CALIFORNIA CURRICULUM COLLABORATIVE

Illustrative Mathematics | Kendall Hunt

Between the Greens

Project Overview

IM® 360 California (Kendall Hunt) 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" rated 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

Illustrative Mathematics | Kendall Hunt (IMKH) is organized into units, each built around a coherent mathematical storyline. Units contain a sequence of lessons, and each lesson includes multiple instructional activities that develop the unit's Big Ideas. A Course Guide, unit & section overviews, and pacing tools support long-range planning. Lessons follow a consistent four-part structure: Warm-Up, Instructional Activities, Lesson Synthesis, and Cool-Down. Activities center on problem-based learning with embedded Mathematical Language Routines and teacher guidance to support discussion and build on student thinking.

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.

- IMKH 360 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 learners.

    - Examples at the Course Level (Teacher Course Guide):
        - The California English Language Development (ELD) Standards have been incorporated throughout the curriculum, aligned to Mathematical Practices (MP) 1, 3, and 6. The reason for this is that MP1, MP3, and MP6 are language-intensive practices that focus on sensemaking of spoken and written text, engagement in dialogue and critique, and processing different forms of verbal and visual language to attend to precision. The curriculum's approach to addressing the 19 CA ELD standards varies and can take place in a warm-up, activities, or cool-down. Aligning the ELD standards with the math practices helps teachers move students towards doing math through conversation and writing.
    - Examples at the Unit Level:
        - Each unit includes a narrative describing the mathematical progression, a dedicated Progression of Disciplinary Language section, and new terminology used. This section identifies the language functions students are expected to develop across the unit, such as comparing, explaining, describing, and justifying, and maps those functions to specific lessons and content.
    - Examples at the Lesson Level:
        - Every lesson includes language goals that are embedded in the lesson goals that define how students will understand and produce language during mathematical activities.
    - Examples at the Activity Level:
        - "Access for English Learners" include MLRs for select activities to provide all students with explicit opportunities to develop mathematical and academic language proficiency. The first occurrence of each routine includes detailed guidance for how to successfully conduct the routine. Subsequent instances include an abbreviated run-though. Teachers provide guidance that can take many forms such as fostering students' partner interactions or having them create visual displays. This support also notes which linguistic demands (i.e., reading, writing, speaking, listening, conversing, and respenting) it is advancing. Differentiation is explicit within "Access for Students with Disabilities" sections attached to specific activities. These include support and challenge suggestions that maintain cognitive demand while adjusting structure, representation, grouping, or questioning, aligned with Universal Design for Learning principles.

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.

- Examples at the Unit Level:
  - The domains of the California Common Core Standards, which are part of the California Mathematics Framework, make up the overarching structure of the materials. The drivers of mathematical investigation are supported as well as each Big Idea is assigned a content connection(s) throughout units, and lessons. On the student side this is represented as “Student-Facing” goals, and targets. For teachers, this connection provides a coherent roadmap that prioritizes depth over breadth, allowing them to focus their instructional time on the most high-leverage concepts that drive student understanding.
- Examples at the Lesson Level:
  - IMKH lessons feature clearly defined Student Task Statements that center the mathematical problem as the driver of instruction. The task precedes formal explanation, positioning students to explore, reason, and discuss before ideas are consolidated. This task-first structure aligns with the Framework’s call for problem-based learning and sustained sense-making.
  - Lessons are designed with low-floor/high-ceiling in mind as they provide multiple access points for entry to eliminate barriers. Each lesson also includes supplemental instructional strategies, labeled “Access for Students with Disabilities”. Implementation of these supports not only facilitates multiple means of engagement, representation, and action or expression, but also provides targeted strategies designed to enhance accessibility and eliminate learning obstacles, providing students with multiple entry points and methods of showing their understanding.
- Examples at the Activity Level:
  - "5 Practices" is an instructional routine that allows students to anticipate, monitor, select, sequence, and make connections between their and their classmates' responses. Activities that include this routine are designed to allow students to solve problems in ways that make sense to them. Promoting productive and meaningful conversations between students and teachers is essential to success in a problem-based classroom. Teachers benefit by having a clear roadmap for facilitating high-quality discourse. Students benefit by seeing multiple approaches to a problem and making connections between these approaches.
  - Warm-up routines such as "Notice and Wonder" and "Which Three Go Together?" are used at the start of lessons to ensure every student can enter the mathematical conversation. These tasks are a strength because they allow for multiple valid observations, validating student intuition before moving into formal concepts. Teachers benefit from immediate formative assessment of student thinking and students benefit from a classroom culture where their initial curiosities are valued as part of the mathematical process.

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- The assessments in IMKH v360 California measure learning and align with conceptual goals while simultaneously cultivating student agency, mathematical identity, and equitable access for all learners.

    - Examples at the Course/Unit Level:
        - End-of-Unit assessments include the breadth of all content for the full unit, with emphasis on the content from the second half of the unit. Assessments are aligned with the California Standards and the Big Ideas of the unit and can have multiple choice, multiple response, short answer, restricted constructed response, and extended response problem types. All problems include a complete solution and standards alignment. Multiple-choice and multiple-response problems often include a reason for each potential error that a student might make. Constructed-response and extended-response items include a rubric. Sample responses and sample errors are given with the rubric based problems for each tier of response. Unlike formative assessments, problems on summative assessments generally do not prescribe a method of solution. This ensures that assessments accurately reflect the depth of understanding required by the California Math Framework, providing a more accurate picture of student mastery across multiple standards.
    - Examples at the Lesson Level:
        - “Cool-downs” are at the end of lessons and formatively assess students’ thinking in relation to an important math concept from the day’s learning. Each “Cool-down” is accompanied by guidance on how to continue teaching grade-level content, with appropriate and aligned practice and support for students. The guidance falls into three categories (More Chances, Points to Emphasize, Press Pause), with suggestions on next steps if most students struggle with the Cool-down. This framework-aligned approach shifts the focus from rote grading to a "reengagement" model, where teachers can strategically adjust their moves to address misconceptions or deepen understanding before moving on to new content.
    - Examples at the Activity Level:
        - Student Journal Prompts use writing as a catalyst in learning mathematics as it gives students an opportunity to describe their feelings, thinking, and ideas clearly. It is also another way to nurture language development. A list of prompts are provided to the teacher to give to students at any time throughout the year. Prompts are split into two categories “Reflecting on Content and Practices” and “Reflecting on Learning and Feelings about Math”. Prompts for the first category focus on students’ learning, or on specific learning objectives in each lesson. Prompts for the second category are more metacognitive and focus on students’ feelings, mindset, and thinking around using mathematics.

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.

- IMKH 360 California builds teacher knowledge by offering clear, purposeful guidance, usable planning tools, and suggested instructional routines and classroom structures.
    - Examples at the Course/Unit Level:
        - "Teacher Reflection Questions" encourages reflection on the classroom teaching and learning. Each of these sections includes three teacher-directed reflection questions on the mathematical work or pedagogical practices of the lesson. The questions are drawn from three themes: Mathematical Content and Student Thinking, Pedagogy, and Access and Equity. When implemented successfully these questions prompt reflection and challenge the assumptions teachers make, about mathematics, learners of mathematics, and the communication of mathematics in their classrooms.
    - Examples at the Lesson Level:
        - The "What's in an IM Lesson" section gives clear guidance on parts of a typical lesson. It goes through all four phases (Warm-up, Instructional activities, Lesson Synthesis, and Cool-down) of a lesson, explaining the purpose and importance, the benefits to students, and timing for each phase. Additionally, guidance is provided on how to incorporate "optional" activities and explaining why they are optional. By explaining the purpose and importance of each phase, the curriculum helps teachers build their pedagogical and content knowledge allowing them to move beyond just following a script.
    - Examples at the Activity Level:
        - "Building on Student Thinking" provides guidance to teachers, based on students' understandings and ideas. This section offers look-fors and questions to support students as they engage in an activity. Teachers monitor students as they work on an activity to gain insight into what students know and are able to do. Based on these insights, the "Building on Student Thinking" section provides questions that advance students' understanding of mathematical concepts, strategies, or connections between representations