CALIFORNIA CURRICULUM COLLABORATIVE

Classroom Mathematics: California CMC

Between the Greens

Project Overview

Classroom Mathematics California (Curriculum Associates) has earned “green” ratings from EdReports, indicating strong alignment to standards and evidence of high-quality instructional design. This project builds on those ratings by examining how “green” programs enact the vision of the California Mathematics Framework in practice.

The analysis centers on four categories essential to effective implementation: (1) scaffolds and language development for multilingual learners, (2) open and engaging tasks aligned to the Framework’s vision for teaching and learning, (3) assessment structures that promote reasoning and mathematical identity, and (4) teacher planning, preparation, and professional knowledge supports. Across these categories, the review draws directly from sample materials to clarify how each program organizes instruction, supports access, and sustains cognitive demand.

The goal of this report is to support district teams in their own review process and decision-making. Rather than ranking programs, it highlights key features, considerations, and evidence from the materials so leaders can examine alignment to local priorities, instructional vision, and implementation capacity.

Curriculum Organization

Classroom Mathematics California (CMC) is organized into units made up of multi-day lessons designed to build connected understanding across lessons and units. The instructional design reflects the California Mathematics Framework’s emphasis on Big Ideas and interrelated concepts. Each lesson follows a structured sequence: “Explore, Develop (one to three sessions), and Refine”, providing time for students to deepen understanding, practice skills, and reflect on key ideas. Strategy lessons consistently use the Try–Discuss–Connect framework, guiding students to make sense of problems, share and compare strategies, and apply their learning

Scaffolds and Support for Access

District teams should be reviewing for the following look fors:

- Scaffolds that maintain the complexity of the task and support entry.
- Supports embedded in core lessons, not only ancillary materials or resources.
- Language routines (MLRs), sentence frames, and partner talk structures.
- Guidance that attends to language demands of tasks.
- Entry points and extensions included directly in lessons.

- Classroom Mathematics California provides purposeful scaffolds that preserve the cognitive demand of tasks while integrating embedded supports and built-in differentiation to foster content and language development for diverse Multilingual Learners.

    - Examples at the Unit Level:
        - A "Connect Language Development and Mathematics" page includes a "Language Expectation for English Learners" chart which shows what English learners can do in connection with a math standard addressed in the unit. The chart lists the math standard, and what Multilingual Learners will be able to do for three proficiency levels (i.e., Emerging, Expanding and Bridging) and four language domains (i.e., Listening, Speaking, Reading and Writing). "Build Academic Language for All Students" highlights one lesson Language Objective and shows how teachers can help students bridge from everyday language to academic language over the course of lesson activities.
        - "Grouping for English learners" shows how thoughtful, teacher-created groups can maximize the participation of MLLs, which enhances their learning of both math content and language. This resource explains the importance of interaction for MLLs, includes grouping guidelines, four ways to form groups and offers grouping guidance for activities with rationale for the grouping options. Teachers still have the agency to decide the format to use (i.e., whole class, small group, partner, or individual) based on knowledge of their students.
    - Example at the Lesson Level:
        - Language Objectives are integrated in every lesson and are tied directly to the math content objectives. They address the four domains of language students will understand and use (i.e., Listening, Speaking, Reading and Writing) to meet the math objectives. When implemented correctly, integrated language objectives ensure that mathematical rigor is not sacrificed for linguistic accessibility, providing teachers with a clear roadmap to facilitate discussions.
    - Example at the Session Level:
        - Math language routines are used throughout the Try-Discuss-Connect framework and Differentiation: English Learners. Try- Discuss-Connect is a discourse-based framework that simultaneously develops math concepts, math practices, and academic language. Language routines, teacher moves, and conversation tips are embedded in the sessions and help teachers support students to make meaning through collaboration and as they interpret and produce language. Differentiation: English Learners helps teachers scaffold or amplify language in the session so English learners can access and engage with grade-level mathematics. This includes activity-specific support for a continuum of English proficiency levels (i.e., Emerging, Expanding and Bridging), focused on California ELD standards. Scaffolding often includes an invitation for students to leverage their home language. By providing teachers with specific moves to amplify rather than simplify content, this approach transforms the classroom into an equitable space where every student's reasoning is valued and visible.

Open, Engaging Tasks

District teams should be reviewing for the following look fors:

- Tasks require reasoning and sense-making.
- Multiple access points and ways to show understanding.
- Opportunities to revise thinking or revisit ideas.
- Structures for conjecture, comparing strategies, and argument.

- Classroom Mathematics California tasks align with California Math Framework principles by requiring explanation, justification, critique, and revision, while simultaneously providing robust pathways for access and extension.
    - Example at the Unit Level:
        - Every unit integrates Big Ideas that organize content around central mathematical concepts that connect across grades, as mentioned in the California Math Framework. Each Big Idea is further defined by a Key understanding written in student-friendly language and describing the Big Idea in terms of the mathematics of the lessons, making them more understandable to students. The Big Ideas in each unit offer overarching themes that connect smaller mathematical topics. On the student side this is represented as “I Can” statements at the start of the unit. Every unit begins and ends with Big Ideas and students revisit, explore, and make connections as part of every Strategy lesson.
    - Example at the Lesson Level:
        - Deepen Understanding is a consistent opportunity to build conceptual understanding of a key lesson concept by extending mathematical discourse. They highlight SMP connections to the lesson’s mathematical concepts by offering questions and support for student conversation and understanding. For teachers, this resource provides questions that turn a standard math lesson into a deeper conversation, helping them guide students to connect what they are learning to real-world math habits. For students, it ensures they don't just stop at getting the "right answer" but instead learn to talk through the "why" behind the math, which builds their confidence and helps them see how different math ideas fit together.
    - Examples at the Session Level:
        - The California Math Framework principles are evident in the Try-Discuss-Connect instructional framework. During the “Try It” phase, students make sense of a problem and then use models or strategies of their choice to think through the problem. Additionally, each “Try It” has been aligned to a California Driver of Investigation (Why), Standard for Mathematical Practice (How), and Content Connection (What). In the “Discuss It” phase, students share their thinking with a partner explaining and justifying their strategies and solutions to each other. It is also during this phase where partners will listen to and respectfully critique each other’s reasoning. To promote and encourage partner conversations, the teacher may share sentence starters and questions for discussion. Lastly, during the “Connect It” phase, the whole-class discussion leads students to make connections among multiple strategies and reflect before they apply their learning to new problems. When implemented correctly this framework ensures that rigor is maintained through collaborative productive struggle, allowing all learners to see themselves as capable mathematicians who can justify their logic and connect diverse strategies.
        - Hands-On activities occur consistently at strategic points in the session after teachers have acquired understanding of students’ learning through observation and their work on questions in the Student Worktext. The activities support students who are unsure of the concept and are an opportunity for small group reteaching while other students work independently. Using these concrete objects lets students access understanding in a different way.

Assessment Tools for Planning Instruction

District teams should be reviewing for the following look fors:

- Assessments require reasoning, modeling, justification, and representation connections.
- Students demonstrate learning through speaking, writing, drawing, modeling, or visuals.
- Rubrics clarify expectations and support formative feedback and self-monitoring.
- Assessments support meaningful participation and positive mathematical identity.

- Classroom Mathematics California assessments structures effectively measure learning and align with conceptual goals while simultaneously cultivating student agency, mathematical identity, and equitable access for all learners.

    - Example at the Unit Level:
        - Students have multiple opportunities to participate in self-assessment, reflection and goal setting throughout the unit. At the start of every unit, the "Big Ideas Organizer" allows students to create a record of their understanding that builds across lessons and units. Students work on the "Big Ideas Organizer" at the end of lesson, using drawings, words, and numbers to show their thinking about key understandings from those lessons and the unit as whole. At the end of the unit students work on two assessments, the "Self Reflection" and "Vocabulary Review". While working on the "Self Reflection" students are able to use words, numbers, and drawings to think and describe what they learned throughout the unit. In addition to quizzes and reflections, end-of-unit performance tasks and data investigations require students to apply Big Ideas in extended contexts, explain their reasoning, interpret representations, and model mathematical situations.
        - Lesson Quizzes assesses students' progress toward mastery of lesson content and is a way to identify where reteaching is needed. Quizzes are aligned with the California Standards and the Big Ideas of the unit and can have multiple choice, multiple select and short response problem types. An explanation of skills tested and content assessed is provided for each quiz, and an "Error Alert" gives teachers some examples of things students might do incorrectly. "Problem Notes" are present for each problem which not only states the correct solution and explanation but additionally provides an explanation of how students arrived at the incorrect answers for multiple choice and multiple select problems. This can be especially useful for those times when teachers wonder how students arrived at a particular incorrect answer and want to target re-engagement. Both multiple select and short response problems have a scoring rubric which explains the expectations for all possible points. Students benefit from this assessment structure as it clear rubrics and multiple problem types can ensure equitable access to the unit's Big Ideas.
        - Every session has multiple opportunities for students to be assessed (i.e., speaking, writing, and drawing) and are in full alignment with the "Big Ideas" of the unit. The "Close: Exit Ticket" is a quick formative assessment of each day's learning and serves as an indicator of students' progress toward mastery or partial mastery of the learning goal of the session..

Planning, Teaching and Teacher Knowledge

District teams should be reviewing for the following look fors:

- Unit maps, lesson overviews, pacing guides.
- Tools that support teacher preparation.
- Prioritization guidance when time is limited.
- Explanations of mathematical concepts and representations.
- Guidance on misconceptions & student strategies.

- Classroom Mathematics California builds teacher knowledge by offering clear, purposeful guidance, usable planning tools, and suggested instructional routines and classroom structures. In addition, CMC provides an extensive digital planning environment that allows teachers to assign lessons, analyze student work, and access embedded professional learning resources within a unified platform

    - Examples at the Unit Level:
        - A “Professional Learning” section is present before every lesson, which provides articles focused on engaging students (particularly MLLs), while giving a deeper insight into resources used in the materials. Titles of “Professional Learning” found in the materials include but are not limited to: “The Process of English Language Learning and What to Expect” , “Establishing Classroom Environments That Support Mathematical Discourse for ALL Learners”, “Teacher Moves That Engage Students in Discourse and Mathematical Thinking” , and “Discourse as a Tool for Learning the Language of Mathematics”. Providing professional learning articles within the lesson planning phase encourages teachers to support mathematical discourse while also building sociocultural awareness.
        - The “Math Background” is used in planning lessons to make connections between key concepts while unpacking the learning progressions. When learning about mathematical background the focus remains on the “Big Ideas” and major themes of the unit as all examples and teaching tips are relevant for implementation to be successful. Each key concept has a visual, insights and examples. Additionally, common misconceptions and error alerts are added to those key concepts that students may find troublesome as a signal to teachers that students may need extra support. By providing a "Math Background" that unpacks learning progressions through the lens of Big Ideas, teachers are equipped to move beyond isolated standards and instead foster the deep, connected understanding prioritized by the California Math Framework.
    - Example at the Lesson Level:
        - The “Connect to Culture” provides activities to use with each session to aid in connecting with and leveraging the diverse background and experience of all students. Activities touch on a wide variety of topics such as travel, animals, video games, sports, history and celebrations. When implemented within the session it can help teachers increase their sociocultural knowledge about the students they serve.
    - Example at the Session Level:
        - The “Session Overview” provides a detailed description of each component, clarifying its specific purpose and effective implementation. These session tools vary, some focus on student strategies (e.g., Select and Sequence Student Strategies), while others focus on support (e.g., Support Partner Discussion) or providing guidance on misconceptions (e.g., Common Misconception).
        - Clearly labeled session components and suggested timing support teachers in pacing instruction and making informed decisions when adjustments are needed.