

California Department of Education

Executive Office

SBE-003 (REV. 11/2017)

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# California State Board of EducationJuly 2023 AgendaItem #11

## Subject

Adoption of the 2023 Mathematics Framework for California Public Schools, Kindergarten Through Grade Twelve.

## Type of Action

Action, Information, Public Hearing

## Summary of the Issue(s)

California *Education Code* (*EC*) Section 60200 requires the State Board of Education (SBE) to review and adopt curriculum frameworks and evaluation criteria for the adoption of instructional materials. *EC* Section 60204 calls for the Instructional Quality Commission (IQC) to recommend curriculum frameworks to the SBE. On May 19, 2021, the IQC voted to recommend that the SBE adopt the draft *Mathematics Framework for California Public Schools (Mathematics Framework)*. The SBE must hold a public hearing before taking action on the draft *Mathematics Framework.*

## Recommendation

The California Department of Education (CDE) recommends that the SBE hold a public hearing and adopt the draft *Mathematics Framework*, including the revisions proposed in response to the public feedback received during the second field review. The CDE also recommends that the SBE delegate authority to SBE and CDE staff to make any necessary revisions as the document is professionally edited and prepared for publication. The current draft *Mathematics Framework* is available on the CDE Mathematics Curriculum Framework web page at <https://www.cde.ca.gov/ci/ma/cf/>.

## Brief History of Key Issues

The SBE adopted the California Common Core State Standards for Mathematics (CA CCSSM), with California additions, in August 2010 and subsequently adopted revisions to the standards in January 2013. These standards are the current subject-matter standards in California for mathematics. The SBE adopted the *Mathematics Framework*, 2013 Revision, in November 2013, followed by the adoption of kindergarten through grade eight instructional materials aligned to the CA CCSSM in 2014.

In anticipation of the next instructional materials adoption, the SBE is scheduled to adopt a revision of the *Mathematics Framework.* This revision will update the guidance for teachers, administrators, and other educational decision-makers to ensure effective implementation of the CA CCSSM and inform the upcoming adoption of instructional materials.

The revision of the *Mathematics Framework* follows an established multistep process, as outlined in the June 2022 information memorandum posted on the CDE website at [www.cde.ca.gov/be/pn/im/infomemojun2022.asp](http://www.cde.ca.gov/be/pn/im/infomemojun2022.asp).

The timeline, posted at <https://www.cde.ca.gov/ci/ma/cf/mathfwrevtimeline2021.asp>, outlines the major steps in the *Mathematics Framework* revision process. The first step was the convening of four focus groups of educators pursuant to the *California Code of Regulations,* Title 5, Section 9511(c). The focus groups were convened in San Diego, Sacramento, Santa Clara, and Baldwin Park; the Sacramento and Santa Clara focus groups included participation from other counties via remote access. The comments provided by the educators attending the focus groups became the basis of the guidelines for the framework development process that were recommended by the IQC at its meeting on November 14–15, 2019, and approved by the SBE at its meeting on January 8–9, 2020.

The SBE-approved guidelines set up expectations for how the framework would be revised. They included a list of general requirements and specific instructions that the revision address each of the following:

* Provide explicit learning progressions in mathematics.
* Include guides for planning instruction for grade-level mathematics.
* Address the issues related to mathematics instruction in grades eight and beyond.
* Promote access, equity, and inclusion for all students.
* Update and revise the chapter on instructional materials support.
* Satisfy various statutory requirements.

The timeline was revised several times, beginning in May 2020, after Governor Newsom issued Executive Order N-33-20, which immediately directed “all individuals living in the State of California to stay home or at their place of residence, except as needed to maintain continuity of operation of the federal critical infrastructure sectors.” In response, the March, April, and May 2020 meetings of the Mathematics Curriculum Framework and Evaluation Criteria Committee (CFCC) were postponed to allow time to transition to virtual meetings. The dates of the subsequent milestones of the timeline were also adjusted several times, including final SBE action. The CFCC ultimately met eight times between February and December 2020. At each of the meetings, the CFCC members provided direction to the contracted writing team, who responded with revised chapters at subsequent meetings. Each chapter underwent several revisions during this process.

Mathematics Subject Matter Committee (SMC) members of the IQC attended each of the CFCC meetings as observers. At the conclusion of the CFCC’s work, they voted to recommend their draft of the *Mathematics Framework* to the IQC. All of the meetings of the CFCC were open to the public, and an opportunity for public comment was provided during each day of meetings. Throughout the *Mathematics Framework* development process, there were multiple opportunities for public input at all public meetings and during two 60-day public review and comment periods.

### Summary of the First Field Review

At its January 2021 meeting (agenda, minutes, and recording available at <https://www.cde.ca.gov/be/cc/cd/iqc2021mtgagendas.asp>), the IQC approved the posting of the draft for the first 60-day public review and comment period, which took place in February through April in 2021. Commenters could submit comments via an online survey form posted on the CDE website or via email to a dedicated email box for the math framework revision. Altogether, more than 500 individuals and groups submitted suggestions for changes to the draft.

A majority of the comments received were from parents, teachers, and students concerned about the framework’s approach to middle and high school coursework, although some commenters supported its approach. Many of the comments dealt with the issue of math acceleration in middle school and the draft guidance around grade eight algebra. Many commenters were concerned that the framework’s advocacy for keeping students together in the same mathematics courses through grade ten would jeopardize chances for advanced students to reach calculus by twelfth grade, therefore limiting their access to Science, Technology, Engineering, and Mathematics (STEM) majors and/or careers. This tied into a debate about tracking students and whether the draft’s recommendations would exacerbate inequities for students from historically marginalized groups. Some felt that the framework’s recommendations would increase those inequities by reducing opportunities for students of color with high ability.

Several hundred commenters submitted concerns about citations to *A Pathway to Equitable Math Instruction*. Others advocated for a more user-friendly document that is shorter in length. Finally, many commenters provided specific suggestions for line edits that were considered by the IQC at its meeting on May 19–20, 2021. Many of those suggested edits were integrated into the revised draft for the second field review.

### Instructional Quality Commission Action and Second Field Review

Working with the writing team, the CDE developed recommendations for edits to the draft based on public comment received and the SBE-approved guidelines, posted on the CDE website at <https://www.cde.ca.gov/ci/ma/cf/mathfwcfccguidelines.asp>, for IQC consideration at its May 2021 meeting.

At its May 2021 meeting (see link above), the IQC recommended the *Mathematics Framework,* with additional edits,to the SBE following a second 60-day review and public comment period. The Mathematics SMC made recommendations based on public comment and its own review of the draft framework. A summary of these recommendations includes the following:

* Provide specific guidance for local educational agencies on mathematics acceleration in middle school.
* Ensure that there is at least one vignette in each of the grade-level chapters that addresses how to teach students in heterogenous classrooms.
* Remove all references to *A Pathway to Equitable Math Instruction* throughout the framework.
* Rewrite sections to be clear on guidance for meeting the needs of high-achieving students and guidance on accelerated pathways, specifying that those decisions are local.
* Change the title of the section “Issues with Acceleration in Middle Grades” to clarify that the guidance does not reject acceleration as an option.
* Make clarifying edits to a vignette and graphic included in chapter 8.

The SMC also approved a list of recommended edits (included as an attachment to the May 2021 IQC agenda) that included hundreds of edits suggested by the public comment that would be addressed at the writers’ discretion.

At its July 2021 and November 2021 meetings, the SBE extended the timeline to allow the writing team additional time to implement these changes. As a result of the latter extension, the second 60-day review and comment period was delayed until March 2022. The second 60-day review and comment period took place from March 14 through May 16, 2022. The comments are available to the public at <https://cde.box.com/s/wqkw7ofgj0an61idclzfc5sziqzdejt3>.

The second 60-day review period also had a large volume of comments, including many detailed, actionable suggestions for edits to the draft framework. In response to the large volume of suggested edits, and because the contract with the writing team had reached its conclusion, CDE and SBE staff worked with mathematics experts at the Region 15 Comprehensive Center at WestEd (R15CC) to review the draft and the public comments and recommend additional edits. At its July 2022 meeting, the SBE acted to extend the timeline once again, with final action to take place in 2023. During the rest of 2022 and early 2023, the R15CC worked with SBE and CDE staff to prepare a revised draft framework for the SBE’s consideration. This revised draft addresses many of the critiques and suggestions for improvement made by the public during the framework revision process. The revised draft is posted on the CDE website at <https://www.cde.ca.gov/ci/ma/cf/>.

### Notable Improvements Responsive to Public Comment

Guidance around meeting the needs of high-achieving learners, as well as those who need greater assistance, has been clarified and strengthened to ensure attention to a range of instructional options, including personalized learning, differentiated instruction, strategic grouping, additional course-taking opportunities, and acceleration. The recommended edits to the draft incorporate the conditions research has found to be associated with successful acceleration, as well as strategies for reaching advanced coursework without acceleration. It also describes means for ensuring all students have the opportunity to gain access to advanced level mathematics courses at various junctures.

To bring the guidance into alignment with SBE guidelines and the CA CCSSM, the recommended edits to the draft affirm two high school pathways––Traditional and Integrated. In response to the explosion of data use across fields and the opportunities to bring mathematics alive for students, the recommended edits incorporate ways to integrate data use into math instruction throughout the grade spans and in both high school pathways. The draft also clarifies the autonomy of local schools and districts in designing courses and pathways that best meet the needs of their students and families. The high school pathway discussion and graphic were revamped to more clearly articulate course sequencing and course options, including pathways to pre-calculus and calculus, as well as options for financial literacy, data science, statistics, and discrete math. Citations to research and other sources have been reviewed and updated to address concerns raised during the field review.

The revised draft reflects hundreds of individual line edits throughout all of the chapters responsive to hundreds of specific public suggestions fielded during the second of two 60-day public comment periods. It also includes structural and content changes responsive to more general public comments, direction from the IQC, and the SBE-adopted framework guidelines. The public comments generally underscored the importance of clear phrasing and reader-friendly structuring and formatting of information throughout the framework. Recognizing this, the editing of each chapter attended to providing clear and concise wording as well as to removing redundancies and improving graphics. In some places text was rearranged, subheads or paragraph heads were added, and/or transitions were created to improve reader friendliness. To improve the flow and readability of the text, longer vignettes were moved to an appendix, with hyperlinks. To support framework-wide cohesion, discussion of the instructional design approach, which recurs across chapters, was clarified and standardized.

Chapters 1, 2, 5, 8, 9, and 13 reflect more significant content changes. Those changes are summarized in attachments 2 and 3.

### Next Steps

The CDE is formally recommending that the SBE adopt the draft *Mathematics Framework*. The SBE may make additional edits to the draft *Mathematics Framework*,which will be incorporated into the document by CDE staff before it is published. Once the SBE takes action, the SBE and CDE staff will make the necessary revisions as the document is professionally edited and prepared for publication.

## Summary of Previous State Board of Education Discussion and Action

**July 2022:** The SBE revised the Schedule of Significant Events to provide more time to implement edits based on the public comments received during the Second Field Review.

**November 2021:** The SBE revised the Schedule of Significant Events to provide more time to implement the edits requested by the IQC at its May 2021 meeting.

**July 2021:** The SBE revised the Schedule of Significant Events to reflect changes due to the unexpectedly voluminous public comment from the first field review of the draft framework.

**May 2020:** The SBE revised the Schedule of Significant Events to reflect changes due to the COVID-19 pandemic.

**September 2019:** The SBE revised the Schedule of Significant Events for the Revision of the *Mathematics Framework for California Public Schools, Kindergarten Through Grade Twelve*.

**May 2019:** The SBE adopted the Schedule of Significant Events for the Revision of the *Mathematics Framework for California Public Schools, Kindergarten Through Grade Twelve* and the Application for Appointment to the Mathematics Curriculum Framework and Evaluation Criteria Committee.

**November 2013:** The SBE adopted the *Mathematics Framework for California Public Schools: Kindergarten Through Grade Twelve*, 2013 Revision.

**January 2013:** The SBE adopted the revised CA CCSSM.

## Fiscal Analysis (as appropriate)

The CDE estimates the cost to revise the *Mathematics Framework* to be a total of $610,000 over five budget years, 2019–20, 2020–21, 2021–22, 2022–23, and 2023–24. This cost includes the contracted writing team; the expenses of the focus groups and the CFCC; the meetings of the IQC and Mathematics Subject Matter Committee; and editing, accessibility, and graphic design services.

## Attachment(s)

* Attachment 1: The draft *Mathematics Framework* recommended by the IQC on May 19, 2021, with edits proposed by the CDE, SBE staff, and R15CC at WestEd (991 pages). This attachment is available on the CDE *Mathematics Framework* web page at <https://www.cde.ca.gov/ci/ma/cf/>.
* Attachment 2: Framework Overview (8 pages)
* Attachment 3: Summary of Revisions by Chapter (9 pages)