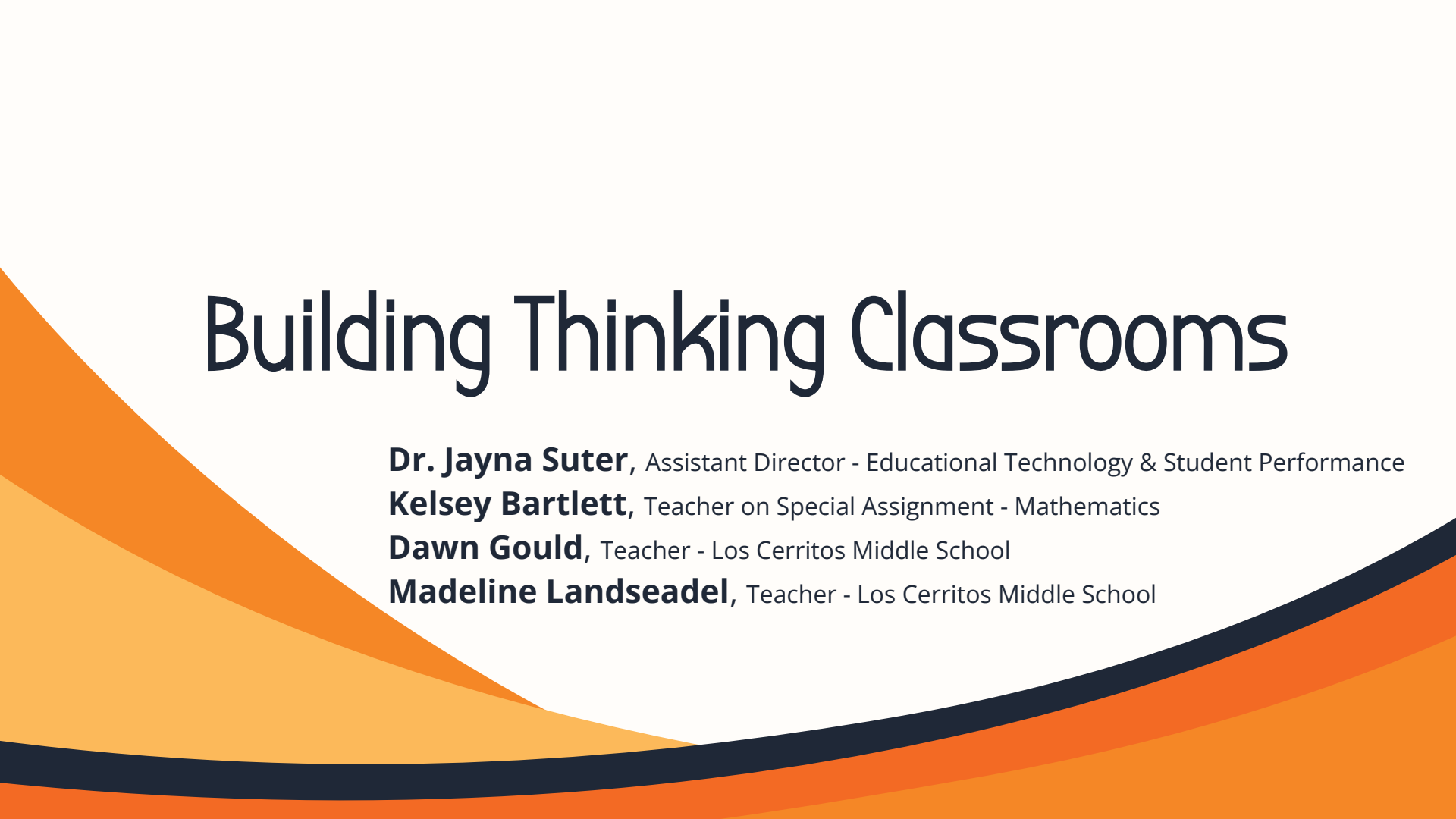




Building Thinking Classrooms

Dr. Jayna Suter, Assistant Director - Educational Technology & Student Performance

Kelsey Bartlett, Teacher on Special Assignment - Mathematics

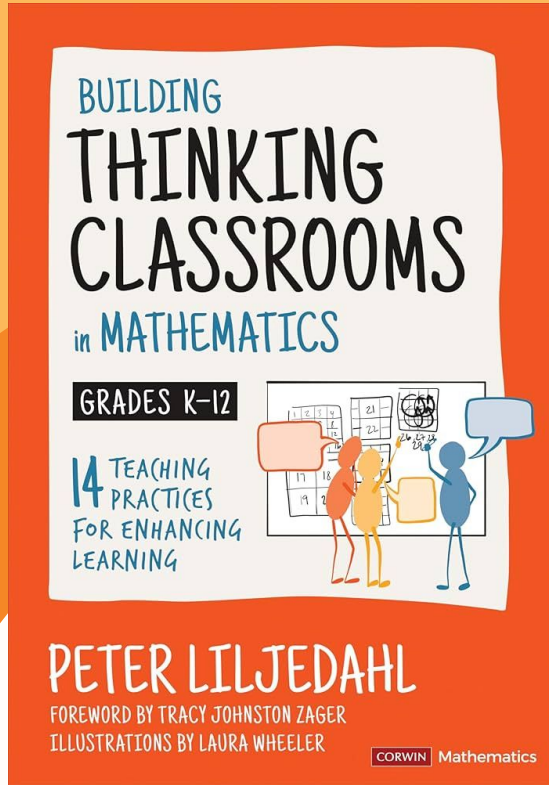
Dawn Gould, Teacher - Los Cerritos Middle School

Madeline Landseadel, Teacher - Los Cerritos Middle School

Objective

To provide the Conejo Valley Unified School District Board of Education with an overview of Building Thinking Classrooms and highlight the work implemented across the district.

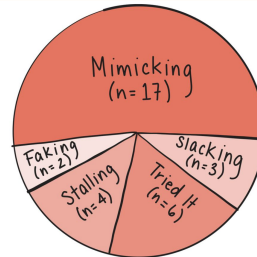
Overview of Building Thinking Classrooms



Building Thinking Classrooms- Peter Liljedahl

Research Question: **“What work gets students thinking in math?”**

- Over 15 years of research, 400 teachers, thousands of students
- In a typical math lesson, 75-85% of students show non-thinking behavior for 100% of the time. The rest think for 8-12 minutes total.



5 Big Findings

1. Most students are not thinking most of math class.
 2. Student behavior is shaped by structures, not individual motivation.
 3. Vertical non-permanent surfaces significantly increase immediate engagement in thinking tasks.
 4. Randomized groups increase participation equity and student identity as contributors.
 5. Classroom environment and task design shape cognitive demand more than explanation does.
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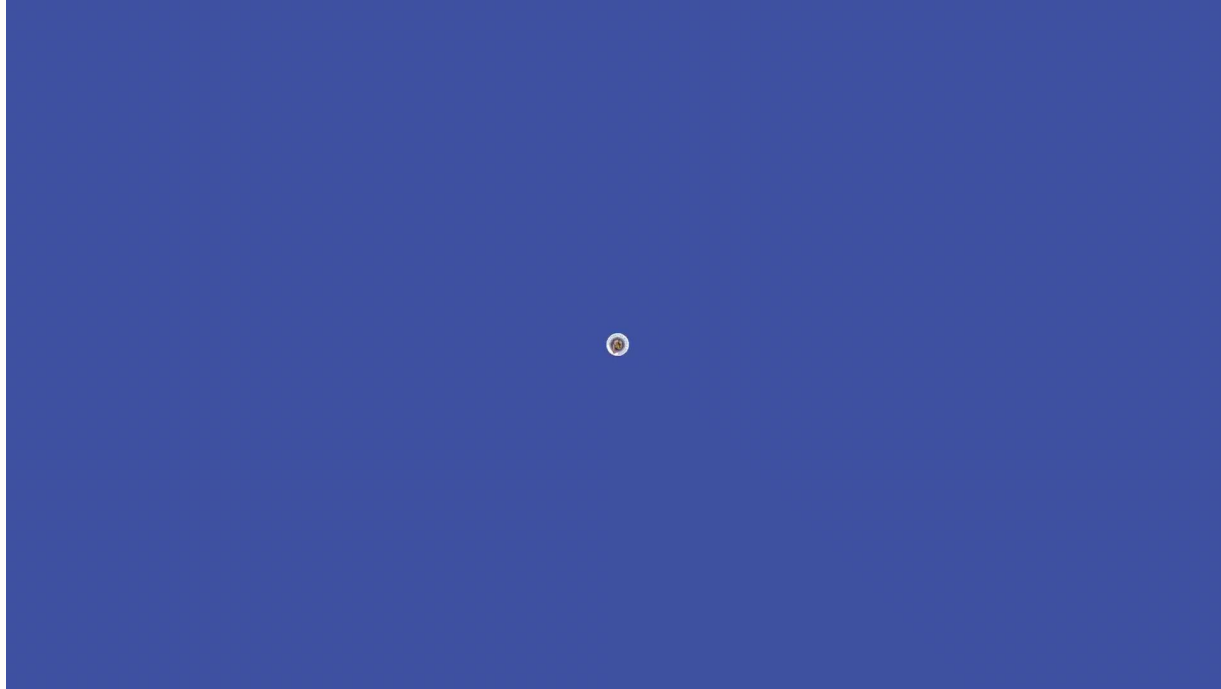
What Does This Mean for Traditional Classroom Structures?

Traditional Classroom	Thinking Classroom
Listening	Reasoning
Copying	Problem Solving
Procedural completion	Conceptual Understanding
Teacher explanation first	Students engaging in thinking first
Quiet compliance	Visible collaboration and discourse
Speed and correctness	Reasoning and strategy development
Answer-getting	Mathematical justification and sense-making

Alignment Between BTC and New California Math Framework

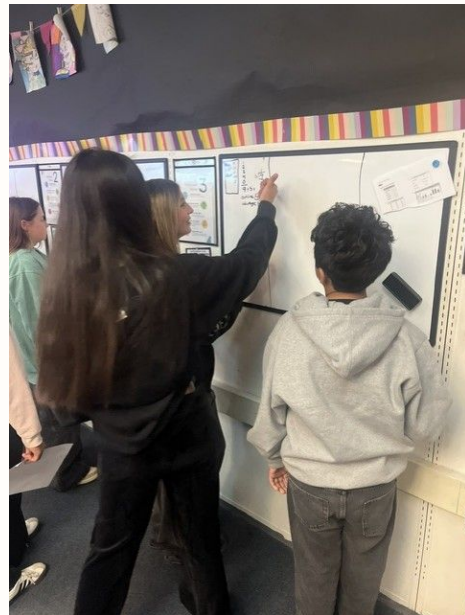
- Instructional structure that brings the California Mathematics Framework to life
- Mathematical discourse and collaboration
- Equity and access for all learners
- Student agency and engagement
- Problem solving and critical thinking
- Deep conceptual understanding
- Perseverance through productive struggle
- Student-centered mathematics classrooms

BTC at LCMS



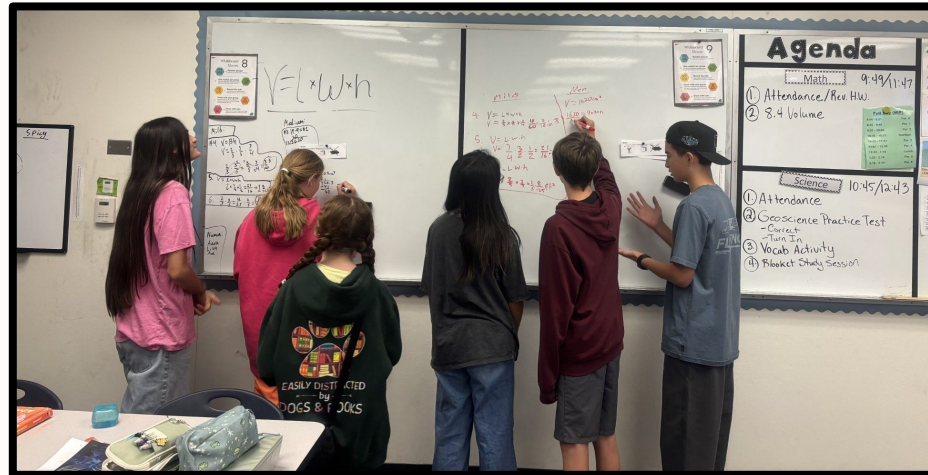
How Have Our Classrooms Changed?

- Engagement levels are higher overall
 - *Classroom culture has improved*
- Covering more content at a quicker pace
- Feedback given is more informed and immediate
- Schoolwide summative assessment scores are up
- CAASPP scores are up
- Students are enjoying Math and THINKING!
- *Teachers are supporters, students are drivers*



Building THINKING Classrooms for Everyone

- **All students are valued in the learning process**
 - From Co-taught CP classes to Honors Algebra
- **Student discourse allows more students to access more Math**
 - All students benefit greatly from the discourse - especially multilingual learners
- **“Thin Slicing” allows students to increase the difficulty level at their own pace**



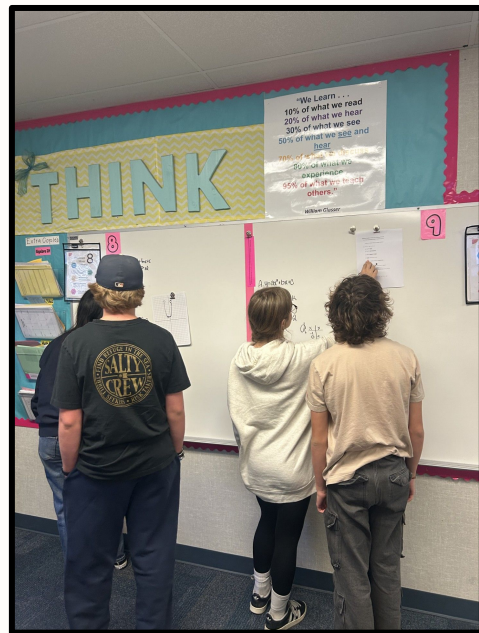
Instructional Practice Shifts

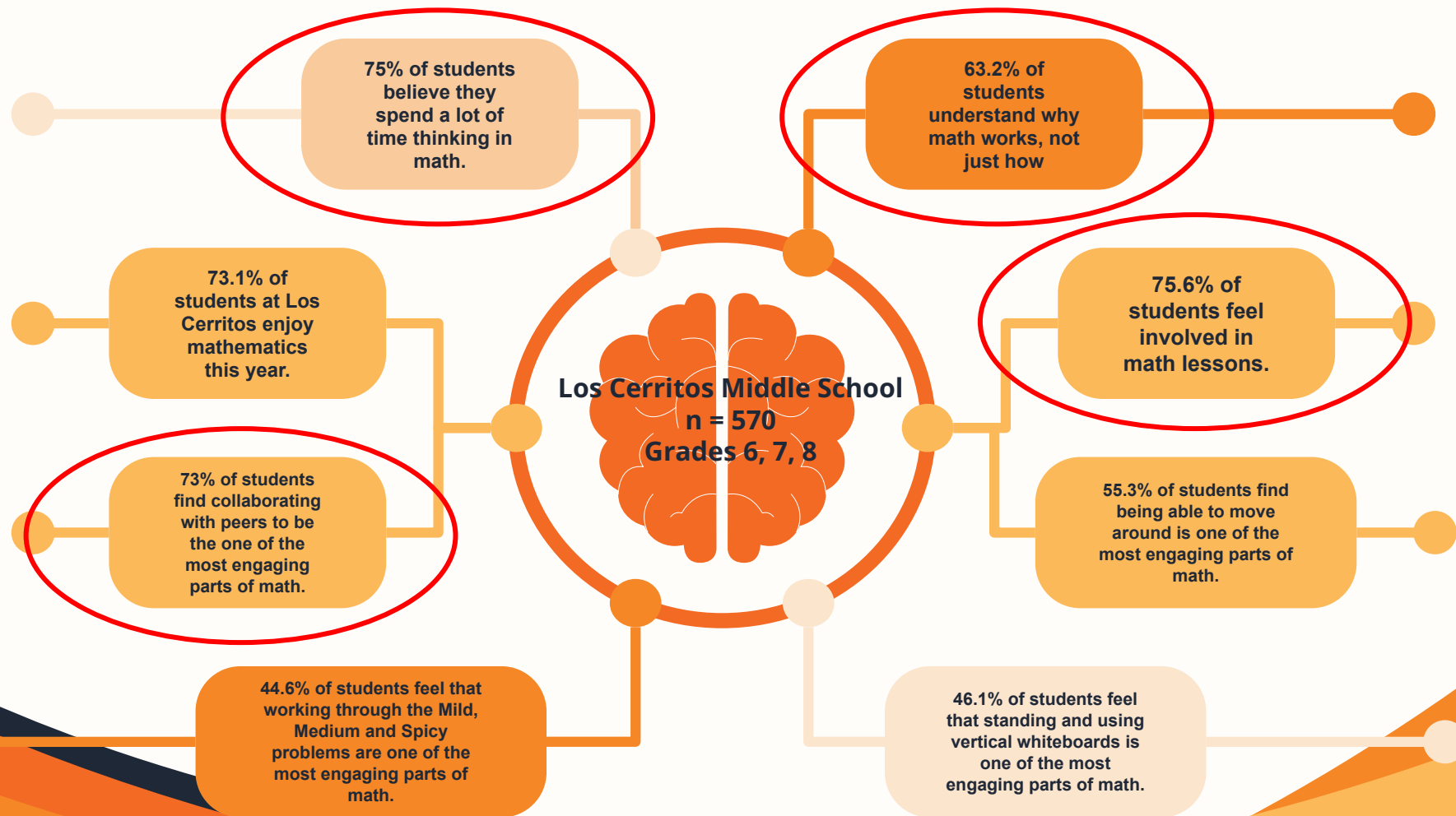
A typical BTC lesson...

- Huddle
- Randomized Whiteboard Work
- Consolidation Notes/Individual Check for Understanding

Essentially a total overhaul of our teaching...

- Classroom supplies & classroom set up
- Routines, procedures, and expectations
- Adjustments made to fit needs of students
 - *Loyalty is always to student learning over ANY model*





Do You Prefer Solving Problems at the Whiteboards?

I do prefer solving problems at the whiteboards with my classmates. I think it helps me understand more and I get to see how other people may solve it which gives me more ways to try and solve a problem.

I enjoy solving them at the whiteboards since I get chances to practice what we learn, but with support from a peer/teacher.

I prefer solving problems at the whiteboards with classmates due to how it assists me in learning the lesson to a greater degree, a way to increase understanding when confused.

I do prefer solving problems at the whiteboards with classmates for many reasons. You get to hear different viewpoints, and ideas on how to solve a problem. If I don't fully understand a lesson my peers help me. It has also made me more patient and working with different people has helped me.

I like solving math problems at the whiteboards, It is fun to see who you will be randomly placed with. It allows me to be engaged in a fun way and learn from my peers.

I prefer solving problems at the whiteboards since it allows me to listen to others' thought processes and possibly use that knowledge to build off my own.

I prefer solving problems at the whiteboards with my classmates. It helps to open up new perspectives, I feel I learn quicker, and it shows the entire process from the teamwork of many different minds. I found that the whiteboard method is much more engaging than a bland piece of paper with math problems. There's better explanation and communication.

I like solving problems at the whiteboards because I can help kids who do not understand the concepts and I can hear what my classmates think and potentially find the concept easier myself.

What Is Your Favorite Part About Using the Vertical Whiteboards in Math Class?

It allows me to have the chance to ask someone without doing it in front of the whole class if I don't understand a way to do something.

I like how I get to work with a group and hear other points of view

To hear other people's thoughts so I can learn from my mistakes and hear how my classmates explain it.

My favorite part is working with new kids each time and being able to easily work out problems on the whiteboards.

We get to talk to new people.

My favorite part of working with the whiteboards is that you have classmates to help you, because if you are stuck you can ask them to clarify and they will be there to help you.

My favorite part is getting up, and talking with my classmates. Many times in just this year alone, I've had constant support and help from my friends explaining a confusing question.

My favorite part about using the vertical whiteboards in math class is actually collaborating and getting the work done together, helping each other out to get better grades.

TOHS/ SEQ BTC Learning Walk

- Non- evaluative learning walks
- Four classrooms - 20 minutes each
- Focus on observing student thinking engagement, and instructional practices
- Focus was identifying patterns and trends across classrooms who use Building Thinking Classrooms
- Debriefed after the walk to discuss trends, and celebrate strengths
- Afternoon was time for teachers to plan on implementation of BTC in their own classroom

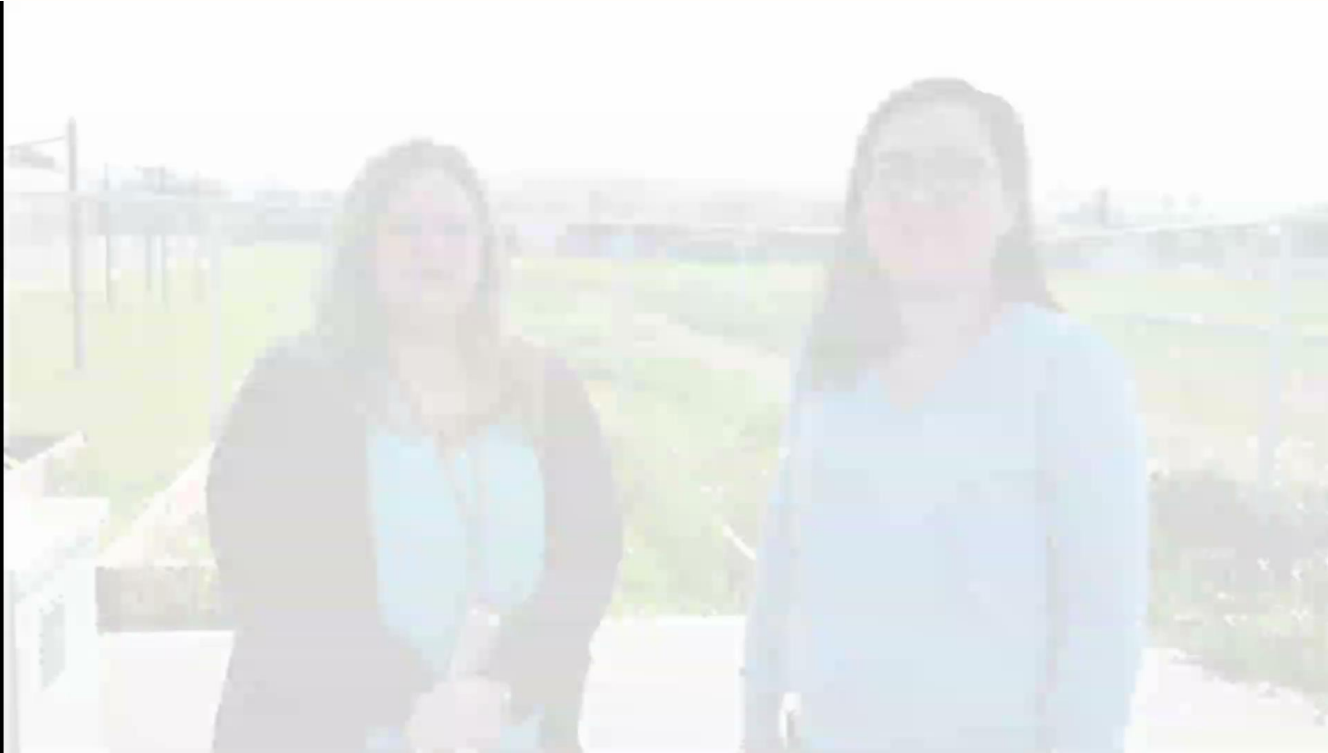
Focus Area	Look For/ Notice	Notes
Student Thinking	Are students actively reasoning, discussing, and trying ideas? What strategies or representations are they using? What did you notice about students' confidence or persistence?	
Collaboration & Communication	How are students interacting with each other? Who is doing this talking? Who is doing the learning? How did students respond when they felt stuck?	
Teacher Moves	How is the teacher facilitating thinking (not telling answers)? What kinds of questions or prompts are used? How did teachers balance support with letting students struggle productively? How did the teacher's questions invite curiosity or reasoning?	
Engagement	What does student energy look/sound like? Are all groups contributing?	
Equity of Voice	Do all students seem to have access to the task and the opportunity to share?	



Across Learning Walks/Teacher Reflection, We Are Hearing...

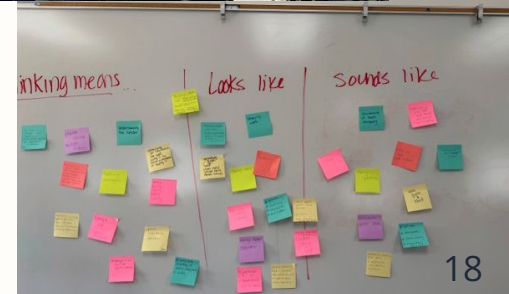
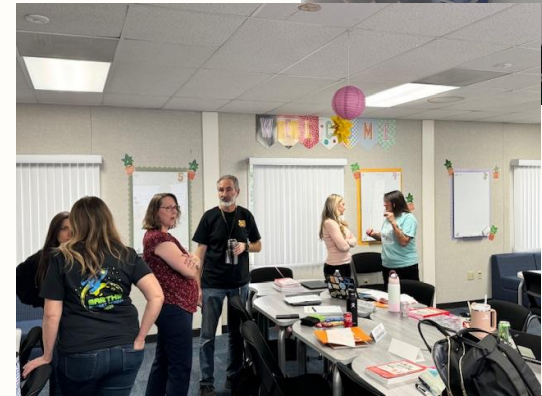
- There is an increase in student discourse
- Students are showing more persistence on problems
- Teachers are still learning how to facilitate timing of the strategy
- Teachers are working on their comfort with productive struggle in the classroom

TOHS Implementation of BTC



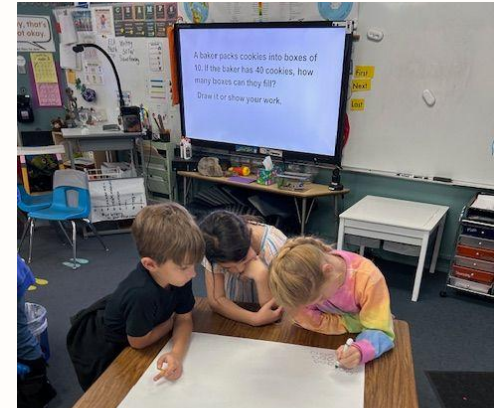
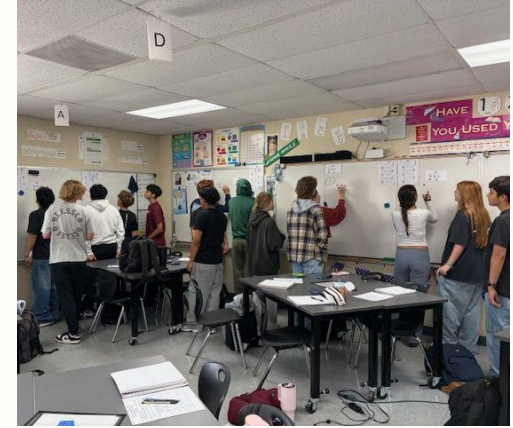
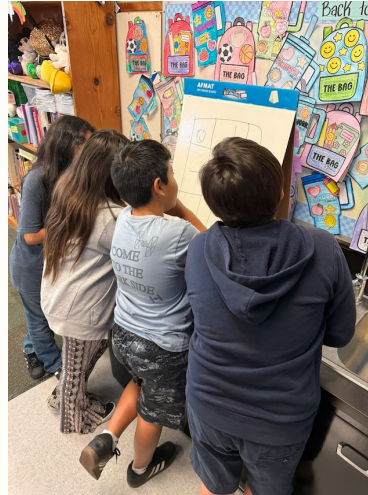
BTC Book Club 2025-2026

- Year-long professional learning cycle focused on increasing student thinking, engagement, and problem-solving
- Immediate application of strategies learned
- Consistent cycle: Read and reflect → collaborate → plan → return with evidence
- Focused on high-impact practices such as:
 - Vertical non-permanent surfaces
 - Randomized groupings
 - Thinking tasks vs. answer-getting
 - Teacher moves that promote student autonomy
- Emphasized equity and access, ensuring all students are actively thinking and participating in mathematics



Where BTC Structures Are Emerging

- Cypress Elementary
- EARTHs Magnet
- Glenwood Elementary
- Ladera STARS Academy
- Wildwood Elementary
- Colina Middle School
- Los Cerritos Middle School
- Redwood Middle School
- Sequoia Middle School
- Newbury Park High School
- Thousand Oaks High School



Next Steps

- Deepening consistency across classrooms
- Strengthening task design
- Supporting teacher facilitation move
- Expanding learning walks
- Pilot instructional materials that naturally support collaborative thinking and problem solving

Questions?