**Through-Course Tasks in the Science Assessment System: An Opportunity for Calibrating Expectations**

Despite the very best efforts of every individual teacher working to provide excellent science learning experiences, working separately can have the unintended consequence of holding different expectations for attainment of the standards upon which the learning is based.

The Through course task (TCT) component of the science assessment system is an answer to this. It provides a structured process around common tasks that facilitates teachers coming together to discuss student work - and the instructional practices that support the production of that work- as a means to calibrating interpretations of the standards and expectations for student demonstration of learning.

*“Most educators who look at student work in a collaborative process hope to learn about the effectiveness of their instruction, better understand students' learning and development, develop more effective curriculum and assessment, and find ways to help students do higher quality work….Bringing samples of student work to the table with your colleagues, looking closely at them, and addressing important questions about teaching and learning has the potential to deepen teachers' understanding of the more traditional -- as well as the innovative -- work they do with students in the classroom."*

*(*[*Education World, 2012*](http://www.educationworld.com/a_curr/curr246.shtml)*,)*

The TCT component of the science assessment system is a three-step *process*.

1. Study/plan. Upon selecting a rich task, teams of teachers (in the school, district, or perhaps even across other schools and districts electronically) come together to study the task; to analyze it against the intent of the standards and collectively understand what it is asking students to do.

The best first step will be to actually do the task. Pulling out the Framework (*A Framework for K- 12 Science Education*, National Research Council) and the progressions for the practices and cross-cutting concepts will help teams begin to understand criteria for success – what they will expect of their students. This begins the process of calibrating expectations against the intent of the standards.

Teams will consider how best to present the task to their students- and generate potential probing or supporting questions. It is important to remember that this isn’t about administering a ‘standardized’ assessment; it is about facilitating student learning.

1. Facilitate. Each teacher will facilitate the task with his or her students, keeping in mind what experiences students have already had to apply their science understandings and skills in order to activate prior learning.

As the students tackle the task, the teacher will continue to support the students. Being aware not to ‘over-scaffold’ (which would mask students’ ability to make sense of a phenomenon or design a solution), the teacher will have potential probing or supporting questions ready.

1. Post-task calibration. Bringing their student work with them, the team will reconvene and engage in a protocol to analyze evidence of student learning. They likely will look for patterns in strengths and weaknesses, identify any misconceptions or incomplete conceptions, discuss

differences in teacher facilitation that may have contributed to different patterns in student work, and discuss next best steps in their science programs based on the evidence they see. They might consider how to provide feedback to students on the task and how they expect students to use that feedback. They also may identify some teacher learning needs that could support stronger teaching and learning practices around the standards.

Because designing rich three-dimensional tasks is a new and challenging undertaking, a ‘template’ has been designed to make transparent the way the initial tasks were developed. The template may be used as one way of creating rich classroom tasks. As we all continue to learn, we may find other ways to design three-dimensional tasks.

The key takeaway about the TCT component of the science assessment system is NOT in terms of identifying student levels or scores; it is in determining where students are in their use of the science and engineering practices and cross-cutting concepts as they make sense of a phenomenon, allowing curricular adjustments to be made. The TCT component provides teachers the opportunity to collaborate with peers, calibrating their expectations for student learning, thus providing students with equitable learning experiences.

**What should we be doing now?**

1. Continue to learn about looking at student work collectively by reading the following:
* [Looking at Student Work Yields Insights](http://www.ascd.org/publications/educational-leadership/apr16/vol73/num07/Looking-at-Student-Work-Yields-Insights.aspx)
* [Protocols for Examining Student Work](http://www.ascd.org/publications/books/109037/chapters/Protocols-for-Examining-Student-Work.aspx)
* [Looking Collaboratively at Student and Teacher Work](https://files.eric.ed.gov/fulltext/ED509798.pdf)
* [Making Sense of Student Work](https://www.wested.org/wp-content/uploads/2016/11/1409094003eBook_MSSW_Intro-3.pdf)
1. Utilize the professional learning bank on the [TCT website](https://education.ky.gov/curriculum/conpro/science/Pages/tct.aspx)