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

The through-course task component of the science assessment system is a 3 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. Remember—this isn't about administering a 'standardized' assessment—it is about facilitating student learning.

2. 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.

3. 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 will likely 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 may also identify some teacher learning needs that could support stronger teaching and learning practices around the standards.

Because designing rich 3-D tasks is a new and challenging undertaking, a 'template' has been designed to make transparent the way that the initial tasks are being developed. The template will be shared as we believe many will want to use this as a means to creating rich classroom tasks. Of course, as we all continue to learn, we may find other ways to design strong tasks—and that will only add to the options available for TCTs.

The 2016-17 school year will be a field test year for this process. The expectation is that *teachers at every grade level implement the TCT process* ***at least once*** *this year between November and March* by selecting from provided grade level tasks. Some teachers will be asked to share a representative sample of student work from the task they implemented so that teams of KDE science specialists and teachers can begin to create 'anchor' or 'marker' papers showing a continuum of student responses for each task. These anchor sets will become available to teachers and collaborative teacher teams to assist them, grade by grade, in calibrating the expectations of student performance for their own students. It will take time to build a robust 'library' of tasks and corresponding anchor sets at each grade level, but it will be priority work.

Remember – the key thing about the TCT component of the science assessment system is NOT in terms of reporting student levels or scores—but in assuring that students have the opportunity to engage in these tasks and that teachers take the opportunity to collaborate with peers and calibrate their expectations for student learning and success throughout the process in order to hone day to day practice.

What should we be doing now?

1. Watch a video with Commissioner Pruitt explaining the Through Course Task component of the Science assessment system here: http://mediaportal.education.ky.gov/assessment-and-accountability/2016/06/pruitt_kidwell_6-24-2016_1-2-mp4/
2. Plan to have science teachers attend an upcoming TCT learning session – the first will be during the Kentucky Science Teachers Association conference (see: www.ksta.org), though more will be announced soon.
3. Continue to learn about looking at student work collectively by reading the following: http://www.ascd.org/publications/educational-leadership/apr16/vol73/num07/Looking-at-Student-Work-Yields-Insights.aspx