



# D51 High School Math Course Pathway Change

February 2019

The high school Math Instructional Resource Selection Team (IRST), comprised of 11 high school math teachers and 2 high school administrators, has reached consensus and is recommending that, as a D51 Learning System, we change our high school math course pathway from an integrated pathway to an Algebra/Geometry/Algebra (AGA) pathway beginning in the Fall of 2019.

## What WILL NOT Change:

- The math content, skills, and concepts that will be taught and assessed in our high schools. Our D51 standards-based curriculum is aligned to Colorado Academic Standards. “Standards are the fundamental elements of lesson design, defining the expectations for learning.” (D51 Teaching & Learning Framework)
- The instructional delivery of the math content, skills, and concepts taught and assessed in our high schools. “Instructional delivery is the implementation of instructional approaches supporting learning.” (D51 Teaching & Learning Framework)
  - Our D51 Learning Model ensures instructional delivery that provides learner-centered, standards-based learning that fosters learner agency and ownership.

## What WILL Change:

- The order, or sequence, in which the Standards are taught and assessed.

## What this means for students & teachers:

- Freshman entering high school in the Fall of 2019, as well as accelerated students in middle school, will take Algebra 1 instead of Math 1.
- Students needing to block math as part of their instructional program will take Algebra 1 and Geometry
- Utilizing funds from the 2017 Mill Levy, new resources will be purchased; teachers who have been teaching Math 1 (and those teaching Math 2 for students who block) will receive professional learning to implement new resources within our new course pathway.



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## **A change in course pathway necessitates “rolling implementation.”**

Those students currently engaged in an integrated course pathway will finish this pathway to ensure access and exposure to the instructional experiences needed to achieve the standards.

## **Evidence-Based Rationale for the High School Math Course Pathway Change:**

- The A/G/A course pathway is typically seen in the United States, while an integrated pathway is more typically seen internationally.
- An A/G/A pathway consists of two algebra courses and a geometry course, with some data, probability and statistics included in each course.
- Because the A/G/A pathway is familiar to most U.S. districts, implementing this pathway to the standards may require fewer instructional and curricular changes (in comparison to implementing the integrated pathway).
- An A/G/A pathway is an organized plan for mastering the standards that provides repetition of closely related standards. Due to this organization, the way skills, content, and concepts build on one another is simpler and more explicit; students and teachers engage in sustained instructional focus in one area of the standards each year.
- An analysis of Colorado SAT data suggests a strong majority of the top scoring 184 schools in Colorado are using an A/G/A curriculum.

## **High School Math Teacher Perceptual Input:**

- Some teachers believe traditional is more familiar to D51 teachers, parents, and community members which makes it much easier for teachers to work with and for parents to get help/help their students.
- Some teachers report comments from community members about “this crazy new math.” These teachers believe this kind of response is due to the order the standards are being taught (course pathway), not the standards themselves.
- Some teachers believe there is community “buy in” for A/G/A.
- Some math teams shared the feedback that those who have taught both an integrated and an A/G/A pathway seem to prefer A/G/A.
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**It is important to note that not all D51 high school math teachers preferred the A/G/A course pathway; 26% recommended we continue with an integrated course pathway.** As learning community, the high school math teachers are to be commended for the way each member has committed to actively support this decision.