

TPAC Tryout Task Planning Instruction and Assessment

Secondary Science

March 2010

Overview of the Planning Instruction & Assessment Tryout Task

Focus on student learning

In this task, you will show the strategies you use to make science accessible to your students. You will explain the thinking underlying your teaching decisions and analyze the strategies you use to connect students with the content you are teaching.

Select a learning segment

A learning segment is a set of lessons that build upon one another toward a central focus that reflects key concepts and skills, with a clearly defined beginning and end. It may be part of a larger instructional unit that includes multiple learning segments. If you teach science to more than one class of students, focus on only one class.

For this task, you will **plan a learning segment of about one week (approximately 3-5 hours of instruction)** that is centered around key scientific concepts and scientific inquiry skills that underlie specific student academic content standards. The learning segment should also develop students' scientific knowledge by helping them use scientific concepts to make sense of one or more real world phenomena. A Glossary of terms used in this task appears near the end of this document.

Submit teaching artifacts and analysis

You will submit a context for learning form, lesson plans, and copies of instructional and assessment materials. You will also write commentaries describing your teaching context and how your plans for instruction and assessment are tailored to your students' strengths and needs. To preserve confidentiality, please do not identify yourself, your cooperating teacher, the school, or the district by name, and do not use your students' last names. 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 that affect your teaching. You'll be referring to this description of students and the teaching context in your responses in the planning commentary.

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: _____

# of Students at Each Level in Different Modalities					
Score Level	Listening	Speaking	Reading	Writing	Overall

10. How many students have Individualized Education Plans (IEPs) or 504 plans? _____
- a. Briefly describe any required accommodations or modifications that will affect your science instruction in this learning segment.

About the school curriculum and resources

11. Describe any specialized features of your school or classroom setting (e.g., themed magnet, charter school, bilingual, Structured English Immersion) that will affect your teaching in this learning segment.
12. 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.)
13. What other major resources (e.g., technology) do you use for science instruction in this class?

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 of all students, 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 planning or delivery of instruction, such as co-planning, required curricula, pacing, use of specific instructional strategies, or standardized tests including interim or benchmark assessments.

Planning Instruction & Assessment

Purpose

The Planning Instruction & Assessment task describes and explains your plans for the learning segment. It demonstrates your ability to organize curriculum, instruction, and assessment to help diverse students meet the standards for the curriculum content. It provides evidence of your ability to select, adapt, or design learning tasks and materials that offer your students equitable access to science curriculum content.

What Do I Need to Do?

- ✓ Complete a plan for each lesson in the learning segment.

- Be sure to address the learning of curriculum content.
- To identify student academic content standards, please list the standard including both the number and text of the standard. If only a portion of a standard is being addressed, then only list the relevant part(s).
- Use the preferred lesson plan format for your credential program or the optional lesson plan format provided following the rubrics. The plans submitted should include at least the topics in the optional lesson plan format.

- ✓ Submit copies of key instructional materials, including class handouts, overheads, and informal and formal assessment tools (including evaluation criteria or rubrics) used during the learning segment. Select those that, together with the plans, are needed to understand what you and the students will be doing. If any of these are included from a textbook, please provide a copy of the appropriate pages. If any of these items are longer than **four** pages, provide a summary of relevant features in lieu of a copy.
- ✓ Label each document or group of documents with a corresponding lesson number.
- ✓ Provide appropriate citations for all materials whose sources are from published text, the Internet, or other educators.
- ✓ Respond to each of the prompts in the Planning Commentary.

Planning Commentary

Write a commentary of about **4-7 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. Briefly describe the theoretical framework and/or research that inform your instructional design for developing your students' knowledge and abilities in science during the learning segment.
2. How do key learning tasks in your plans build on each other to support students' development of learning of science concepts, inquiry skills, and related academic language? How will students use the science concepts and inquiry skills to make sense of one or more real world phenomena? Describe specific strategies that you will use to build student learning across the learning segment. As needed, reference the instructional materials you have included.
3. Consider the description of students that you provided in Context for Learning. How do your choices of instructional strategies, materials, technology, and the sequence of learning tasks reflect your students' experiences, prior learning, and needs? Be specific about how your knowledge of your students informed the lesson plans, such as the choice of text or materials used in lessons, how groups were formed or structured, or strategies to support or extend learning.
4. For this learning segment, identify students' possible common sense understandings or misconceptions that contrast with accepted scientific understandings. How will you detect and attempt to change these common sense understandings or misconceptions?
5. Consider the language demands¹ of the oral and written tasks in which you plan to have students engage as well as the various levels of academic language proficiency in English described in the Context Commentary.
 - a. What oral and/or written English will you teach and/or reinforce during the learning segment? Why is this language important? For which students?
 - b. Explain how specific features of the learning and assessment tasks in your plan, including your own use of language, support students in learning to understand and use this academic language. How does this build on what your students are currently able to do and increase their abilities to comprehend and/or use a specific form of oral and written language?
6. Explain how the collection of assessments from your plan allows you to monitor your students' progress toward meeting learning objectives.
7. Describe instruction and assessment strategies you have planned for your students who have identified educational needs (e.g., English language learners, students with IEPs). Explain how these features of your learning and assessment tasks will provide students access to the curriculum and allow them to demonstrate their learning.

¹ Language demands can be related to vocabulary, features of text types such as lab reports, scientific and mathematical notation, or other language demands such as participating in group tasks.

Secondary Science Rubrics
Planning Instruction and Assessment Task