

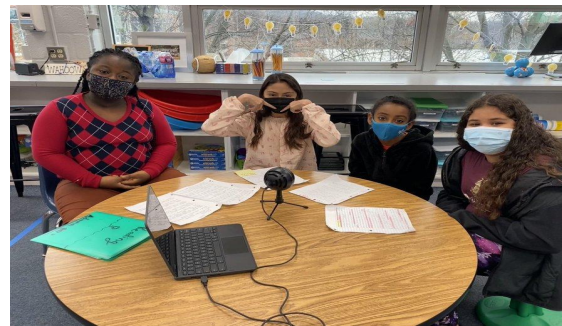
# Middle School Project: Mathematics Pathways

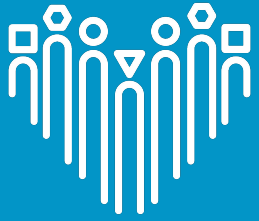
School Board Meeting  
May 5, 2022



# Essential Questions

1. What are Alexandria City Public Schools (ACPS) current **middle school mathematics pathways**?
2. Where is the Virginia Department of Education (VDOE) in **updating mathematics pathways and standards**?
3. What work has ACPS taken to **address mathematics**?
4. What has the **Middle School Project Work Team examined** in the area of mathematics?
5. What are the **next steps** for this subcommittee?





# Current Middle School Math Pathways

Sample	6 <sup>th</sup> grade	7 <sup>th</sup> grade	8 <sup>th</sup> grade
1	Math 6	Math 7	Algebra I
2	Honors Math 6	Honors Math 7	Algebra I
3	Honors Math 7 (Math 6 required)	Algebra I	Geometry



# VDOE Timeline to Update Standards

**2022–2023 School Year**

- A draft of the proposed 2023 Mathematics Standards of Learning (SOL) is presented for review and public comment.

**September 2023**

- The Superintendent of Public Instruction presents the proposed 2023 Mathematics SOL to the Board of Education for final review and adoption.
- The Department of Education posts the final approved documents on its website.

**2024–2025 School Year**

- Crosswalk year: The 2016 and 2023 Mathematics SOL are included in the written and taught curriculum.
- SOL assessments measure the 2016 SOL and include field- test items measuring the 2023 SOL.

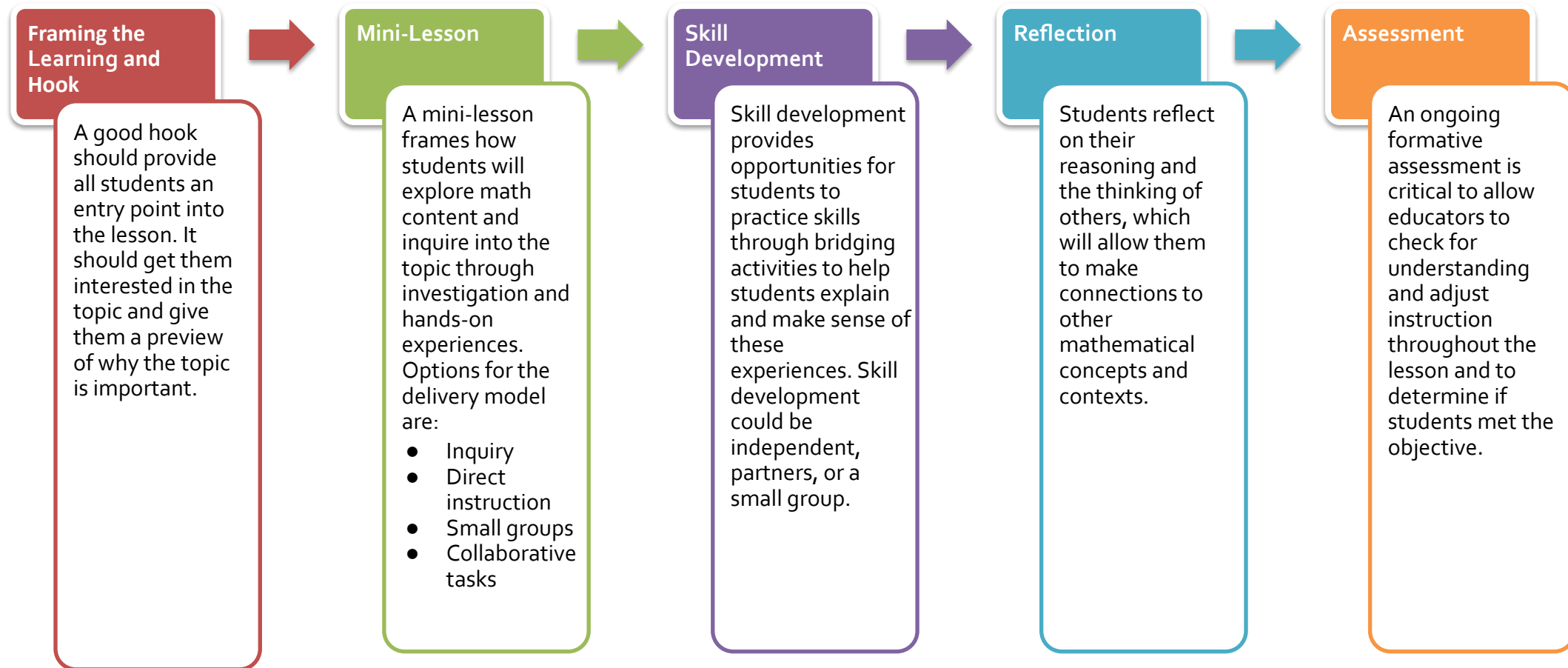
**2025–2026 School Year**

- Full-implementation year: The written and taught curriculum reflect the 2023 Mathematics SOL.
- SOL assessments measure the 2023 Mathematics SOL.

# ACPS Comprehensive K–12 Mathematics Instructional Framework



EQUITY FOCUSED



# Mathematics

## AREAS WITH SERIOUS IMPLICATIONS FOR EQUITABLE ACCESS TO HIGH-QUALITY MATHEMATICS TEACHING AND LEARNING

### GRADE-LEVEL CONTENT

On-grade-level mathematics content must be the focus of students' work.

### EQUITABLE, EFFECTIVE TEACHING PRACTICES

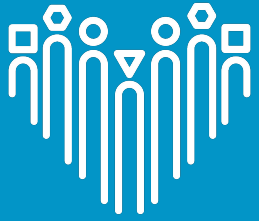
Position all students as competent, confident, and capable learners and doers of mathematics.

### ADVOCACY

Engage in work that supports all students' equitable access to high-quality, meaningful mathematics.

National Council of Teachers of Mathematics and National Council of Supervisors of Mathematics. "Continuing the Journey: Mathematics Learning 2021 and Beyond." July 2021. Retrieved from [https://www.nctm.org/uploadedFiles/Research\\_and\\_Advocacy/collections/Continuing\\_the\\_Journey/NCTM\\_NCSM\\_Continuing\\_the\\_Journey\\_Report-Fnl2.pdf](https://www.nctm.org/uploadedFiles/Research_and_Advocacy/collections/Continuing_the_Journey/NCTM_NCSM_Continuing_the_Journey_Report-Fnl2.pdf).





# Catalyzing Change in School Mathematics

## Key Recommendations

### Broaden the purposes of learning mathematics.

Each and every student should develop **deep mathematical understanding**; **comprehend** and **critique** the world through mathematics; and **experience** the **wonder, joy, and beauty** of mathematics, which all contribute to a **positive mathematical identity**.

### Create equitable structures in mathematics.

Middle school mathematics should **dismantle inequitable structures**, including tracking teachers, as well as the practice of ability grouping and tracking students into qualitatively different courses.

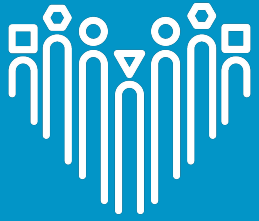
### Implement equitable mathematics instruction.

Mathematics instruction should be **consistent** with **research-informed** and **equitable teaching** practices that **foster** students' **positive mathematical identities**.

### Develop deep mathematical understanding.

Middle schools should offer a **common, shared pathway** grounded in the use of mathematical practices and processes to coherently **develop deep mathematical understanding**, ensuring the **highest-quality mathematics education** for each and every student.

# Research-Equitable Teaching Practices in Mathematics



EQUITY FOCUSED

Mathematics Teaching Practices	Equitable Teaching	Supporting Professional Learning Resources
<ul style="list-style-type: none"> <li>Establish <b>mathematics goals</b> to focus learning.</li> <li>Effective teaching of mathematics establishes <b>clear goals</b> for the mathematics that students are learning, <b>situates goals</b> within learning progressions, and uses the goals to <b>guide instructional decisions</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Establish <b>learning progressions</b> that <b>build students' mathematical understanding, increase their confidence, and support their mathematical identities</b> as doers of mathematics.</li> <li>Establish <b>high expectations</b> to ensure that each and every student has the opportunity to <b>meet the mathematical goals</b>.</li> <li>Establish <b>classroom norms</b> for participation that position each and every student as a <b>competent mathematics thinker</b>.</li> <li>Establish <b>classroom environments</b> that <b>promote learning</b> mathematics as just, <b>equitable</b>, and <b>inclusive</b>.</li> </ul>	





# EQUITY FOCUSED

## Next Steps

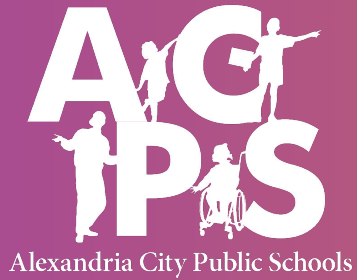
Monitor VDOE developments in mathematics.

Develop supporting Professional Learning resources.

Coordinate recommendations with the Talent and Gifted (TAG) local plan committee.

Establish a timeline for implementation.

Continue to gather feedback from stakeholders and experts in the field.



# Questions?

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Dr. Pierrette Finney, Principal, Francis C. Hammond Middle School

Suzanne Futrell, Secondary Mathematics Instructional Specialist

Jennifer Tutuska, Teacher, George Washington Middle School



## Superintendent

Dr. Gregory C. Hutchings, Jr.

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