4, Step 1, Textbox 4.1.1: Goals and Student Background

Below are two examples of written responses to Textbox 4.1.1 as excerpted from the portfolios of two different candidates. The candidate responses were not corrected or changed from what was submitted. One response was scored at the Met/Exceeded Standards Level and the other response was scored at the Does Not Meet/Partially Met Standards Level. This information is being provided for illustrative purposes only. These excerpts are not templates for you to use to guarantee a successful score. Rather, they are examples that you can use for comparison purposes to see the kinds of evidence that you may need to add to your own work.

The work you submit as part of your response to each task must be yours and yours alone. Your written commentaries, the student work and other artifacts you submit, and your video recordings must all feature teaching that you did and work that you supervised.

Guiding Prompts for Task 4, Textbox 4.1.1

a. What learning goal(s) and standards (state and/or national) did you identify for the class? Explain how they are appropriate for the lesson and your students' learning needs.

b. What whole-class data did you use to establish a baseline to measure student growth?

c. How did your students' prior knowledge and background information influence your planning process?

Example 1: Met/Exceeded Standards Level

a. The main learning goals for this lesson were for students to be able to accurately identify the parts of a flower and a leaf and to understand and describe the processes plants go through that make them important parts of our lives. This lesson aligned with the Texas Essential Knowledge and Skills (TEKS) standards that say students should be able to "describe the interactions that occur among systems that perform the functions of transport, reproduction, and response in plants," and "analyze the levels of organization in biological systems and related the levels to each other and to the whole system." The College and Career Readiness Standard (CCRS) say that students should be able to "Describe, compare, and contrast structures and processes that allow gas exchange, nutrient uptake and processing, waste excretion, nervous and hormonal regulation, and reproduction in plants, animals, and fungi, and give examples of each." In the lesson, students will be rotating through four tasks that ask them to think about plants in different ways, contributing to a better overall understanding. Each task is designed to fit one of the four different learning styles: Mastery, Understanding, Self-Expressive, and Interpersonal (Strong and Perini, 2000).

b. For baseline data, I used a notes sheet students filled in with prior knowledge and their understanding of the opening lesson. I used this to gauge how much students knew about the male and female parts of a flower, the process of pollination, the layers of a leaf, photosynthesis, and the xylem and phloem. I graphed the results, giving the students a "zero" if they could not provide any information, a "one" if they could give some information, and a "two" if they could give correct and detailed information.

c. Most of my students had prior knowledge of pollination, photosynthesis, and the layers of a leaf. 14 out of 22 students had no prior knowledge of the xylem, and most (20 and 19, respectively) no background information on the male and female parts of a flower. Using this, I planned for the tasks focusing on structure to start with the basics and integrate the specific structures slowly, giving students time to practice what they knew then add xylem, phloem, and male and female parts to it. Because students had limited knowledge of different processes, I planned the tasks to connect the processes to how they influence humans to increase the authenticity and interest in the lesson.

Refer to the [Task 4 Rubric](#) for Textbox 4.1.1 and ask yourself:

- Where is the evidence from the teacher candidate that describes how the learning goal(s) and the students' backgrounds influenced the planning process?

- Why is the evidence connected?

Example 2: Did Not Meet/Partially Met Standards Level

a. From the NGSS, I thought MS-LS1-6 (Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.) would be appropriate for my students. As an anchoring event lesson, the performance expectation won't be met during this lesson directly, but this lesson will create the foundation upon which the standard will be met. My goal for this lesson is simply to elicit their ideas by having them create an initial model, or explanation, for how the sunflower follows the sun. I'm using a video that will engage their curiosity while simultaneously exposing their misconceptions.

b. To begin the unit, I used the assessment scores from the entire previous unit to establish a baseline of understanding. This gave me an idea of their comprehension with regards to the previous unit's exploration of the characteristics for life. I could tell from the data that the class, as a whole, grew in understanding, showing 85% improvement in assessment scores from the first exit ticket to the summative exam.

c. This background understanding of the characteristics for life gave me a solid foundation from which to launch into the new unit: structure and function of plants. One of the questions I'll ask after watching the video will be, "Are sunflowers alive?" This should allow me to leverage their understanding of the content from the previous unit, while also transitioning them into a broader understanding of the word "alive." In my planning, I wanted to refer back to the previous unit as frequently as possible in order to leverage and build on more of that understanding.

Refer to the [Task 4 Rubric](#) for Textbox 4.1.1 and ask yourself:

- Where is the evidence from the teacher candidate that describes how the learning goal(s) and the students' backgrounds influenced the planning process?

- Why is the evidence limited?

Suggestions for Using These Examples

After writing your own rough draft response to the guiding prompts, ask the question, "Which parts of these examples are closest to what I have written?" Then read the 4 levels of the matching rubric (labeled with the textbox number) and decide which best matches your response. Use this information as you revise your own written commentary.

Lastly, using your work and/or these examples as reference, consider what you believe would be appropriate artifacts for this textbox.