

Excerpt

from **Making Sense of Student Work: A Protocol for Teacher Collaboration**

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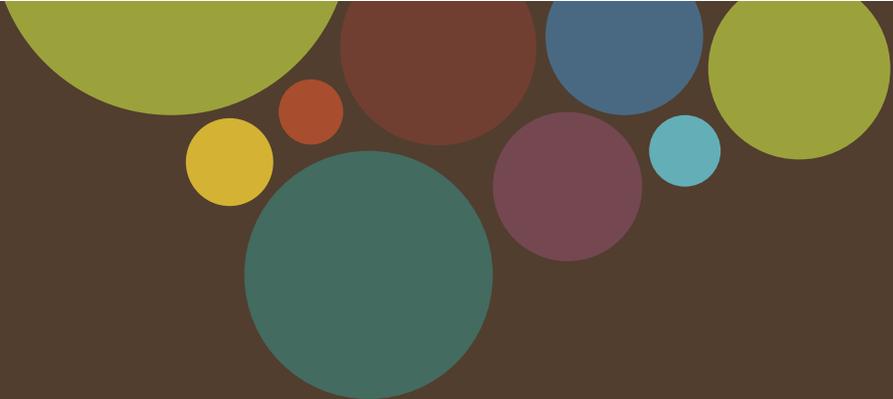
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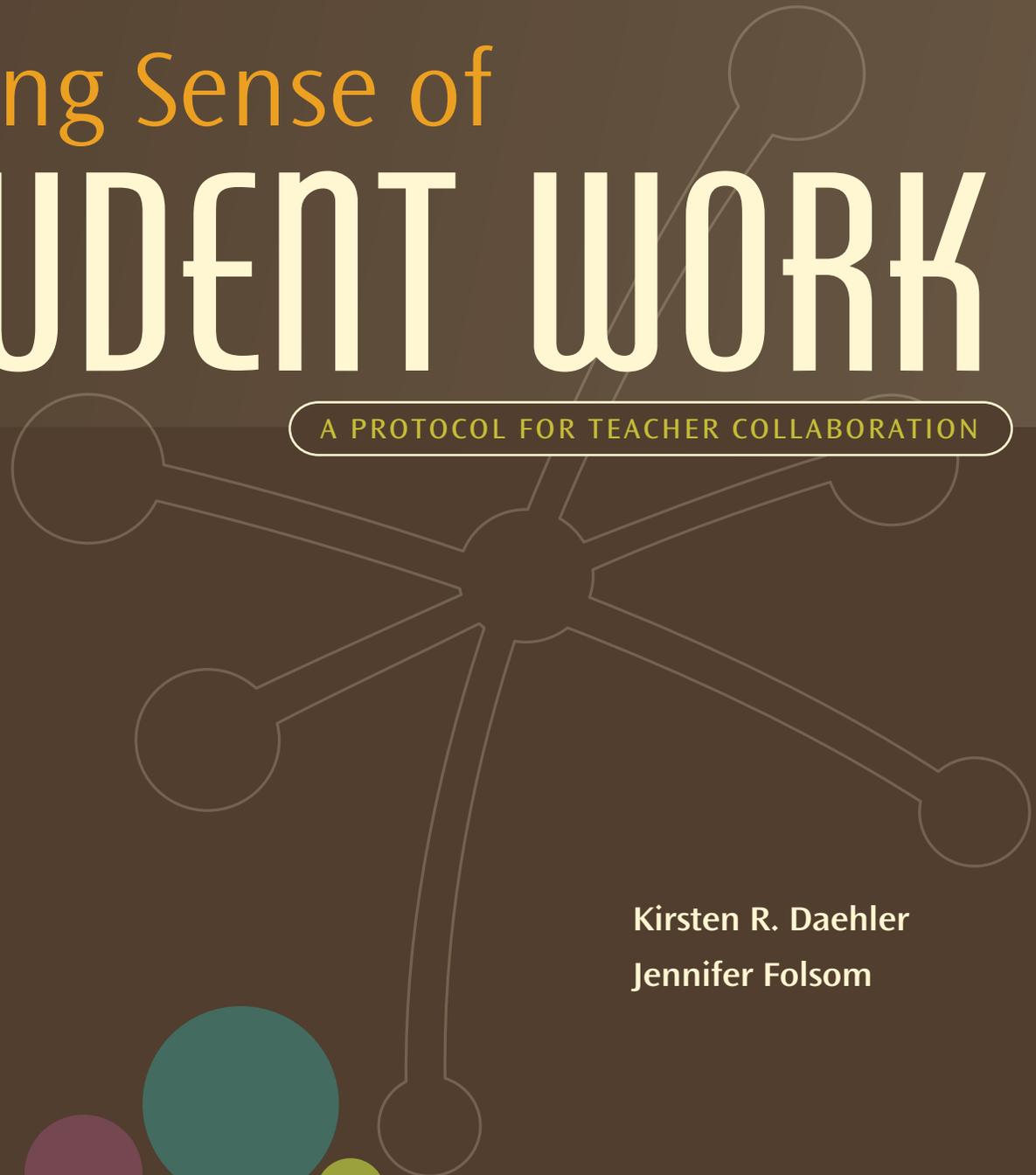
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Making Sense of STUDENT WORK

A PROTOCOL FOR TEACHER COLLABORATION



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Jennifer Folsom

WestEd 
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MENTAL MODELS

Materials

- A full set of 9–12 pieces of student work for each person
Note: There are tips for selecting student work samples in the Introduction. If you are unable to attain your own student work samples, WestEd has a few **Sample Student Work Sets** available as free downloads at WestEd.org/mssw.
- A blank copy for each person of the task that students completed
- A copy of specific objectives for your student learning (e.g., state or district standards, benchmarks, frameworks, grade-level objectives)
- Easel paper
- Chart markers in a variety of colors

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SESSION AGENDA

GETTING STARTED 20 MINUTES

- | | |
|----------------------------------|---------|
| 1 Choose roles | 10 MIN. |
| 2 Get an overview of the session | 5 MIN. |
| 3 Decide on our group norms | 5 MIN. |

TODAY'S TASK 30 MINUTES

- | | |
|---------------------|---------|
| 4 Work today's task | 5 MIN. |
| 5 Share responses | 10 MIN. |
| 6 Analyze the task | 15 MIN. |

ANALYZING STUDENT WORK 50 MINUTES

- | | |
|--------------------------------|---------|
| 7 Read and sort student work | 30 MIN. |
| 8 Compare and discuss findings | 15 MIN. |
| 9 Identify misconceptions | 5 MIN. |

WRAP UP 20 MINUTES

- | | |
|-------------------------------------|---------|
| 10 Prepare to bring in student work | 15 MIN. |
| 11 Reflect on today's discussion | 5 MIN. |

TOTAL TIME 2 HOURS

10 MINUTES

1 Choose roles

WHOLE GROUP 10 MINUTES

If you are a new group or haven't met recently, take a few minutes to introduce yourselves.

If you have not yet chosen roles — Reader, Timekeeper, and Recorder — take a few minutes to read the “How is the protocol structured?” section of the Introduction, then select roles for this session.

5 MINUTES

2 Get an overview of the session

WHOLE GROUP 5 MINUTES

READER

This first session is designed to help us:

- Interpret student work based on evidence found in that work
- Identify patterns in the way students think about the topic
- Evaluate student work on the basis of specific learning objectives
- Identify what one particular task reveals about students' understandings

To reach these goals, we'll start by establishing some norms for our group. Then we'll work through an assessment and talk about what a student would need to know to successfully complete the task. Next we'll dig into a set of 9 to 12 pieces of student work. This will give us a chance to identify the mental models behind students' thinking. In our discussions, we'll aim to talk about students' work in terms of the evidence it presents. ■

RECORDER

Post an agenda for today's session (as needed).

TODAY'S AGENDA	
Getting Started	20 min
Today's Task	30 min
Analyzing Student Work	50 min
Wrap Up	20 min

5 MINUTES

4 Work today's task

WHOLE GROUP

1 MINUTE

READER

Before we look at the student work, it is helpful to become familiar with the task students did. To do this, we'll take several minutes and **individually** complete the task by writing our own responses.

Then we'll work in **small groups** to share responses, check the correctness of our thinking, and hear different ways people solved the task. Lastly, we'll figure out the knowledge a student would need in order to successfully complete the assignment.

Go ahead and start writing your response. As you work, take note of how you approach the task. ■

Note: Distribute a blank copy of the task that matches the student work your group is working with today.

INDIVIDUALLY

4 MINUTES

- a. Complete today's task. As a reminder, write your own adult-level response (not what a student would write) and think about:
- What I notice about how I approached the task...

TIMEKEEPER

After 5 minutes,
call time.

15 MINUTES

6 Analyze the task

SMALL GROUPS 15 MINUTES

🕒 TIMEKEEPER

Write the stop time on the board (15 minutes from now). Remind people when there is 1 minute remaining.

- a. Discuss the task in terms of the content it covers and take notes.
 - If students correctly completed this same task, what would we know about the content they understand?

- b. Together read relevant learning objectives (e.g., standards, benchmarks, frameworks, grade-level objectives), discuss which ones are best aligned with this task, and take notes.
 - These specific learning objectives are a good fit with the task...

🕒 TIMEKEEPER

After 15 minutes, call time and ask people to reconvene as a whole group.

- b. Discuss what you are noticing about these students' ideas and their underlying mental models. Then sort their work into piles according to students who share similar ways of thinking.

Use these questions to guide your discussion and take notes:

- Which students have similar mental models?
- Which ideas do most students seem to understand?
- What are some points of confusion?

EXPLORING MENTAL MODELS

The way we think about a particular phenomenon is called a **mental model**. Our mental models are how we imagine things work. Our mental models can be accurate, complete, and precise, but often they are not. Sometimes all that's needed is learning that missing piece of information or fine-tuning the idea. Other times incorrect mental models are built on misconceptions.

TIMEKEEPER

After 15 minutes, suggest groups move on to part c.

Making Sense of STUDENT WORK

A PROTOCOL FOR TEACHER COLLABORATION

“Great teachers decide what and how to teach based on what their students already know and think. But making sense of student ideas is complex and challenging intellectual work. This protocol supports teachers who want to understand what their students know and how they reason so that they can leverage learning in productive ways.”

—Linda Darling-Hammond, *Charles E. Ducommun Professor of Education, Stanford University*

“The Making Sense of Student Work protocol gave me an amazing opportunity to connect with other educators. It helped me analyze the strengths and limitations of the tasks my students were engaged in during class. After completing the process, I was able to create more rigorous assessments that are better matched to what I want my students to take away from each lesson.”

—Kyle Jenson, *Classroom Teacher*

“This protocol helps groups of teachers get to the heart of formative assessment. Through authentic inquiry and professional collaboration, teachers come to understand the complexities of how students think and make evidence-based choices about their teaching practices.”

—Judith Warren Little, *Dean, Graduate School of Education, University of California, Berkeley*

Making Sense of Student Work is a self-facilitated protocol, ideal for collaborative groups of 3–24 teachers. It is divided into five 2-hour sessions, each with a specific focus — exploring mental models, investigating learning gaps, thinking through instructional next steps, analyzing tasks, and modifying tasks.

The Making Sense of Student Work protocol provides a framework to help teachers:

- Have evidence-based discussions about students’ work and students’ thinking
- Examine and come to understand students’ ideas and the logic behind these ideas
- Strengthen their abilities to make instructional choices in response to the specific ways students are thinking
- Analyze and improve the formative assessment tasks they use with students

The protocol has been successfully used by teachers in a variety of contexts, including formal professional learning communities, weekly grade-level team meetings, and informal teacher-to-teacher collaborations. It builds on more than a decade of development and research by the Making Sense of SCIENCE project at WestEd.

More information about Making Sense of Student Work is available online.

WestEd.org/mssw

 LAY-FLAT BINDING

EDUCATION

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ABOUT THE AUTHORS



Kirsten R. Daehler, Director of Making Sense of SCIENCE, is a chemist for sport, a lover of physics, and always a teacher at heart. Two of her greatest joys are professional collaboration and digging into how students think.



Jennifer Folsom, Lead Curriculum Developer and Staff Developer with Making Sense of SCIENCE, has an ever-inquiring mind and a knack for figuring things out. Developing rewarding and respectful learning opportunities for teachers is her passion.