GUIDANCE FOR USE: TDSciN TASK LIBRARY

Introduction

This document is designed to support users in using resources from the Tennessee District Science Network (TDSciN) Task Library in a variety of ways that support high-quality science teaching and learning. The TDSciN tasks and accompanying support documents can provide a starting point for the design of a student assessment, an instructional sequence in the classroom, or professional learning experiences for educators.

Considerations for Classroom Assessment Use

As with any task selected for assessment purposes, users are encouraged to review the task and determine whether revisions may need to be made based on the educator's context and students.

It is important to note that the tasks are a work in progress. Many of these tasks were piloted in classrooms and all tasks have undergone at least one revision. However, the design of classroom assessment tasks is iterative, with some revisions being informed by student feedback. Thus, the tasks will likely need to be further revised before and after classroom use, based on both classroom context and student responses. This will help ensure the tasks actually elicit the student learning that is intended and that the rubric captures an appropriate and realistic range of student responses.

Educators interested in using one of these tasks for classroom assessment use are encouraged to take the following steps to support successful planning and implementation of the task:

1. Review the corresponding **three-page task review** to learn about the strengths and weaknesses of the task and its recommended use in the classroom.
2. Take the task from the perspective of a student in order to identify **what students will need to know and be able to do** to successfully complete the task.
3. Consider whether students have had the **opportunity to learn** all they are expected to know and be able to do in the task. The goal is not to teach to the task; rather, the goal is for students to be able to apply the understandings they've developed when they engage with the task.
4. After implementing the task, **collect and review student work** that represents a wide range of ways students completed the task. Consider the following while reviewing student work:

- Did student responses to the prompt elicit the student learning it was intended to elicit? If not, this may be for two reasons: (1) students did not have the required knowledge and skill to successfully complete the task, or (2) the task design itself did not elicit the kinds of student understanding you expected. If there were similar unexpected answers across the class, consider how you might need to revise the prompt for next time (e.g., clarifying prompt language or adding or removing scaffolds).

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- Consider scoring student responses holistically across the task. If students demonstrate understanding of the DCIs, SEPs, and CCCs in part of the task but not in a specific prompt, scoring for understanding and not for "correct" responses to specific prompts ensures a more equitable approach that allows students multiple opportunities to demonstrate competency and understanding.

  To strengthen the scoring tools for future use, consider adding a range of actual student responses as examples for each level of the rubric or scoring guide.

Considerations for Professional Learning Use

While these tasks could be used to design a variety of professional learning experiences for educators, we encourage activities that ask educators to review the tasks with a critical eye. All tasks have strengths and areas of improvement; thus, positioning educators to evaluate tasks is an effective method to build understanding around high-quality features of classroom tasks designed for today's science standards. Some sample activity designs include:

- Educators individually rank a set of tasks from most effective to least effective. Invite teams to discuss the rationale for their rankings and to come to consensus as a group. Consensus conversations can elicit a group's understanding of features that matter most in assessments tasks, offering an opportunity for the facilitator to push thinking on high quality scenarios, making sense of phenomena with the three dimensions, equitable features, and ensuring tasks are fulfilling their intended purpose and targets.

- Educators pilot a common task with their students. Educators collaborate to analyze student work, focusing on student learning, ideas for task improvement, and features of quality tasks.

Tennessee Academic Standards for Science and the Next Generation Science Standards

While the primary learning targets of these tasks are the Tennessee Science Standards, many also include the corresponding Next Generation Science Standards (NGSS) elements. Where relevant, the task materials refer to NGSS elements to determine grade-appropriateness for the three dimensions as shown in the progression matrices for the Disciplinary Core Ideas (DCIs), Science and Engineering Practices (SEPs), and Crosscutting Concepts (CCCs).

Some identified standards include strikeouts (e.g., ESS.ESS3.2. Obtain, evaluate, and communicate information on how natural resource availability, ~~natural hazard occurrences, and climatic changes~~ impact[s] individuals and society). This indicates the standard is only partially targeted by the task.

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