TASK ANNOTATION PROJECT in SCIENCE: MUST-HAVES

Science assessment tasks designed for the Next Generation Science Standards (NGSS) and similar three-dimensional standards can—and should—come in all different forms. To really help all students develop proficiency in science, they need feedback from different kinds of assessments including quick checks during the process of learning, conceptual deep-dives and authentic transfer tasks, and those assessments designed to tell us how whole classrooms, schools, and districts are progressing. With so many different purposes and uses of assessments, it has been tricky to identify what really sets a three-dimensional assessment apart from a traditional assessment.

The Task Annotation Project in Science (TAPS) surfaced some features that routinely distinguish NGSS tasks from science tasks that are not designed for the NGSS—the "must-haves" of any NGSS assessment.

To be considered designed for three-dimensional standards, assessment tasks must...

✓ Be focused on a phenomenon or problem.

To reveal how well students understand and can use the three dimensions, assessment tasks must focus on making sense of a phenomenon or addressing a problem.

✓ Require students to engage in sense-making.

Perhaps the most important shift for NGSS assessments is that they must ask students to actively engage in sense-making as the central goal of the assessment. This means assessment tasks should emphasize reasoning as the way students show their understanding of science ideas and practices, rather than rote ideas and procedures.

✓ Require students to use both science ideas and practices.

From exit tickets to final exams, students must be required to use **at least** one science and engineering practice and one core idea together as part of their sense-making process. This is the floor, not the ceiling: the more comprehensive the assessment, the higher the bar for what students need to demonstrate. For more information about assessing the three dimensions, see these resources on assessing practices and crosscutting concepts.

✓ Make sense to students.

All assessment tasks need to be coherent and understandable to the students being asked to respond. This means that tasks use as many words as needed, but no more; provide students with enough information that the full range of students expected to respond to the task can understand what's going on and what's being asked of them; and that tasks are scaffolded logically and with purpose from the student perspective, such that students understand how each part of the task builds toward making sense of the phenomenon or problem they are addressing.

✓ Support the intended purpose and use.

Tasks have different purposes, and its important that each task is designed to provide evidence to meet that purpose. For example, lesson exit tickets may focus more on the specific parts of practices, core ideas, and crosscutting concepts that were addressed in the lesson without focusing on the full grade-band expectations, while end of course exams may emphasize students' ability to transfer their grade-appropriate understanding to new contexts and be able to use multiple practices, core ideas, and crosscutting concepts together. It is critical that assessments are designed to support their intended purpose and use—and that we are transparent about what is being assessed and what isn't.

Looking for a quick check of whether an assessment task includes these non-negotiables? Check out the Science Task Prescreen tool to help identify major red flags, and the Science Task Screener to support an in-depth analysis of assessment tasks.