Middle School Math Pathways

SMFCSD Board Presentation

November 18, 2021

Board Approved Action in April 2022

Create a single heterogeneous Math 6 course for all

To address significant challenges:

1. Impact of Pandemic on 6th compressed math placement
2. Ongoing concerns about placement out of 5th grade
3. Disproportionate enrollment & inequitable outcomes

Plan 7th/8th grade math pathways to improve math performance, increase Algebra enrollment and improve the diversity of enrollment

As a result of April-December 2021 stakeholder engagement and planning, to be implemented Fall 2022

Tonight, for Board information

Staff proposal for

7th/8th grade math pathways to improve math performance, increase Algebra enrollment and improve the diversity of enrollment

Goals of this Proposal

By 2023-24,

- 45% of 8th graders enrolled in Algebra, from current 22%
- 35% of 8th grade Latinx students enrolled in Algebra, from current 4%
- 85% of 8th graders earning C or better in math
- 53% of 8th grade Latinx students meeting/ exceeding standard on Math CAASPP, from current 23%

See 2021-22 LCAP goals

Proposal Informed by Stakeholder Engagement

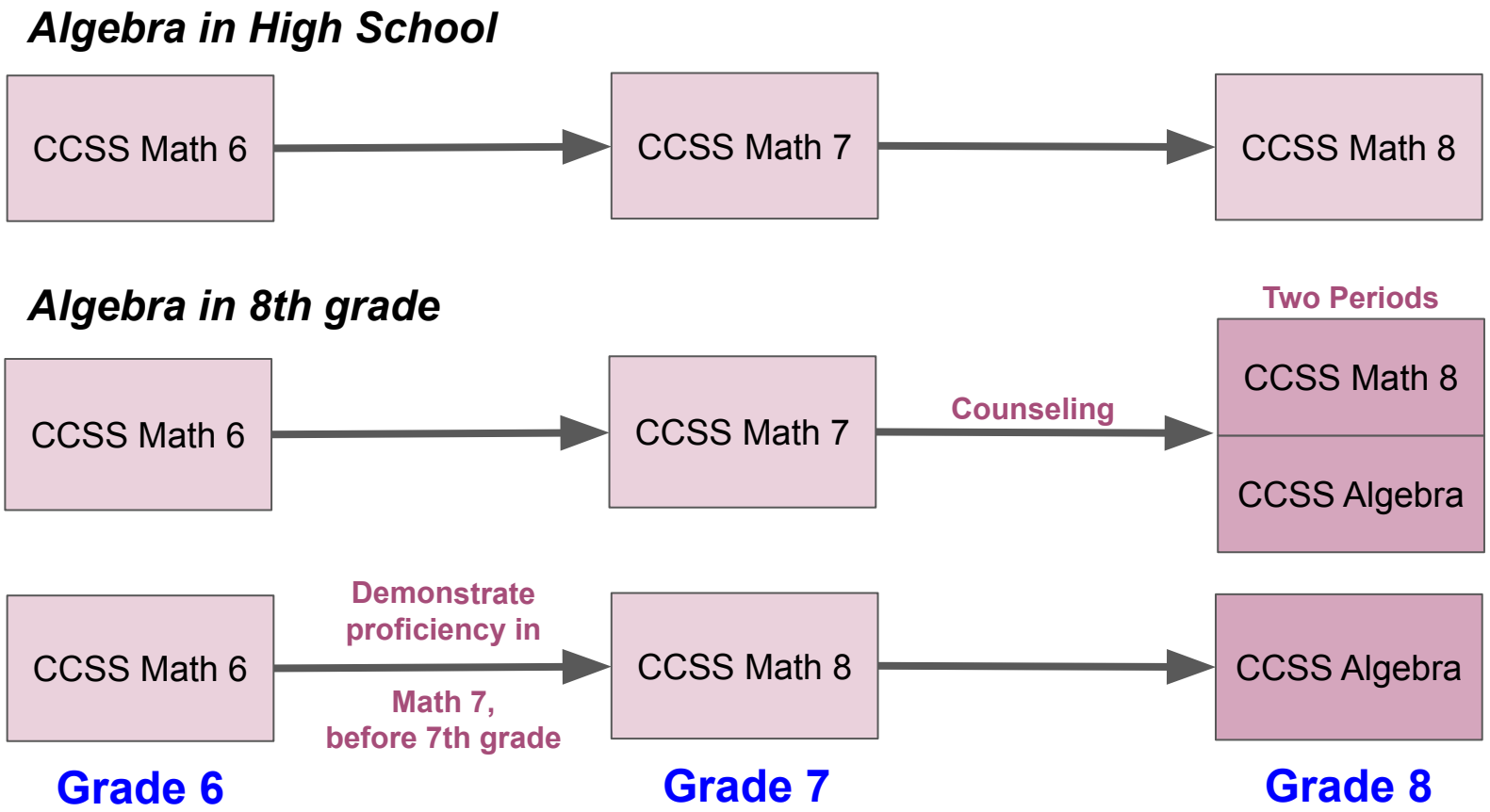
Families & Students

- Cafe con Diego: at Abbott, Bowditch, Borel, Bayside
- Board Community Workshops at Borel & Bayside
- YouTube Town Hall Live Streams
- Math 6 Family & Student Survey

Staff

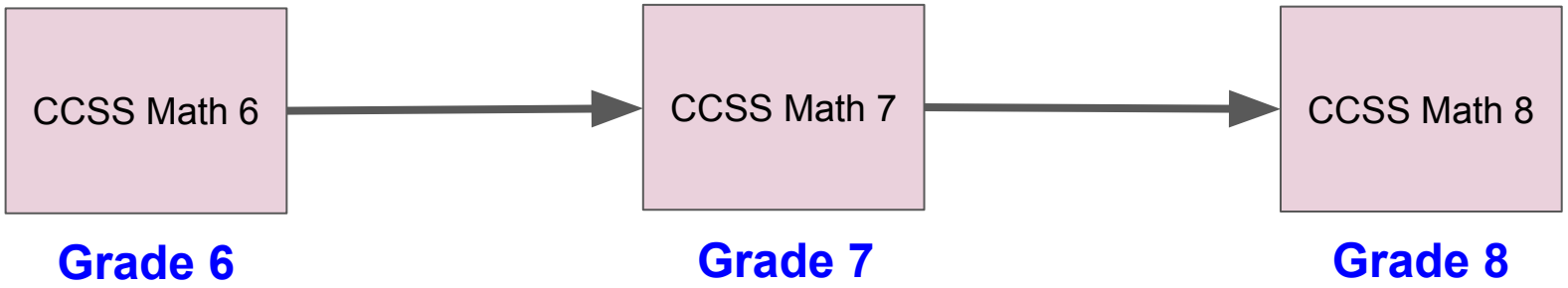
- Middle school math teacher engagement and survey
- Site Leader engagement

Proposal: 3 Pathways



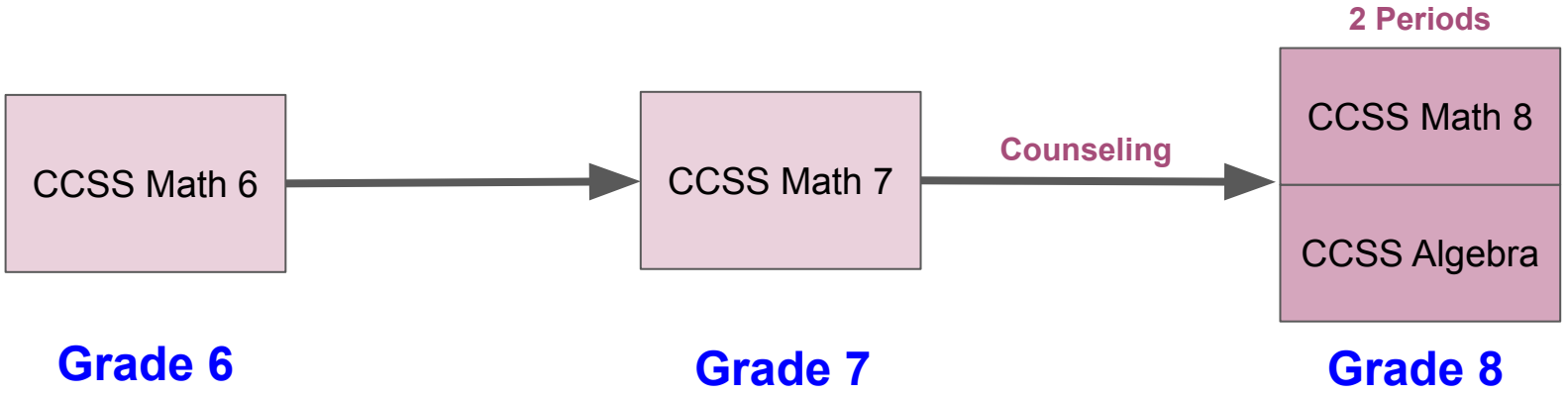
Pathway to Algebra in High School

- Common Core aligned, grade-level course work aimed to prepare students for the rigors of high school mathematics
- Each high school in the San Mateo Union High School District offers a pathway to Advanced Placement (AP) mathematics courses for students who take Math 8 in 8th grade and Algebra in high school.
- With High School compression, expanded AP opportunities



Pathway to Algebra in 8th Grade--2 Periods

- Complete all Common Core middle school math courses and Common Core Algebra without compression
  - 180 hours in each course: 2 periods of Math 8 in the Fall and 2 periods of Algebra in the Spring
- Counseling & recommendation in place of an assessment.
- Access to expanded AP/advanced courses in high school

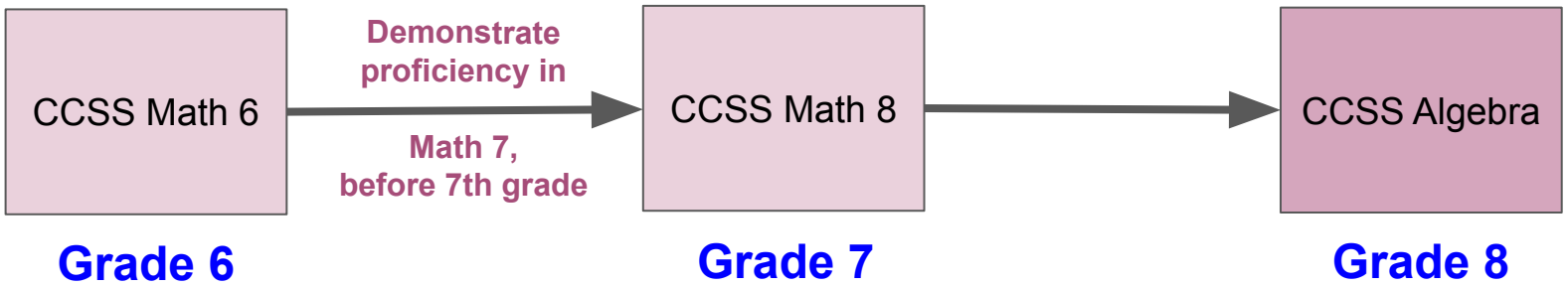


Stakeholder Support for 2-Periods Pathway

- Student Survey: 48% support this pathway as an alternative
  - If all 400 took this pathway … goal reached!
- Family Survey: 47% support
- Teacher Survey: 66% support

Pathway to Algebra in 8th Grade--1 Period

- Demonstrate proficiency in Common Core Math 7, before 7th grade
- Several options to demonstrate proficiency (see following slide)
- Allows students to complete Common Core Math 8 and Common Core Algebra without compression or 2 periods in 8th
- Access to expanded AP/advanced courses in high school



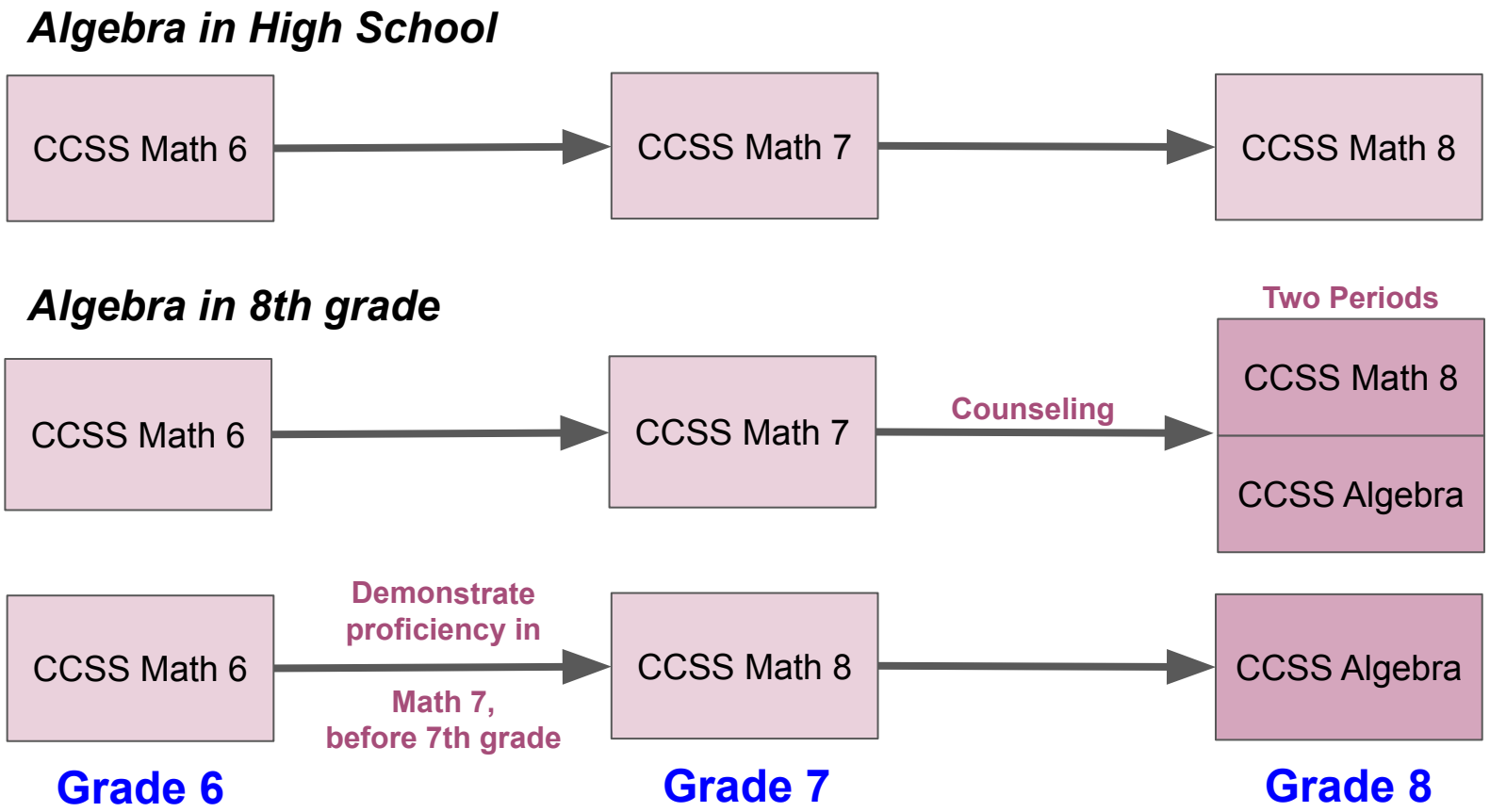
Approaches to Demonstrate Math 7 Proficiency before 7th Grade

1. Pass Math 7 “end of course” assessment
    - By February 1, to allow for option 2, if needed
2. Math 7 Independent Studies with optional online, live support
    - February to May 1
3. Online, live class outside of school
    - February to May, pending staffing
4. In-person Summer School, June 20 to July 29

Stakeholder Support for 1-Period Algebra Pathway

SURVEY	Student	Family	Teacher
Overall Support for this Pathway	67%	98%	60%
Of those who support this pathway, the following percent thought a specific approach would work well.			
1. Pass “end of course” test	45%	27%	31%
2. Independent Studies, with online support	22%	22%	17%
3. Online, live class outside of school	10%	21%	12%
4. Summer School	10%	14%	9%

Proposal: **Mix** of 3 Pathways will enable us to meet Goals



1 Period Pathway: Why accelerate thru Math 7? Why not Math 8?

California Framework Math Standards before/since Common Core

CA Math 7	CA Math 8	Algebra 1	High School Math
-	- Solving and simplifying single variable expressions and equations.	- Proportional Relationships - Linear Equations and Inequalities - Systems of Equations - Roots and Exponents - Introduction to Functions - Expressions and Polynomials - Quadratic Equations	- Transformations & Congruence - Angles and Parallel Lines - Pythagorean Theorem - Modeling with Functions - Interpreting and Building Functions - Linear, Quadratic, and Exponential Models

1 Period Pathway: Why accelerate thru Math 7? Why not Math 8?

California Framework Math Standards before/since Common Core

CCSS Math 7	CCSS Math 8	CCSS Algebra 1	High School Math
- Solving and simplifying single variable expressions and equations.	- Proportional Relationships - Linear Equations and Inequalities - Systems of Equations - Roots and Exponents - Introduction to Functions	- Linear Equations, Inequalities, and Systems - Expressions and Polynomials - Quadratic Equations and Functions	
	- Transformations & Congruence - Angles and Parallel Lines - Pythagorean Theorem	- Modeling with Functions - Interpreting and Building Functions - Linear, Quadratic, and Exponential Models	
	- Analyzing Graphs - Bivariate Data	- Categorical & Quantitative Data	

Upon Board approval …
Finalize Timeline for 1-Period Algebra Pathway

- Backward map from Master Scheduling deadlines
- Set date for Math 7 “end of course” assessment: ~February 1
- Set start & end dates for Math 7 Independent Studies
- Confirm staffing to determine Online Live option and Summer School. Set start & end dates.