

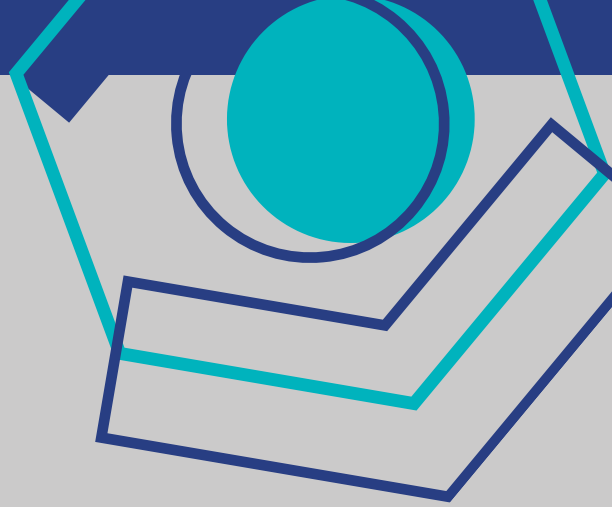
THE
PRACTICAL
PLAYBOOK

Teaching 8th Grade Algebra 1



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**Algebra Assist
Cohort 0**

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SUGGESTED USE

This resource is designed to serve as a practical guide for schools that are developing an Algebra I program in 8th grade or seeking to refine and strengthen an existing model. Created by practicing educators, it offers real-world examples, tools, and reflections intended to support thoughtful decision-making around access, rigor, and student readiness.

The information included here was gathered collaboratively from six different school districts across the state of Kentucky. These examples reflect a range of school sizes, student populations, and scheduling structures. As such, they are meant to illustrate possibilities rather than prescribe a single approach. Schools are encouraged to use this guide as a starting point—adapting ideas, strategies, and resources to best meet the needs of their own students and communities.

In addition to programmatic considerations, this guide also contains insights that Algebra I teachers may find useful in their daily practice. Whether used by administrators, counselors, or classroom teachers, this playbook is intended to support informed conversations, promote collaboration, and help schools design Algebra I pathways that are both equitable and sustainable



The Schools

School A

- NCES Classification: Rural
- Enrollment: 502
- Grades 6-8
- Economically Disadvantaged: 59%
- English Learners: 6%
- Students w/ Disabilities: 14%
- White: 58%
- African American: 8%
- Hispanic: 18%
- Asian/Pacific Islander/Indian: 2%

School B

- NCES Classification: Town
- Enrollment: 833
- Grades 6-8
- Economically Disadvantaged: 38%
- English Learners: 3%
- Students w/ Disabilities: 15%
- White: 85%
- African American: 3%
- Hispanic: 8%
- Asian/Pacific Islander/Indian: 2%

School C

- NCES Classification: Rural
- Enrollment: 300
- Grades 6-8
- Economically Disadvantaged: 78%
- English Learners: 1%
- Students w/ Disabilities: 14%
- White: 93%
- African American: 1%
- Hispanic: 5%
- Asian/Pacific Islander/Indian: 1%

School D

- NCES Classification: Rural
- Enrollment: 365
- Grades P-8
- Economically Disadvantaged: 79%
- English Learners: 0%
- Students w/ Disabilities: 24%
- White: 98%
- African American: 0%
- Hispanic: less than 1%
- Asian/Pacific Islander/Indian: 1%

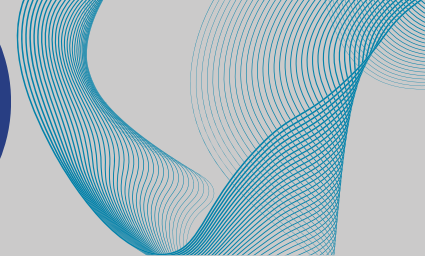
School E

- NCES Classification: Rural
- Enrollment: 150
- Grades 7-8
- Economically Disadvantaged: 80%
- English Learners: 0%
- Students w/ Disabilities: 26%
- White: 99%
- African American: 0%
- Hispanic: 0%
- Asian/Pacific Islander/Indian: 1%

School F

- NCES Classification: City
- Enrollment: 760
- Grades 6-8
- Economically Disadvantaged: 62%
- English Learners: 13%
- Students w/ Disabilities: 12%
- White: 42%
- African American: 28%
- Hispanic: 16%
- Asian/Pacific Islander/Indian: 7%

Advanced Pathways



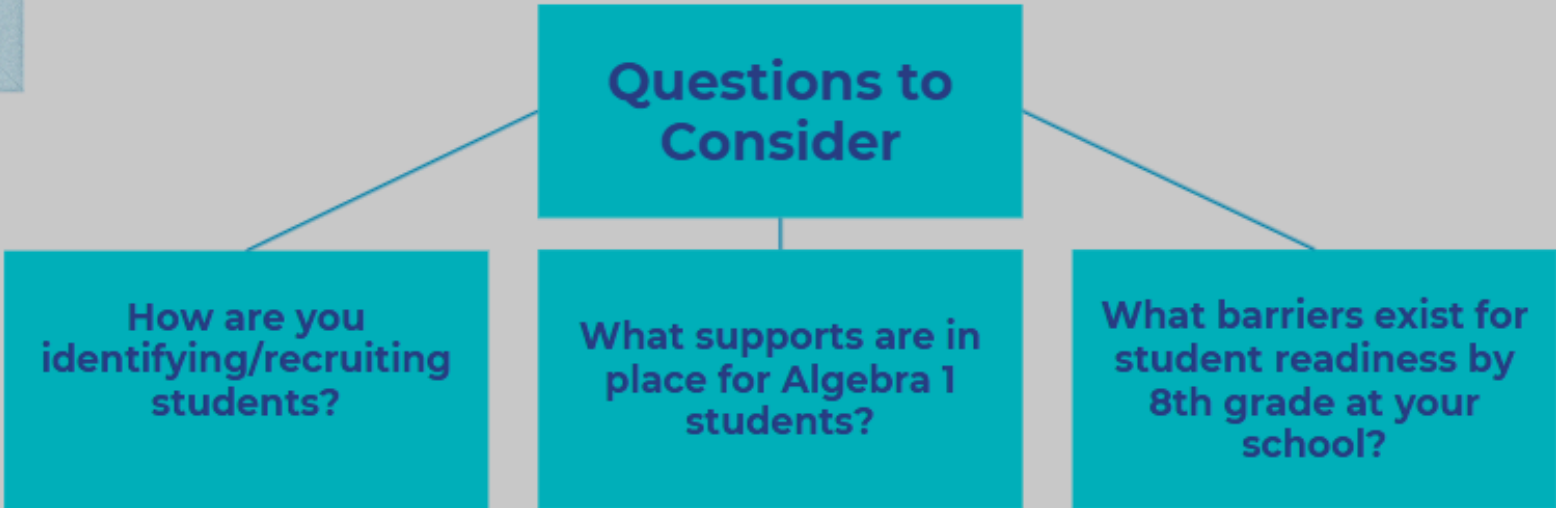
School A	• Students in 6th grade have access to a 6th Grade Honors Course. • Students in 7th grade have access to a 7th Grade Honors Course that requires a math elective to cover identified 8th grade standards. • Students in 8th grade have access to an Algebra 1 Course. Placement includes a required 9-week or semester-long intervention to ensure readiness and success.
School B	• Students in 6th grade have access to the traditional 6th Grade Math Course • Students in 7th grade have access to the traditional 7th Grade Math Course • Students in 8th grade have access to an Algebra 1 Course. Placement includes a required 9-week or semester-long Enrichment course to ensure 8th grade standards are covered.
School C	• Students in 6th grade have access to a 6th Grade Honors Course that covers 6th grade standards and half of the 7th grade standards. • Students in 7th grade have access to a 7th Grade Honors Course that covers the remaining half of the 7th grade standards and half of the 8^h grade standards. • Students in 8th grade have access to an Algebra 1 Course that covers the remaining half of the 8th grade standards and the Algebra 1 standards.
School D	• Students in 6th grade have access to the traditional 6th Grade Math Course • Students in 7th grade have access to the traditional 7th Grade Math Course • Students in 8th grade have access to an Algebra 1 Course. Students are required to take two math classes per day to ensure coverage of all 8th/Algebra 1 standards.
School E	• Students in 6th grade are at the elementary. • Students in 7th grade have access to a Pre Algebra course. Students also take a 7th Grade Math Course. • Students in 8th grade have access to an Algebra course. Students also take an 8th Grade Math Course.
School F	• Students in 6th grade have access to an Accelerated 6th Grade Math Course that includes 6th grade standards and selected 7th grade standards. • Students in 7th grade have access to an Accelerated 7th Grade Math Course that includes 7th grade standards and selected 8th grade standards. • Students in 8th grade have access to an Algebra Course that includes remaining 8th grade standards and Algebra 1 standards. *Scientific notation taught by science teachers. *Flex (RTI) time utilized for math for all accelerated students.

How Do Students Get to Algebra I?

Suggested Pathways

Year 1	Year 2	Year 3
6th Grade Math	7th Grade Math	Advanced 8th Grade Math 50% of Algebra I Standards Included
		Algebra I Supplemental Class to Cover 8th Grade Standards
		Algebra I 8th Grade Standards Included
6th Grade Accelerated Math (All 6th Standards/.5 7th Standards)	7th Grade Accelerated Math (.5 7th Standards/All 8th Standards)	Algebra I

Identifying Students and Barriers



Identifying Students for Algebra 1

School A	Students are identified for 7th Grade Honors and Algebra 1 using the following criteria: KSA Scores, iReady Scores, Math Grades, Teacher Recommendation, Attendance, and the Orleans Hanna. 6 th Grade Honors are recommended by the elementary.
School B	Students are identified for Algebra 1 using a rubric that includes the following criteria: iReady scores, Math Grades, Teacher Recommendation, and the Orleans Hanna. Sample Rubric here .
School C	Students are identified for Honors Courses using the following criteria: KSA Scores, iReady diagnostic scores, early completion of core content class in previous school year, progress data from the previous school year, and G/T identification. Requirements: Students must maintain a 70% for a cumulative average in the class. If a student is behind at school-wide academic progress checks, the parent will be notified. If the cumulative average is not improved, the student will be removed from the Honors Course.
School D	Students are identified using MAP Scores. Students are split into top half and bottom half. All students have two math classes. The top half have Algebra I and the bottom half have RTI as the second class.
School E	Students are identified for 7th Grade Pre-Algebra using the following criteria: Teacher Recommendation, Math Grades, and iReady Scores. Students are identified for 8th Grade Algebra 1 using the following criteria: Successful Pre-Algebra Completion or Teacher Recommendation based on 7 th grade performance.
School F	Students are identified for Accelerated Courses using the following criteria: MAP Scores (230+ for Algebra 1), Student request, Teacher Recommendation, PSAT (410+ for Algebra 1), Math Grades, and KSA Scores (Proficient or Distinguished).

Tracking vs Accelerated Pathways

KEY FEATURES OF TRACKING

- Fixed Groupings
- Limited Mobility
- Limited Collaboration with students of varying abilities
- Difference in rigor in the curriculum offered (“Honors” culture)
- Access to higher coursework is not available to all students.

KEY FEATURES OF ACCELERATED PLACEMENT

- Flexible Groupings based on readiness and performance (on/off ramps)
- Student centered focus that meets students where they are and offers rigorous, accelerated learning
- Allows students to grow and progress at their own pace
- Provides access to higher coursework for all students

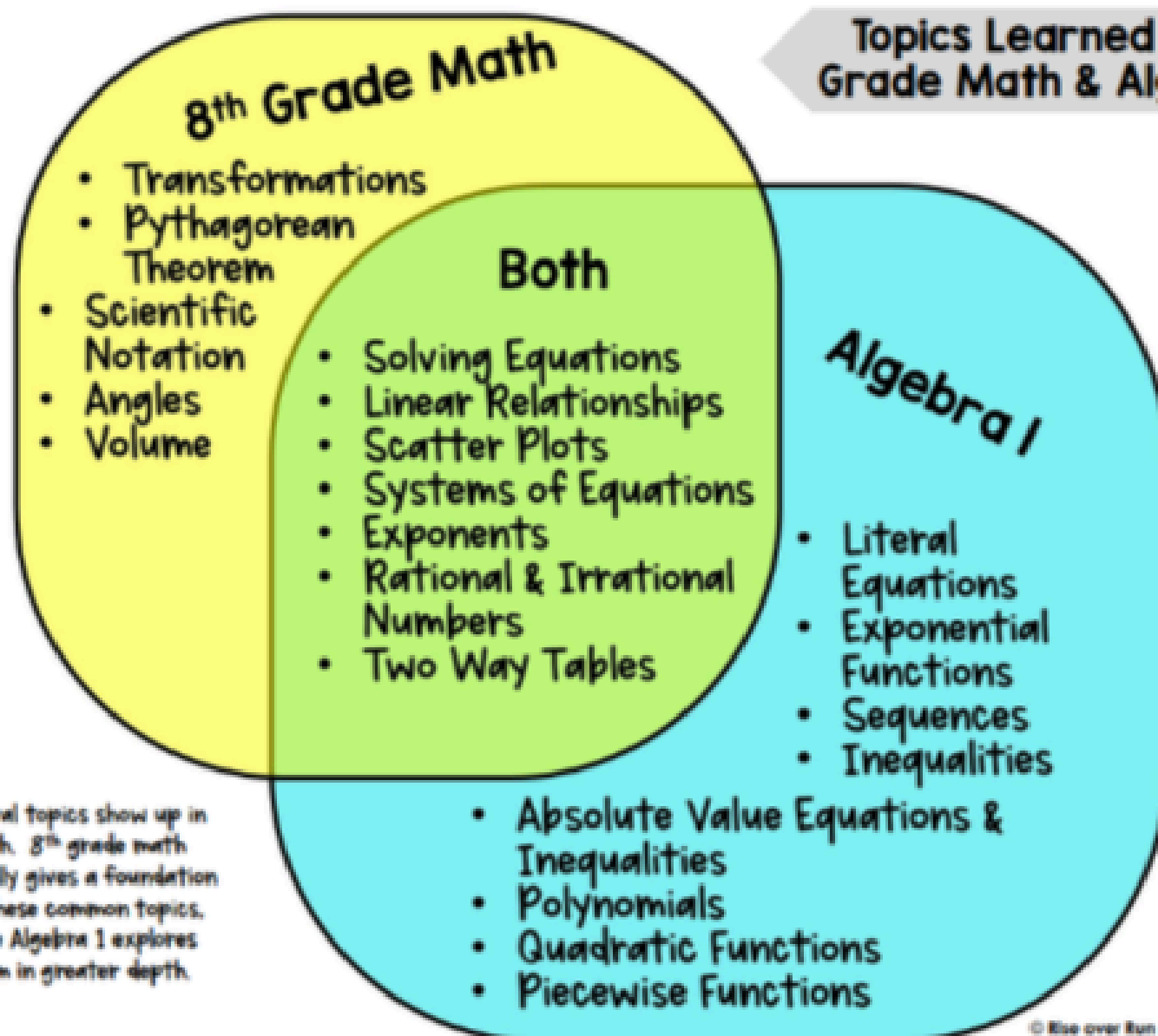
On/Off Ramps

ON RAMPS (OPPORTUNITIES FOR STUDENTS TO ENTER ACCELERATED COURSEWORK)

- Performance- based criteria
- Teacher observation and recommendation
- Acceleration based on mastery
- Student interest

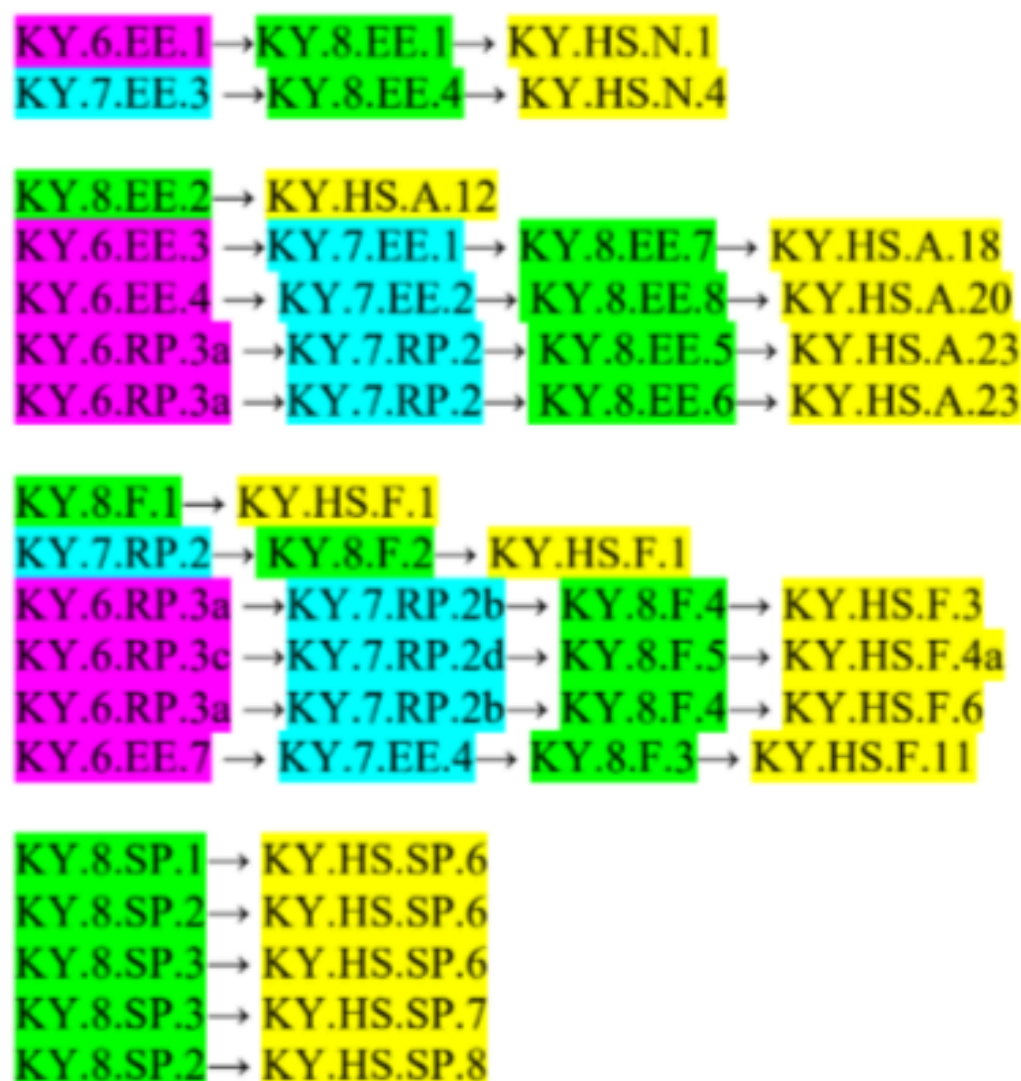
OFF RAMPS (OPTIONS FOR STUDENTS TO EXIT ACCELERATED)

- Performance-based criteria
- Social-emotional needs
- Attendance concerns
- Student request
- Parent request
- Flexible reentry to the grade-level course

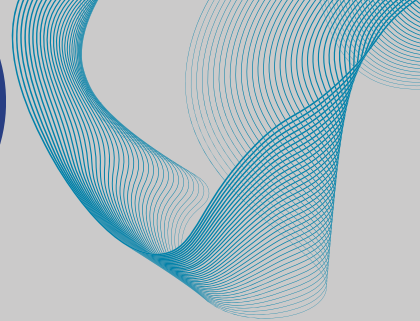


Source: www.riseoverrunteacher.com

Middle Grade to Algebra 1 Coherence At-A-Glance



Words of Wisdom



School A	“Meet them where they are and push them farther than they think they can go.”
School B	“Some of my best algebra students are students that struggled in lower math classes but something clicked their 7th grade year. They are excited to finally be in the "honors" class or be a "smart" kid.”
School C	Math Class Motto: “Give math and me a chance!”
School D	“You can have a free day when EVERYONE is proficient or distinguished!”
School E	“The struggle is real everyday, for teachers and students alike.” “Productive struggle means that they are learning and growing.”
School F	“Set HIGH Expectations for ALL learners and build the necessary scaffolds in order for them to reach the expectations. ALL kids are capable of achieving at high levels!” “Frame the "accelerated" culture as students are taking a course or being exposed to standards when they are ready in their journey. They are not smarter than the other kids, they had opportunities or exposure in math that allowed them to be ready earlier. Do not create an elitist culture with accelerated pathways. “



Access To Algebra

For questions, additional resources, or to continue the conversation, please contact us!

We provide ongoing professional learning for our program schools focused on strengthening middle school Algebra 1 instruction and refining effective, accelerated pathways. This work is centered on building internal capacity and supporting continuous improvement in student access and success.

Website: <https://www.advancekentucky.com/access-to-algebra>

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