

Louisiana Believes

Intensive Algebra I Pilot

Behavioral Intervention Summit January 2019

Objectives

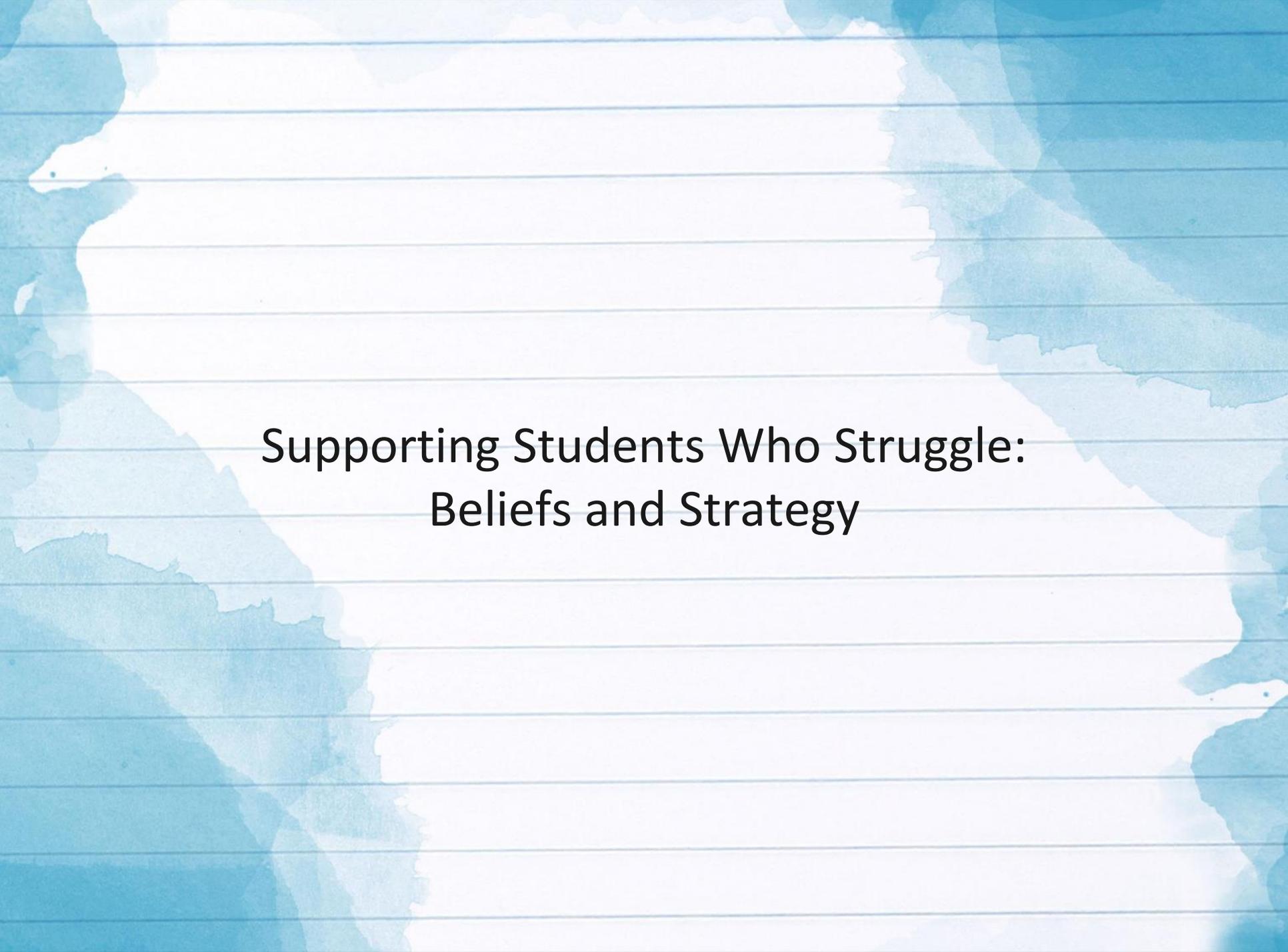
Objectives

- Understand LDOE's beliefs and strategy for supporting students who persistently struggle
- Explore strategies specific to math and analyze data from the Intensive Algebra I Pilot
- Determine next steps for schools

Agenda

Agenda

- Supporting Students: Beliefs and Strategy
- Math: Intensive Algebra I Pilot and Impact Data
- Next Steps



Supporting Students Who Struggle: Beliefs and Strategy

Beliefs about Students

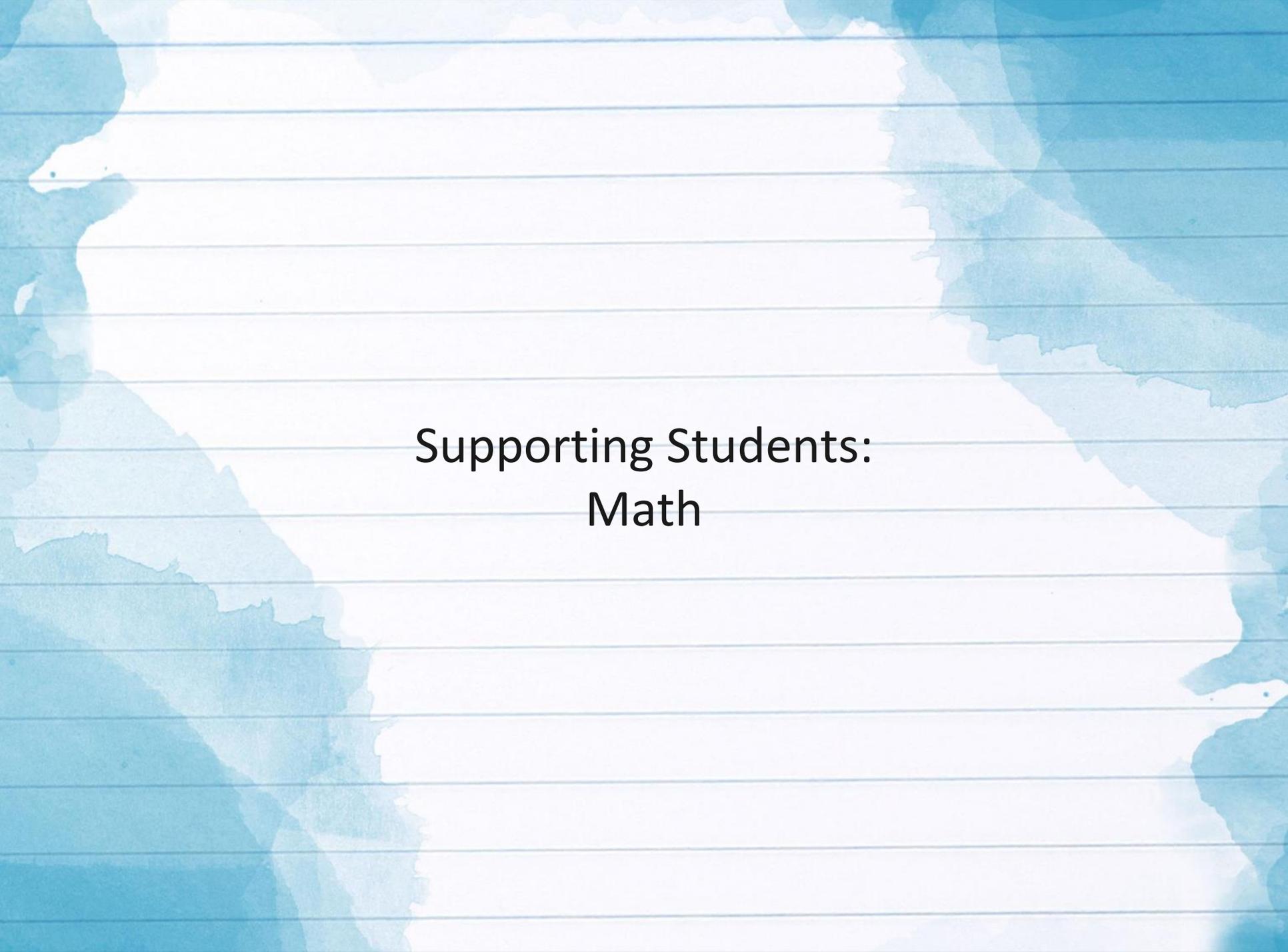
The Louisiana Department of Education believes that all students, including students with disabilities, English learners, and students who persistently struggle, can achieve grade-level standards. To ensure that this vision is realized for all students, the following things have to be true.

Strategy to Support Students

1. All students should access on-grade-level instruction every day through a high quality curriculum in the least restrictive environment.

1. Intervention should supplement instruction and accelerate student progress by preparing students for new learning.
 - a. With students who need additional support to achieve grade-level standards, teachers should employ the supports within the curriculum that scaffold learning during core instruction.
 - b. With students who persistently struggle, teachers should employ more intensive intervention; this should supplement, not replace, the high quality curriculum and embedded supports.

1. All teachers who support struggling learners, including but not limited to general education, special education, English learners, and intervention teachers, should be trained on the curriculum and should plan in a coordinated way to ensure all students are prepared for Tier 1 content during core instruction.



Supporting Students: Math

Supporting Students in Math

Math instruction for students who persistently struggle should help students access the Tier 1 curriculum content. This requires teachers to:

1. Identify the standard(s) being targeted during core instruction.
2. Identify the pre-requisite standards using the [Remediation Guides](#).
3. Engage students in components of previous grade levels of the Tier 1 curriculum and/or other aligned resources during small group or individualized instruction.

This additional content can be delivered by the general education, special education, and/or intervention teacher. It will be most effective when delivered by a teacher who is trained in the curriculum and engaged in that student's core math classroom.

Intensive Algebra I Pilot

The Importance of Algebra I

- Mastery of algebra in particular is a critical step to enrollment and success in a college preparatory math sequence. (Snipes and Finklestein, 2015)
- Math curriculum— especially advanced courses such as algebra and geometry—has a positive effect on college graduation and on earnings later in life. (Rose and Betts, 2001)
- In 2014, 30% of Louisiana students entering college took a remedial course. Approximately 5% of those had completed a gateway course 2 years later.

Takeaway -- Students must be successful in Algebra I for college to even be an option.

Additionally, the California Dropout Research Project found that controlling for all other variables, students who passed Algebra 1 by the end of their freshman year increased the likelihood of graduating on-time by more than 75%. ([Silver, Saunders, and Zarate](#))

A look at the data in Louisiana.....

| BSSY | 9th Graders Enrolled in LRS | 9th Graders Enrolled in Algebra I | Took Algebra I EOC | | Passed Algebra I EOC (Good, Fair, or Excellent) *2017 (Basic, Mastery, or Advanced) | | Passed Algebra I EOC (Good or Excellent) *2017 (Mastery or Advanced) | | # Enrolled in a Higher Course | |
|----------|-----------------------------|-----------------------------------|--------------------|-------|--|-------|---|-------|-------------------------------|-------|
| | | | Count | Rate | Count | Rate | Count | Rate | Count | Rate |
| 2013-14 | 56,523 | 41,045 | 35,900 | 87.5% | 29,310 | 81.6% | 19,685 | 54.8% | 8,831 | 15.6% |
| 2014-15 | 56,122 | 42,204 | 37,377 | 88.6% | 31,036 | 83.0% | 20,368 | 54.5% | 8,524 | 15.2% |
| 2015-16 | 57,212 | 42,833 | 37,594 | 87.8% | 30,964 | 82.4% | 21,327 | 56.7% | 8,352 | 14.6% |
| 2016-17 | 55,461 | 39,766 | 37,682 | 94.8% | 31,657 | 84.0% | 22,238 | 59.0% | 8,585 | 15.5% |
| 2017-18* | 52,986 | 37,402 | 35,384 | 94.6% | 23,440 | 66.2% | 12,484 | 35.3% | 8,840 | 16.7% |

A look at the data in Louisiana.....

40% of last year's 9th graders are genuinely prepared for the opportunity to be successful in college

- There were 52,986 students in 9th grade.
- 21,324 scores Mastery or Advanced OR were in a higher math course.
- 11,944 scored Unsatisfactory or Approaching Basic.
- 10,956 scored Basic. If you counted these, that would bring the percentage to 61%.
- 2,018 students took the course but did not take the Algebra I EOC.
- 6,744 students did not take Algebra I.

| BSSY | 9th Graders Enrolled | 9th Graders | Took Algebra I EOC | Scored Mastery or Advanced OR | Scored Unsatisfactory or Approaching Basic | Scored Basic | Scored Proficient or Advanced | Scored Proficient or Advanced | Scored Proficient or Advanced | Rate |
|----------|----------------------|-------------|--------------------|-------------------------------|--|--------------|-------------------------------|-------------------------------|-------------------------------|-------|
| 2013-14 | | | | | | | | | | 15.6% |
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The Intensive Algebra I Pilot

During the 2017-18 school year, we began to tackle this problem. We partnered with the College Board, who publishes the Tier 1 high school math curriculum Springboard.

- Springboard built out aligned “skills workshops” at critical points of Algebra I.
- 110 teachers in 50+ districts agreed to pilot Intensive Algebra.
- Students who historically struggled in math had 2 periods of math every day.
- Teachers had 2 days of initial implementation training, a 1-hour monthly webinar, and a 1-day in person training in January.

In a typical day, students engaged with 1 period of aligned, pre-requisite work then 1 period of Algebra I.

The Intensive Algebra I Pilot

Intensive Math Support



**HIGH-QUALITY
CURRICULUM**



APPROPRIATE RESOURCES
(targeted diagnostics,
coherent supports)



**EXTENDED
TIME**

The Intensive Algebra I Pilot: Results

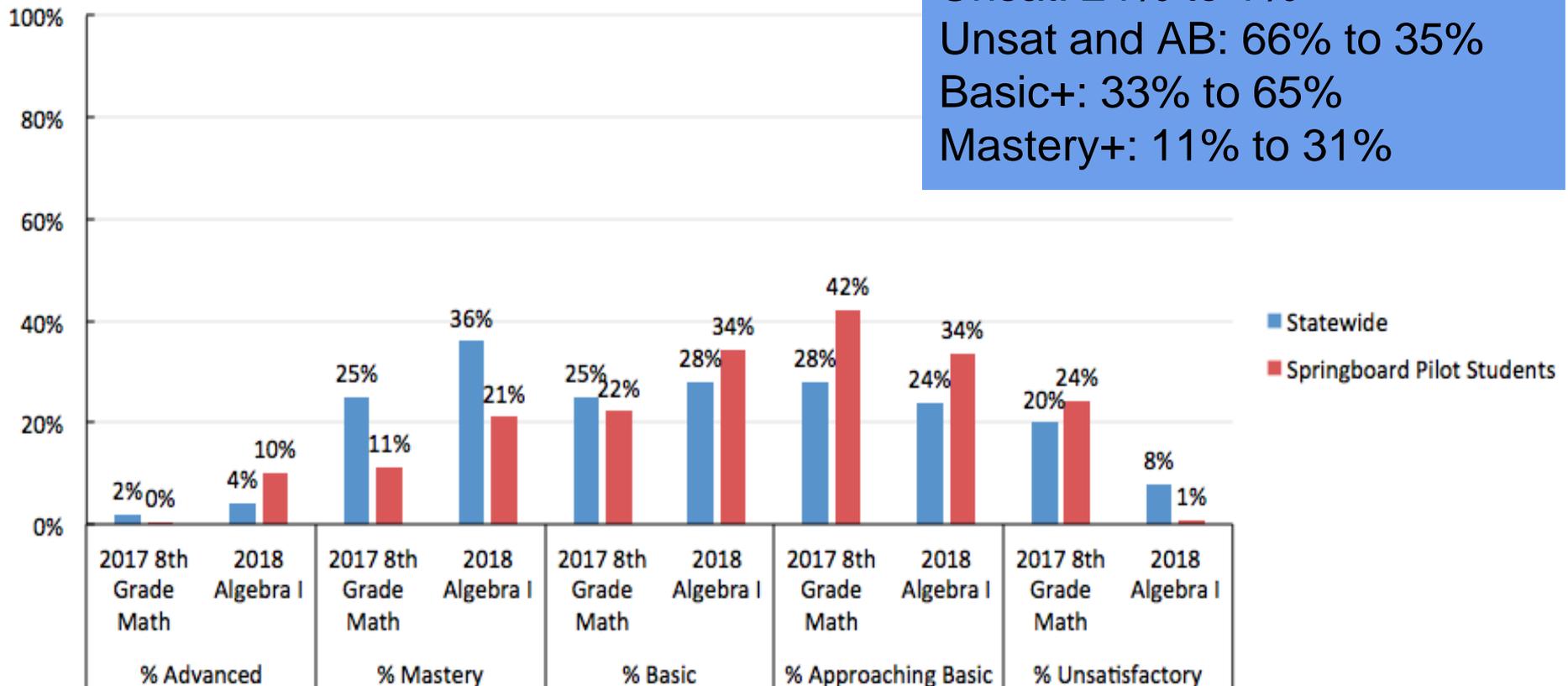
2300+ Students

Unsat: 24% to 1%

Unsat and AB: 66% to 35%

Basic+: 33% to 65%

Mastery+: 11% to 31%



Impact of the Algebra I Pilot

Impact

How did the Algebra I Pilot concretize the overall strategies for supporting students who struggle?

1. All students should access on-grade-level instruction every day through a high quality curriculum in the least restrictive environment.
1. Intervention should supplement instruction and accelerate student progress by preparing students for new learning.
 - a. With students who need additional support to achieve grade-level standards, teachers should employ the supports within the curriculum that scaffold learning during core instruction.
 - b. With students who persistently struggle, teachers should employ more intensive intervention; this should supplement, not replace, the high quality curriculum and embedded supports.
1. All teachers who support struggling learners, including but not limited to general education, special education, English learners, and intervention teachers, should be trained on the curriculum and should plan in a coordinated way to ensure all students are prepared for Tier 1 content during core instruction.

Impact

How did the Algebra I Pilot concretize these math-specific strategies?

Math instruction for students who persistently struggle should help students access the Tier 1 curriculum content. This requires teachers to:

1. Identify the standard(s) being targeted during core instruction.
2. Identify the pre-requisite standards using the [Remediation Guides](#).
3. Engage students in components of previous grade levels of the Tier 1 curriculum and/or other aligned resources during small group or individualized instruction.

This additional content can be delivered by the general education, special education, and/or intervention teacher. It will be most effective when delivered by a teacher who is trained in the curriculum and engaged in that students' core math classroom.

Reflection & Next Steps

Next Steps

1. Answer the following for each school before the January collaboration.
 - a. What percentage of students at each school engage with on-grade-level Tier 1 curriculum every day?
 - b. What percentage of students at each school have small group instruction in class?
 - c. What percentage of students at each school are being pulled out for additional math intervention?
 - d. What are students doing in small groups? During intervention?
 - e. Who at the school determines/influences the work persistently struggling students are doing?
2. Use the newly released [PD Vendor Guide](#) to identify initial and ongoing training options for Tier 1 curriculum and supports for students who struggle in math.

Next steps:

1. Based on your responses to the reflection questions, what are the next steps at your school?
2. Which stakeholders should be included in your planning around supporting students who struggle?

Email STEM@la.gov with questions.