

# TPAC Tryout Task Assessing Student Learning

## Secondary Science March 2010

# Overview of the Assessing Student Learning Task

## *Focus on student learning*

In this task, you will demonstrate your ability to assess and analyze your students' science knowledge, skills and abilities, and how you use that analysis to plan or modify next steps in instruction and to give students feedback on their work.

## *Select an assessment for analysis*

For this task, you will select and analyze a report of a scientific investigation or experiment that you will use to check on your students' developing knowledge and skills related to science concepts and the ability to collect, analyze, and interpret scientific data. (The students can collect their own data or select from data collected by others.) The reports should be the work of individuals, not groups. The assessment should give both you and the students a sense of how well they are progressing toward learning key knowledge, skills, and abilities targeted in the unit of instruction. If you teach science to more than one class of students, focus on only one class. A Glossary of terms used in this task appears near the end of this document.

## *Submit teaching artifacts and analysis*

You will submit student work samples with identifying information removed, your rubric or evaluative criteria for the assessment, and a commentary with a summary of student learning across the class, a description of differences in learning, a deeper analysis of the learning of two focus students and the feedback you gave to them, and the next steps in instruction that you planned based on your analysis. The instructions in the following pages will guide you in putting together the materials required in this task.

## *Assessment of your task*

This is an initial draft of an assessment intended for national use. It may focus on some teaching competencies that have not yet been addressed in your preparation program. However, most of the questions are likely to be familiar and are questions that teachers ask themselves throughout their careers, answering at increasing levels of sophistication. A set of draft rubrics for this task is included; the level reflecting acceptable competence of student teachers is Level 2. We have asked the faculty member supporting you through this task to give you feedback on your work.

We are also asking you to give us feedback on the instructions and rubrics for this task through an open-ended survey at a link that we have provided to the faculty member supporting you. We appreciate any assistance you can give us in helping us improve this task.

# Context for Learning

## Purpose

The Context for Learning task is a brief overview of important features of your classroom context that influence your instructional decisions during the learning segment. It provides evidence of: 1) your knowledge of your students; and 2) your ability to identify and summarize important factors related to your students' learning and the school environment. You'll be referring to this description of students and the teaching context in your responses in subsequent tasks.

## What Do I Need to Do?

- ✓ Complete the **Context for Learning Form**. The form is located on the next page.
- ✓ Respond to each of the prompts in the Context Commentary. The prompts follow the Context for Learning form.

# Context for Learning Form

Provide the requested context information for the class selected for this assessment.

This form is designed to be completed electronically. The blank space does not represent the space needed. Use as much space as necessary.

## About the school where you are teaching

1. Are you teaching in a:

\_\_\_\_ Middle school      \_\_\_\_ High school

\_\_\_\_ Other (please describe) \_\_\_\_\_

## About the course you are teaching

2. What is the name of the course you are documenting? \_\_\_\_\_

3. What is the length of the course?  one semester  one year  other (describe) \_\_\_\_\_

4. What is the class schedule (e.g., 50 minutes every day, 90 minutes every other day)?

5. What is the degree of ability grouping or tracking in science, if any?

## About the students in your class

6. How many students are in the class you are documenting? \_\_\_\_\_

7. What is the grade-level composition of the class? \_\_\_\_\_

8. How many students in the class are:      English language learners \_\_\_\_\_

Speakers of varieties of English (e.g., African-American Vernacular English, frequent use of slang) \_\_\_\_\_

9. If you have English Language Learners and your state/district/school has test scores reflecting their English language proficiency:

- a. Please complete the following table about your English Learners' latest English proficiency scores in modalities tested. Add rows as needed and label the levels.

Name of test: \_\_\_\_\_

<b># of Students at Each Level in Different Modalities</b>					
<b>Score Level</b>	<b>Listening</b>	<b>Speaking</b>	<b>Reading</b>	<b>Writing</b>	<b>Overall</b>

10. How many students have Individualized Education Plans (IEPs) or 504 plans? \_\_\_\_\_

- a. Briefly describe any required accommodations or modifications that will affect your assessment of science learning in this learning segment.

### About the school curriculum and resources

11. If there is a particular textbook or instructional program you primarily use for science instruction, what is it? (If a textbook, please provide the name, publisher, and date of publication.)

## Context Commentary

Write a commentary of about **3-4 single-spaced pages** (including prompts) that addresses the following prompts. (The page length is a suggestion to give you an idea of how much detail to provide.) You can address each prompt separately, through a holistic essay, or a combination of both, as long as all prompts are addressed.

1. Describe the **variation** across your class with respect to the features listed below. **Focus on key factors that influence your planning and teaching of this learning segment.** Be sure to describe what your students can do as well as what they are still learning to do.
  - a. Academic development  
Consider students' prior knowledge, key skills, developmental levels, and other special educational needs.
  - b. Language development  
Consider aspects of language proficiency in relation to the oral and written English required to participate in classroom learning and assessment tasks. Describe the range in vocabulary and levels of complexity of language use within your entire class, not just for your English Language Learners.
  - c. Patterns of social interaction  
Consider factors such as the students' ability and experience in expressing themselves in constructive ways, working with others to negotiate and solve problems, and getting along with other students.
  - d. Family and community contexts  
Consider key factors such as cultural context, knowledge acquired outside of school, socio-economic background, access to technology, and home/community resources.
2. Describe any district, school, or cooperating teacher requirements or expectations that might impact your assessment practice, such as co-planning, required curricula, pacing, or standardized tests including interim or benchmark assessments.

# Assessing Student Learning

## Purpose

The Assessment of Student Learning task illustrates how you analyze student work samples to diagnose student learning needs and to inform instruction. It provides evidence of your ability to 1) select an assessment tool and criteria that are aligned with your central focus, student academic content standards, and learning objectives; 2) analyze student performance on an assessment in relation to student needs and the identified learning objectives; 3) provide feedback to students; and 4) use the analysis to identify next steps in instruction for the whole class and individual students.

## What Do I Need to Do?

- ✓ Select an assessment that you will use to check on your students' developing knowledge and skills related to science concepts and the ability to collect, analyze, and interpret scientific data. The assessment should be the work of individuals, not groups. The assessment should give both you and the students a sense of how well they are progressing toward learning key knowledge, skills, and abilities targeted in the unit of instruction.
- ✓ Provide a copy of the directions/prompt for the assessment, if these are not apparent from the student work samples.
- ✓ Collect student work from your entire class. Analyze the student work to identify patterns in understanding across the class.
- ✓ Provide any **evaluative criteria (or rubric)** that you used to assess the student work. Evaluative criteria are performance indicators that you use to assess student learning. Examples of categories of evaluative criteria include understanding of a particular science concept, the relationship between two concepts, or the fit between evidence and conclusions.
- ✓ Select three student work samples which together represent what students generally understood and what a number of students were still struggling to understand. At least one of these students should be an English Language Learner or a student with an IEP<sup>1</sup>. Choose two of these students, including the English Language Learner or student with special needs, as focus students to discuss their learning in more depth.
- ✓ Remove names of students, yourself, and the school with correcting fluid, tape, or marker prior to copying/scanning the work samples. Label them as "Work Sample 1", "Work Sample 2", and "Work Sample 3". Be sure that reviewers can distinguish any written feedback to students from the students' written work.

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<sup>1</sup> If you do not have any English Language Learners or students with IEPs, select a student who is challenged by academic English or who usually struggles with the content.

- ✓ Document your feedback to the two focus students, either as individuals or as part of a larger group. If it is not written directly on the work sample, provide a copy of any written feedback or write a summary of oral feedback (summary may be included with Commentary prompt #4b below).
- ✓ Respond to each of the prompts in the Assessment Commentary.

## Assessment Commentary

Write a commentary of **5-8 single-spaced pages** (including prompts) that addresses the following prompts. (The page length is a suggestion to give you an idea of how much detail to provide.) You can address each prompt separately, through a holistic essay, or a combination of both, as long as all prompts are addressed.

1. Identify the specific student academic content standards and learning objectives measured by the assessment chosen for analysis.
2. Create a summary of student learning at this point across the whole class relative to your evaluative criteria (or rubric). Summarize the results in narrative and/or graphic form (e.g., table or chart). Attach your rubric or evaluative criteria.
3. Discuss what most students appear to understand well, and, if relevant, any misunderstandings, confusions, or needs (including a need for greater challenge) that were apparent for some or most students. Cite evidence to support your analysis from the three student work samples you selected.
4. For the two focus students (see previous page for how to select these students):
  - a. Describe their prior knowledge of the content and their individual learning strengths and challenges (e.g., academic development, language proficiency, special needs). What did you conclude about their learning at this point? Cite specific evidence from the work samples and from other classroom assessments relevant to the same evaluative criteria (or rubric).
  - b. Describe what you did to help these two students understand their work performance, either individually or as part of a group, and to apply the feedback. If oral, describe the feedback. If written, provide a copy or refer the reviewer to any feedback written directly on submitted student work samples. In what ways does your feedback address individual students' needs and learning objectives? Cite specific examples to support your explanation.
6. Based on the student performance on this assessment, describe the next steps for instruction for your students. If different, describe any individualized next steps for the two students whose individual learning you analyzed. These next steps may include a specific instructional activity or other strategies to support or extend continued learning of objectives, standards, central focus, and/or relevant academic language for the learning

segment. In your description, be sure to explain how these next steps follow from your analysis of the student performance.

Secondary Science Rubrics  
Assessing Student Learning Task