Collecting Evidence of Student Reasoning, Kindergarten Video Transcript

In this video, we will explore how to collect evidence of student reasoning in mathematics. We will also outline opportunities to explore how discourse and formative assessment can deepen student reasoning while learning and doing mathematics.

First, we will examine the Tasks Choice Board. During the online professional learning session, we will have the opportunity to choose and implement many of these tasks with students.

Notice that the rows on the Tasks Choice Board are organized using selected problem types from the Mathematics Achievement Academy, Kindergarten. The tasks are organized into three groups: introductory tasks, discourse or instructional support tasks, and formative assessments.

Note that a full page document for each task on the Tasks Choice Board is available for use as needed.

Take a moment to locate the Introductory Task column.

You will choose three Introductory Tasks and create an exemplar of student work for each task. These exemplars provide an opportunity to map out the work a proficient kindergarten problem solver may produce.

Next, use the same Introductory Tasks to complete Anticipated Misconceptions and Scaffolds.

Now it is time to complete three cycles based on the components of the TEKS-Based Problem-Solving Model explored during day 1. The first cycle will support analyzing given information, the next cycle will support formulating a plan or strategy, and the final cycle will support determining a solution.

Within each cycle, an Introductory Task, a Discourse Task, and a Formative Assessment will be implemented with students.

You will work from the same row of the Tasks Choice Board for a complete cycle, and you will use the rows for which you created exemplars.

Let us revisit the Tasks Choice Board and the three Introductory Tasks we used to create our exemplars.

For example, if you chose Joining Change Unknown for the Analyzing Given Information cycle, the Introductory Task, Discourse Task, and Formative Assessment should all be taken from this row.

Upon choosing the problem type, complete the Analyzing Given Information: Planning Sheet.

Next it is time to implement the Introductory Task with students.

You will select one student work sample reflecting an opportunity for growth and use this information to respond to the Analyzing Given Information: Introductory Task Reflection.
The next part of the Analyzing Given Information cycle is Discourse. Prior to implementing the Discourse Task, review the mathematical language routine Co-Craft Questions using the toolkit card or video from day 1.

Remember to implement the Discourse Task from the same row as the Introductory Task from this cycle. You will use the Co-Craft Questions mathematical language routine to implement this task.

After implementing Co-Craft Questions with students you will respond to the Analyzing Given Information: Discourse Reflection.

Prior to implementing the Formative Assessment Task, consider the instructional setting you will use to administer the formative assessment. For example, you may choose a small group or one-on-one setting, depending on the number of students who will be assessed.

Remember to use the Formative Assessment from the same row as the Introductory and Discourse Tasks for Cycle 1.

Take a moment to review the steps for the formative assessment.

Notice that there are specific questions to ask students based on analyzing the given information.

Please use the data collection tool to document student responses to questions posed during the Formative Assessment.

If a student is able to answer the question for the task, place a check in the box for that student.

If a student is able to answer only part of the question, place a dash in the box for that student.

If a student is unable to answer the question, place a circle in the box for that student.

Now you will consider the completed data collection tool as you respond to the Analyzing Given Information: Formative Assessment Reflection.

This concludes the Analyzing Given Information cycle.

The additional problem types and their exemplars will be used to complete cycles for formulating a plan and determining a solution.

As with the Analyzing Given Information cycle, you will be asked to reference learning from day 1 prior to implementing discourse structures.

You may have noticed that we do not complete a cycle for justifying the solution and evaluating the problem-solving process. This component of the TEKS-Based Problem-Solving Model will be explored in detail on day 2.

Now it is time to plan for and implement the analyzing given information cycle, the formulating a plan or strategy cycle, and the determining a solution cycle.