Oceanside Written Update

Alignment of PD to Communicating Reasoning

Vision Outcome - *The percentage of OUSD students scoring "below standard" on the **c**ommunicating reasoning claim** will decrease by 10%.*

Communicating Reasoning Claim

The student demonstrates the thorough ability to clearly and precisely construct viable arguments to support their own reasoning and to critique the reasoning of others.

Monitoring of progress includes collecting evidence of students' **communicating reasoning** through our observation tool (See Outcome 3).

Embedded Days (Teachers)

Teachers work collaboratively to analyze student work, design and facilitate tasks prompting students' to **communicate their understanding** of

CGI (Teachers)

Cognitively Guided Instruction (CGI) is a professional development program that increases teachers' understanding of the knowledge that students bring to the math learning process and how they connect that knowledge with formal concepts and

Centralized Training (Teachers)

Teachers explore the use of rich tasks, integrating SMPs into instruction, and formative assessment part of regular instruction including advancing students' abilities to **communicate** their reasoning.

OUSD Classroom Observation Tool

Date: _____ Site: _____ Grade level: _____ Observer: _____

Lesson Focus: _____

Outcome: Instructional practices facilitate rigorous, meaningful, cohesive and accessible math instruction for all students.

Expectations:	Growth Trajectory		
	Emerging (1)	Applying (2)	Transforming (3)
A. Teachers pose high quality questions and problems that prompt students' engagement and thinking about the content of the lesson. **Level: (0) (1) (2) (3)**	• Questions are cognitively demanding (DOK Level 2) • Questions are open-ended • Questions and prompts are set within real-world context	• Questions are cognitively demanding (DOK Level 3) • Prompts have two entry points • Questions and prompts are mathematically relevant and used to solve real-world problems	• Questions are cognitively demanding (DOK Levels 3-4) • Prompts have multiple entry points • Questions and prompts require students to explore and understand the mathematical concepts, processes, and /or relationships
B .Teachers use variation in students' solution methods to strengthen other students' understanding of the content **Level: (0) (1**	• Cognitively engage some students • Afford students time to share out different strategies for solving the problem • Have students write	• Cognitively engage most students • Provide time to examine and address solutions that are incorrect • Have students agree or disagree with each other'	• Cognitively engage all students • Have students expand on each other's mathematical solutions • Connect different students' responses to key mathematical ideas • Create mathematical visual records of the class discussion to show varying
C Te opport studen conve each d critiqu thinki constr argum **Level: (0) (1) (2) (3)**	• Promote the use of sentence starters to facilitate academic conversations • Students use academic language, with support and/or prompting	clarification from their classmates • Students use academic language without stems and minimal prompting	stems to engage in debates; defend and challenge thinking; explain how they solve problems.

TRU Framework
(Site leads and some teachers)

Facilitated by David Foster and his team, participants deep dive into the 5 dimensions of TRU including "Agency, Identity, Authority" – "The extent to which students have opportunities to **conjecture, explain**…"

Learning Walks
(Principals)

Principals are paired with project specialists to identify the current reality of mathematics teaching and learning at their sites, and design next steps to support advancement towards our vision and outcomes including developing students' abilities to **communicate their reasoning.**
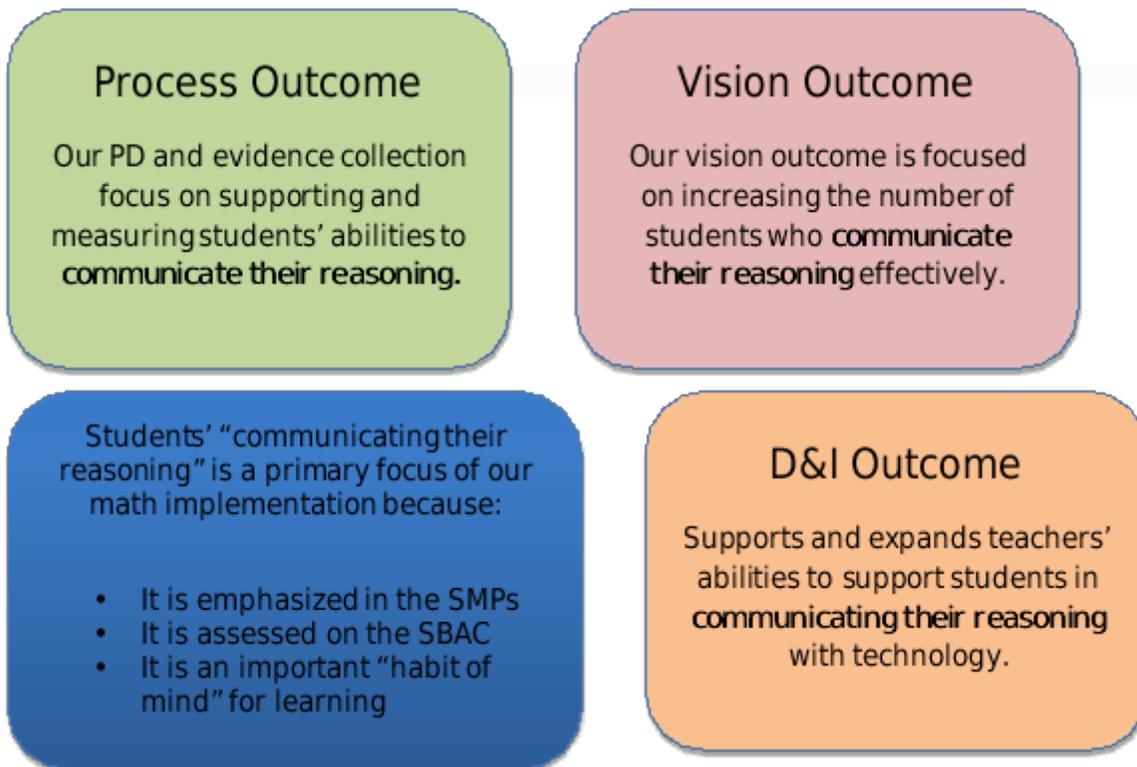
| D. Teachers ask students to explain and justify work and provide feedback that helps students revise their thinking and work.

Level: (0) (1) (2) (3) | • Use number talks that engage students in discourse
• Identify misconceptions through meaningful discussions
• Coaches students to use academic language in explanations that help clarify their thinking | • Facilitate discussions of students' explanations and use probing questions
• Provide timely task-specific feedback after instruction
• Explore how students respond to feedback
• Require students to explain their thinking | • Prompt student to re-organize and consolidate their mathematical thinking and understanding
• Provide ongoing and timely task-specific feedback during and after instruction
• Provide time and expect that students revise their work based on feedback, including revision of explanations and justifications
• Have students explain and justify mathematical ideas and strategies with sufficient and significant mathematical details |

Alignment of our MiC outcomes

Over the summer and Fall of 2015 we worked to increase the coherence between our MiC outcomes in order to better focus and streamline our work. After reviewing the 2015 CAASPP results, surveying the content of the CCSS-M and considering what major "teaching/learning" variable we might best be able to impact, we decided to focus on developing students' abilities to communicate their reasoning. The diagram below demonstrates how our current MiC outcomes are related to each other and "communicating reasoning."

Vision for math instruction - *Teachers inspire all students to be responsible learners through the development and facilitation of rigorous, meaningful, cohesive, and accessible math instruction.*

Process Outcome

Our PD and evidence collection focus on supporting and measuring students' abilities to **communicate their reasoning.**

Vision Outcome

Our vision outcome is focused on increasing the number of students who **communicate their reasoning** effectively.

Students' "communicating their reasoning" is a primary focus of our math implementation because:

- It is emphasized in the SMPs
- It is assessed on the SBAC
- It is an important "habit of mind" for learning

D&I Outcome

Supports and expands teachers' abilities to support students in **communicating their reasoning** with technology.

Content Outcome

PD events support teachers and administrators in developing students' abilities to **communicate their reasoning.**