Accelerating to Algebra: Initiative Overview, Timeline, and Processes

November 2019
WHY???
Multiple research studies have shown that taking more rigorous, higher-level mathematics courses is associated with positive high school and postsecondary outcomes.

*Example:* Study that followed Florida students over time found that taking at least one higher-level math course (beyond Algebra I) by the fall of 10th grade was correlated with:

- Higher 10th grade math assessment scores
- Higher graduation rates
- Higher 4-year college enrollment
• More than 75% of students are not taking Algebra I in eighth grade and therefore are significantly less likely to reach advanced, college-level coursework by 12th grade.

• Students often do not have the opportunity to take more advanced courses due to scheduling and sequencing limitations.

*BUT* many students currently do not have the opportunity to take advantage of advanced coursework offerings
AND there are significant differences in access to these advanced courses for different student groups.

- Non-economically disadvantaged students in the district are significantly more likely to be enrolled in an advanced math course in 8th grade than their economically disadvantaged peers.
• Black/African American and Hispanic students in the district are significantly less likely to be enrolled in an advanced math course in 8th grade than their peers.

**Math Enrollment for Students in Grade 8**

- All Students: 28%
- Asian: 58%
- Black or African American: 14%
- White: 44%
- Two or More Races: 33%
- Hispanic: 11%

**Advanced Math (Algebra I/Geometry)**
• Believe that all learners deserve a chance at success in the future
• Prepare all learners to have limitless possibilities after high school
• Help learners become interested and curious about mathematical ideas and exploring answers to relevant questions
• Open doors of opportunity rather than close opportunities for hope
• Commit to high expectations for all learners
• Provide culturally relevant instruction
• Develop positive, caring relationships with learners
District Goal:

Long-term District Goal: In August 2020, all Kindergarten students will begin a path of study in mathematics to prepare them to complete Algebra I in Grade 8 in 2028-2029.

Short-term District Goal: In August 2020, Fulton County Schools will provide an opportunity for Grade 6 students to begin a path of study in mathematics to prepare them to complete Algebra I in Grade 8 in 2022-2023.
Current State
• Richmond County Schools
• Gwinnett County Schools
• Clayton County Schools
• Richmond County is in their third year.
• At the end of Grade 7, students are identified to take Algebra I in Grade 8 or Algebra I (with embedded Grade 8 standards) over two years Grade 8 and 9.
• In 2018-2019, 33 percent (666 students) of Grade 8 students took Algebra I in Grade 8 while 67 percent (1,359 students) are continuing to complete Algebra I this school year in Grade 9. Of the 666 students, 26 percent scored Proficient or higher on the Algebra I End of Course Test. Of the 1,359 students, 6 percent scored Proficient of higher on the Grade 8 Math End of Grade Test.
• Gwinnett County is in their first year.

• Using a similar model to Richmond, 75 percent of their Grade 8 students are taking Algebra I and will take the End of Course in May.

• Twenty-five percent are taking Grade 8 Math (with some Algebra standards embedded) and will take the Grade 8 Math End of Grade Test.
• Clayton County is two years away.

• This year they have enrolled all Grade 6 students in the state's accelerated math courses. Students will take Math 6 and 7.1 this school year, Math 7.1 and 8 next school year (2020-2021) and Algebra I in (2021-2022).
Long- and Short-term Strategies

### Long-term Strategy

- Improve Student Readiness
  - Birth to 5 Ready to Learn Partnerships
  - Re-design K-7 Math Curriculum

### Short-term Strategy

- Strengthen Continuous Achievement
  - Simplify Placement Guidelines
  - Implement GaDOE Accelerated MS Curriculum (2020-2026)

Birth to 5 Ready to Learn Partnerships
Re-design K-7 Math Curriculum
Simplify Placement Guidelines
Implement GaDOE Accelerated MS Curriculum (2020-2026)
Fall 2019: Data Discussions
Invite Private Providers to Data Discussion with FCS staff. Share GKIDS Readiness Data. Provide insight on FCS transition services.

Winter 2020: Early Childhood Summit & Regional Meetings
Enlist Community Partners and build support for Early Childhood Programs. Build Awareness of Early Childhood resources and connect families to support in each Board Member's District.

Spring 2020: Host 2 Parent Education Summits – (Kindergarten Round-Up 2.0)
Focus on Kindergarten Readiness. Connect parents to resources in the community. Provide health and academic screenings. Register for FCS Kindergarten, Summer Transition, FCS Kindergarten and FCS PREP.

Summer 2020: Expand Summer Transition Programs across the District
Use the Bright from the Start template to offer Rising Kindergarten programs in 30 elementary schools across the district. Target students that did not attend a GA PreK or full day Preschool program. Not income-based.

Fall 2020: Launch FCS PREP
Provide parents with essentials needed to prepare their children (ages 0-5) for school readiness.
We will engage highly effective mathematics teachers, school leaders, and experts in the field of mathematics education to develop a curriculum to prepare all students to succeed in Algebra I in Grade 8.
To begin preparation for all Kindergarten students to begin the accelerated coursework in 2020-21, the district will be engaging in the following action steps this year:

• Early Adopter Implementation with Six Elementary Schools
• Development and Engagement of Educator Advisory Committee
• Engagement of External Partners
• Presentations at Learning Community Principal Meetings
Accelerating to Algebra in 2019-20

To begin preparation for all Kindergarten students to begin the accelerated coursework in 2020-21, the district will be engaging in the following action steps this year:

• **Early Adopter Implementation with Six Elementary Schools**
  – Six schools are implementing “K Enhanced Curriculum” that includes Kindergarten standards as well as standards from Grade 1.
  – Crabapple Crossing, Findley Oaks, Heards Ferry, Shakerag, Stonewall Tell, Summit Hill
To begin preparation for all Kindergarten students to begin the accelerated coursework in 2020-21, the district will be engaging in the following action steps this year:

- **Early Adopter Implementation with Six Elementary Schools**
- **Development and Engagement of Educator Advisory Committee**
  - Committee will be responsible for proposing revisions to the standards course map and sequence to prepare all students for Algebra I by Grade 8.
  - Committee will be made up approximately 20-25, including teachers, instructional coaches, and administrators.
Committee’s Charge

• Work collaboratively in and across grade bands to:
  – Identify key algebraic concepts needed to ensure student success in Algebra I by 8th grade
  – Develop a clear sequence of learning that supports students to develop and master algebraic thinking and concepts in grades K-7
  – Recommend a revised course map and sequence for grades K-7 math
  – Provide recommendations and considerations on student and teacher needs to successfully implement the revised course map and sequence
Committee’s Charge and Role
• Develop a clear sequence of learning of algebraic thinking and concepts in grades K-7
• Begin developing recommended course map and sequence

Research Overview

Development of Algebraic Thinking

1st Meeting: November 5

2nd Meeting: November 20

3rd Meeting: December 9

4th Meeting: January 15

5th Meeting: January 30

• Review external feedback on course map and sequence
• Make revisions
• Finalize second draft

• Make final revisions
• Identify and brainstorm solutions for teacher and student support needs

Educator Advisory Committee Overview
To begin preparation for all Kindergarten students to begin the accelerated coursework in 2020-21, the district will be engaging in the following action steps this year:

• Early Adopter Implementation with Six Elementary Schools

• Development and Engagement of Educator Advisory Committee

• Engagement of External Partners
  – Fulton County has engaged key partners with expertise in the field of mathematics education to provide guidance and feedback regarding the revisions to the standards sequence and course maps as well as implementation of such changes.

Accelerating to Algebra in 2019-20
To begin preparation for all Kindergarten students to begin the accelerated coursework in 2020-21, the district will be engaging in the following action steps this year:

- Early Adopter Implementation with Six Elementary Schools
- Development and Engagement of Educator Advisory Committee
- Engagement of External Partners
- Presentations to Learning Community Principal meetings
  - District leaders will present updates on the progress of the initiative and collect feedback at Learning Community Principal meetings throughout the year.
Long-term Strategy

- Improve Student Readiness
  - Birth to 5 Ready to Learn Partnerships
  - Re-design K-7 Math Curriculum

Short-term Strategy

- Strengthen Continuous Achievement
  - Simplify Placement Guidelines
  - Implement GaDOE Accelerated MS Curriculum (2020-2026)
We will modify the placement guidelines and build a Continuous Achievement Identification Report to simplify the process of identifying students for advanced and accelerated Reading/ELA and Math.
We will offer the state’s accelerated middle school math curriculum to all Grade 6 and 7 students coupled with a STEM-based connections course for beginning and developing learners.
How might we provide a path for all students to take Algebra I by Grade 8?

**GaDOE Accelerated MS Curriculum**

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<thead>
<tr>
<th>Rationale</th>
<th>Timeline &amp; Content</th>
<th>Student &amp; Teacher Supports</th>
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<tbody>
<tr>
<td>The Georgia Department of Education provides a curriculum map and course overview for teaching 6.1, 6.2, and 7.1 in Grade 6 and 7.2, 8.1, and 8.2 in Grade 7.</td>
<td><strong>2019-2020:</strong> Scheduling &amp; Resource Allocation Support for Schools</td>
<td>Required Connections Course for Students &lt; Level 3 on Georgia Milestones</td>
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<td><strong>2020-2021:</strong> Grade 6: 6.1, 6.2, 7.1</td>
<td>i-Ready for additional time on targeted skills</td>
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<td><strong>2021-2022:</strong> Grade 7: 7.2, 8.1, 8.2</td>
<td>District-led Professional Learning Community for Teachers</td>
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<td><strong>2022-2023:</strong> Algebra I in Grade 8</td>
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1. Student mobility
2. Student readiness
3. Teacher preparation/readiness
4. Mental health considerations
Questions?