

New for WCCUSD

2017-18 Gr. 3-8 Math Interim Assessment Blocks

**Presented to the Board of Education
West Contra Costa Unified School District**

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Research, Accountability, Assessment and Data



What are the Interim Assessment Blocks?

The **Smarter Balanced Interim Assessment Blocks (IABs)** are short, focused sets or blocks of items that measure one or more SBAC assessment targets. Results from the interim assessments provide information about a student's strengths or needs in relation to the Common Core State Standards (CCSS).

- Uses the same assessment targets, by grade level, as the SBAC summative blueprints
- Provides information about a student's strengths and needs related to the assessment targets
- Offers varied blocks by grade level and subject area.

Mathematics Interim Assessment Blocks

| Grade 3 | Grade 4 | Grade 5 |
|-----------------------------------|-----------------------------------|-----------------------------------|
| Operations and Algebraic Thinking | Operations and Algebraic Thinking | Operations and Algebraic Thinking |
| Number and Operations – Fractions | Number and Operations – Fractions | Number and Operations – Fractions |
| Measurement and Data | Measurement and Data | Measurement and Data |
| Number and Operations in Base Ten | Number and Operations in Base Ten | Number and Operations in Base Ten |
| Geometry* | Geometry | Geometry |
| Mathematics Performance Task | Mathematics Performance Task | Mathematics Performance Task |

| Grade 6 | Grade 7 | Grade 8 |
|---------------------------------------|--------------------------------------|--|
| Ratios and Proportional Relationships | Ratio and Proportional Relationships | Expressions & Equations I |
| The Number System | The Number System | Expressions & Equations II (with Prob/Stat) |
| Expressions and Equations | Expressions and Equations | The Number System* |
| Geometry | Geometry | Functions |
| Statistics and Probability | Statistics and Probability | Geometry |
| Mathematics Performance Task | Mathematics Performance Task | Mathematics Performance Task |

*New Assessments in 2017-2018

What did we Assess?

We selected two Blocks to be administered (at each grade level 3-8) that are aligned with the Concepts and Procedures Claim. Concepts and Procedures were our weakest area on the SBAC.

| Grade | Fall Benchmark IAB 1 | Fall Benchmark IAB 2 |
|----------------|-----------------------------------|-----------------------------------|
| Grade 3 | Numbers and Operations in Base 10 | Operations and Algebraic Thinking |
| Grade 4 | Numbers and Operations in Base 10 | Operations and Algebraic Thinking |
| Grade 5 | Numbers and Operations in Base 10 | Operations and Algebraic Thinking |
| Grade 6 | Number System | Expressions and Equations |
| Grade 7 | Number System | Expressions and Equations |
| Grade 8 | Number System | Expressions and Equations 1 |

What Did Each Assessment Test?

Number and Operations in Base Ten (Grades 3-5)

The standards for Number and Operations in base ten require students to be able to fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Operations and Algebraic Thinking (Grades 3-5)

The standards for Operations and Algebraic Thinking require students to be able to identify arithmetic patterns, and explain them using properties of operations. (For example, observe that 4 times a number is always even)

The Number System (Grades 6-8)

The standards for the number system include applying and extending understanding of operations with multiplication, division, fractions and rational numbers.

Expressions and Equations (Grades 6-8)

The standards for Expressions and Equations require students to solve real-life and mathematical problems using numerical and algebraic expressions and equations that may include variables to represent quantities.

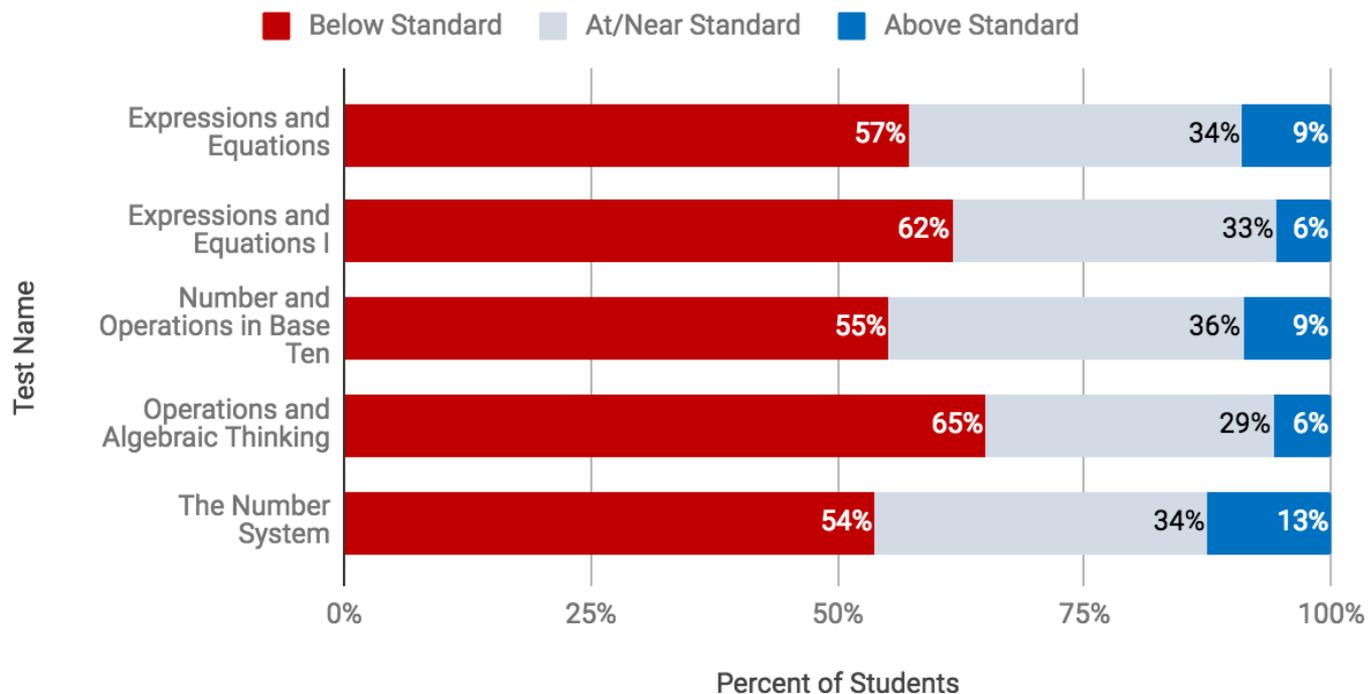
Participation

| Grade | Assessment | # of Students | % of Students |
|-------|-----------------------------------|---------------|---------------|
| 3 | Number and Operations in Base Ten | 2071 | 91% |
| | Operations and Algebraic Thinking | 1659 | 73% |
| 4 | Number and Operations in Base Ten | 2150 | 91% |
| | Operations and Algebraic Thinking | 1650 | 71% |
| 5 | Number and Operations in Base Ten | 2103 | 91% |
| | Operations and Algebraic Thinking | 1668 | 73% |
| 6 | Expressions and Equations | 1638 | 78% |
| | The Number System | 1418 | 68% |
| 7 | Expressions and Equations | 1439 | 77% |
| | The Number System | 1315 | 70% |
| 8 | Expressions and Equations I | 1452 | 76% |
| | The Number System | 1152 | 60% |

- We are not yet at full participation on these assessments yet.
- Most schools had participation rates above 85%, but a few schools or classrooms did not administer one or more assessments, lowering overall rates for that assessment.

Fall 2017 IAB Math Results by Test

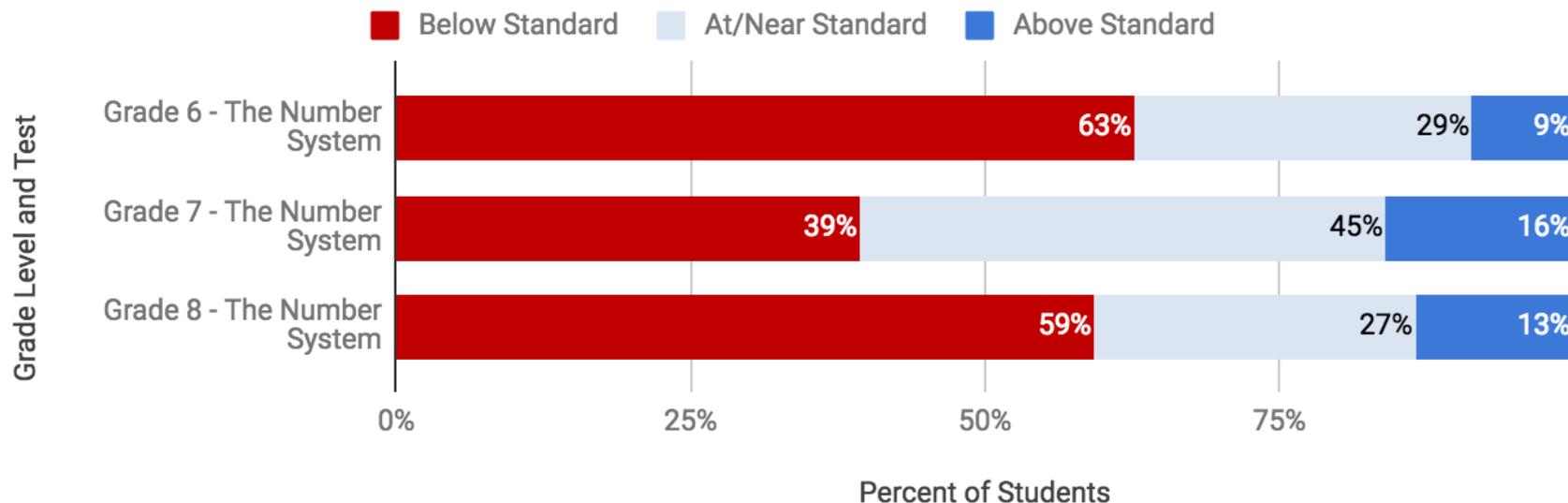
Grades 3-8
n = 19,715



- Looking at overall target areas, our stronger areas are number and operations in base ten and the number system.

Grades 6,7,8
n = 3,885

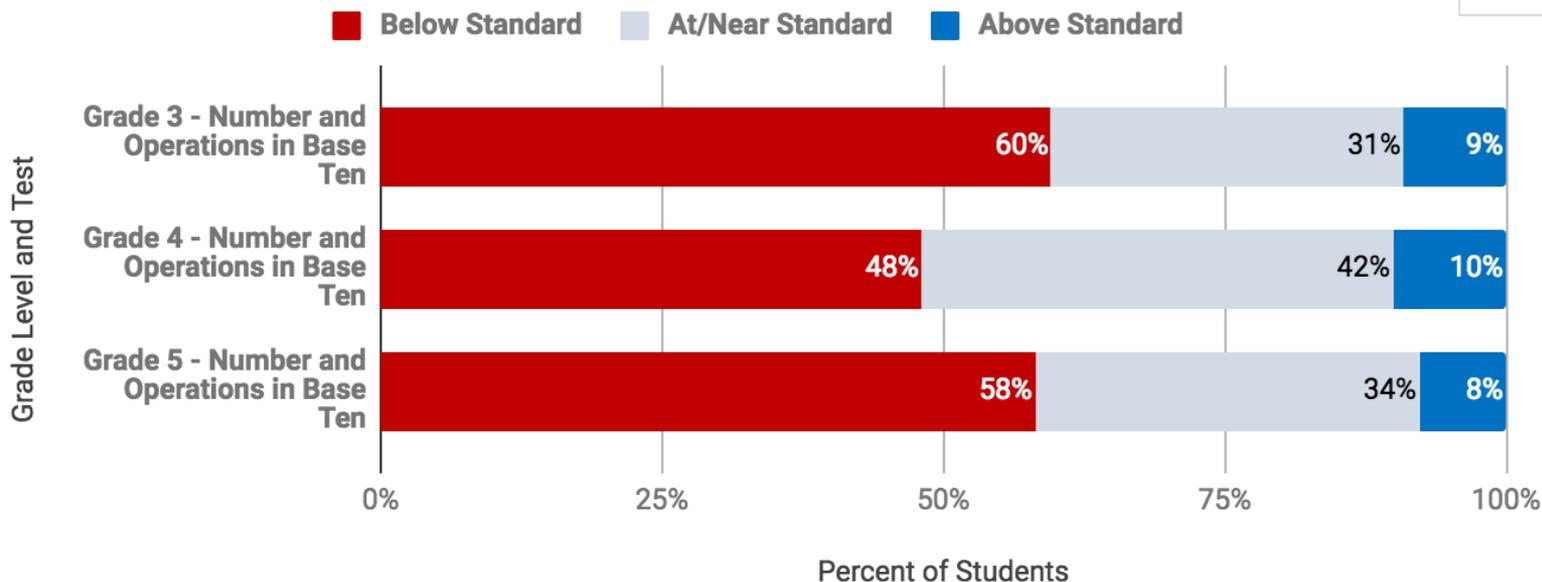
Fall 2017 IAB Math Results by Grade Level Test



- The Number System was our overall strongest target area.
- Seventh grade students performed significantly higher than sixth and eighth grade on this assessment.

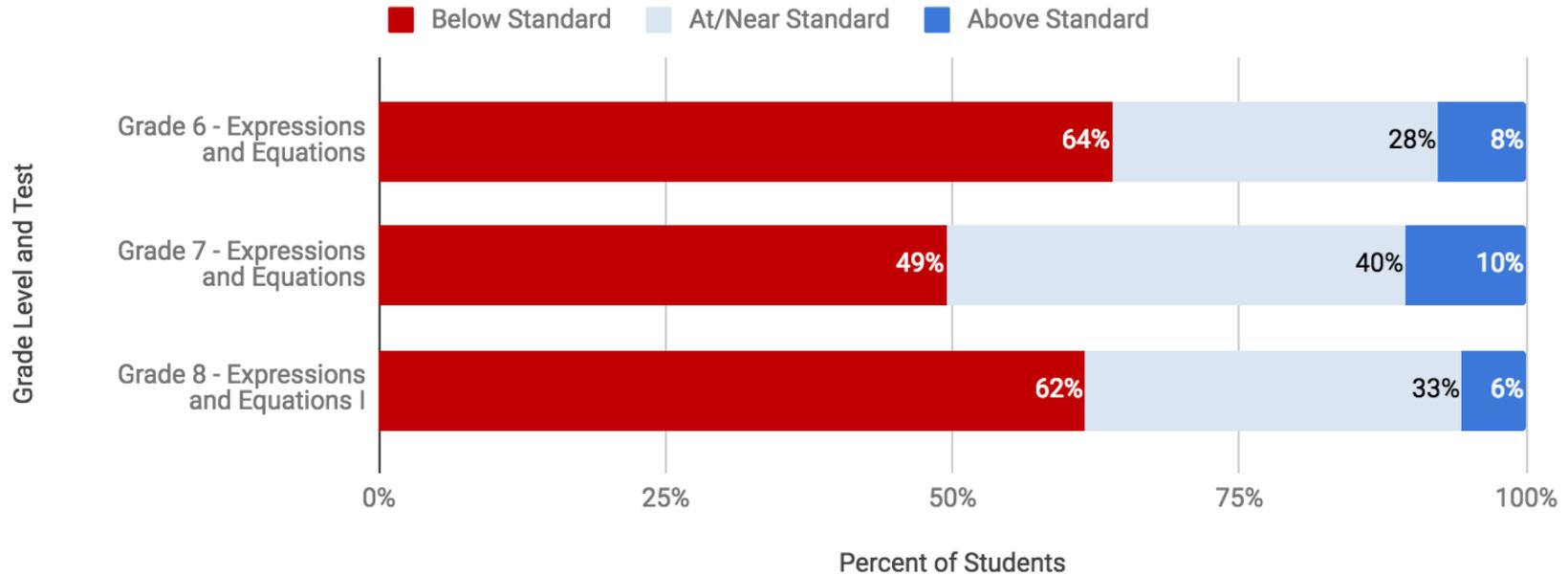
Fall 2017 IAB Math Results by Grade Level Test

Grades 3,4,5
n = 6,324



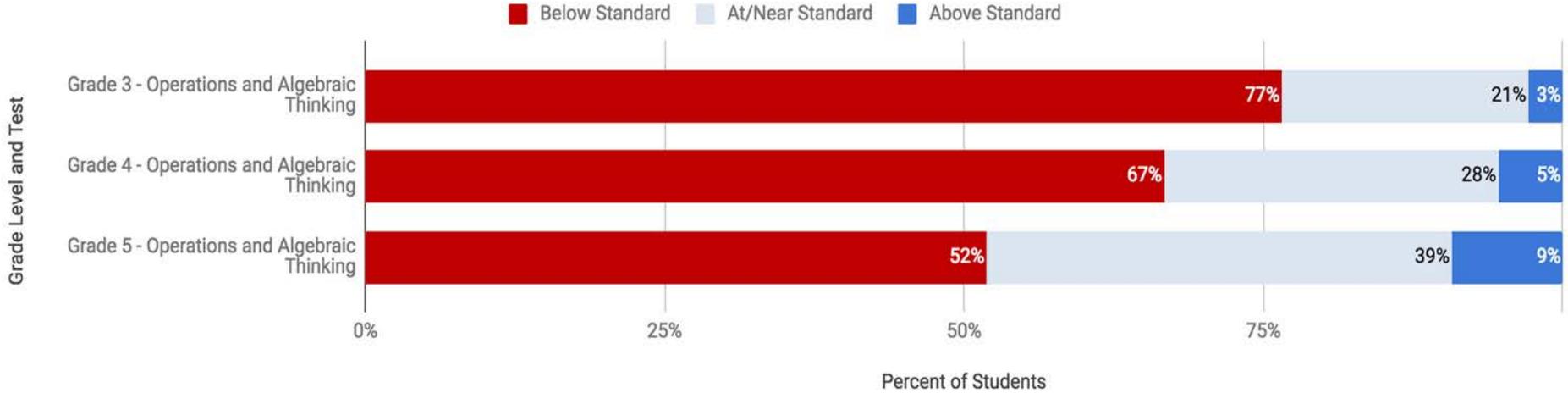
- Number and Operations in Base Ten was our second strongest target area.
- Fourth grade students performed better than third and fifth in Number and Operations in Base Ten.

Fall 2017 IAB Math Results by Grade Level Test



- Expressions and Equations was our third strongest target area.
- Seventh grade students outperformed sixth and eighth grade students in this area.

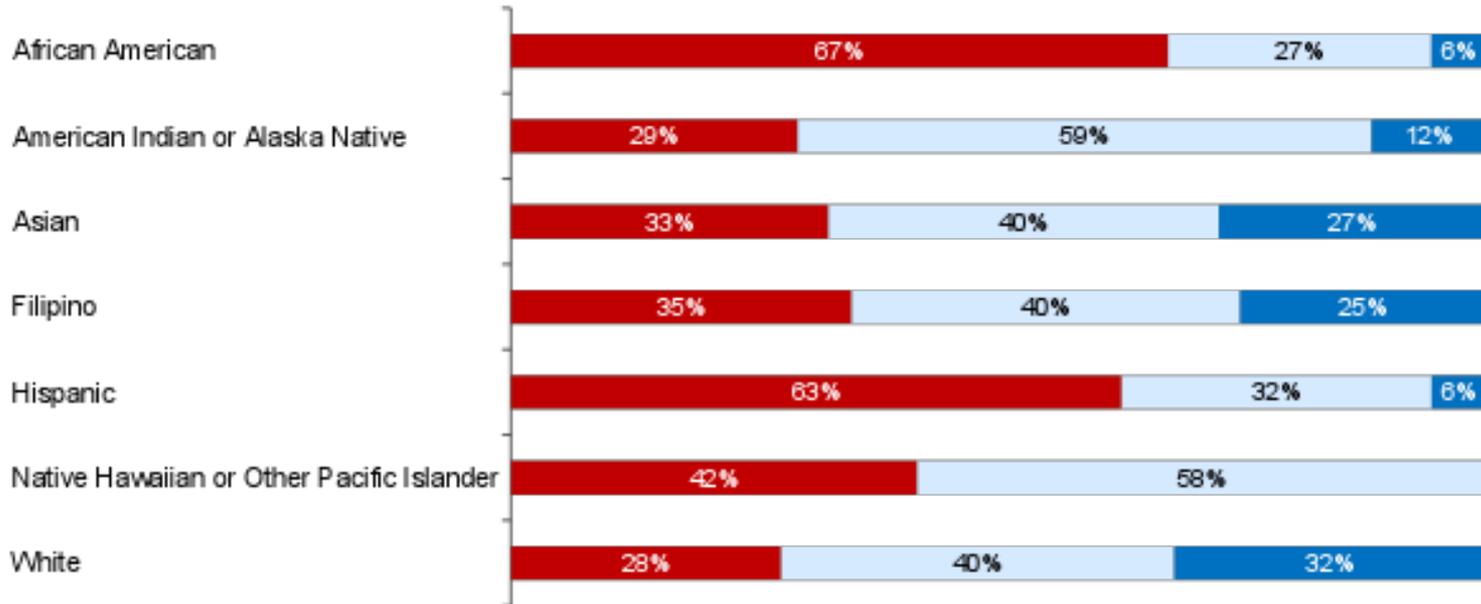
Fall 2017 IAB Math Results by Grade Level Test



- Operations and Algebraic Thinking was our lowest performing target area.
- Fifth grade students significantly outperformed our third and fourth grade students in this area.

The Number System Results by Ethnicity

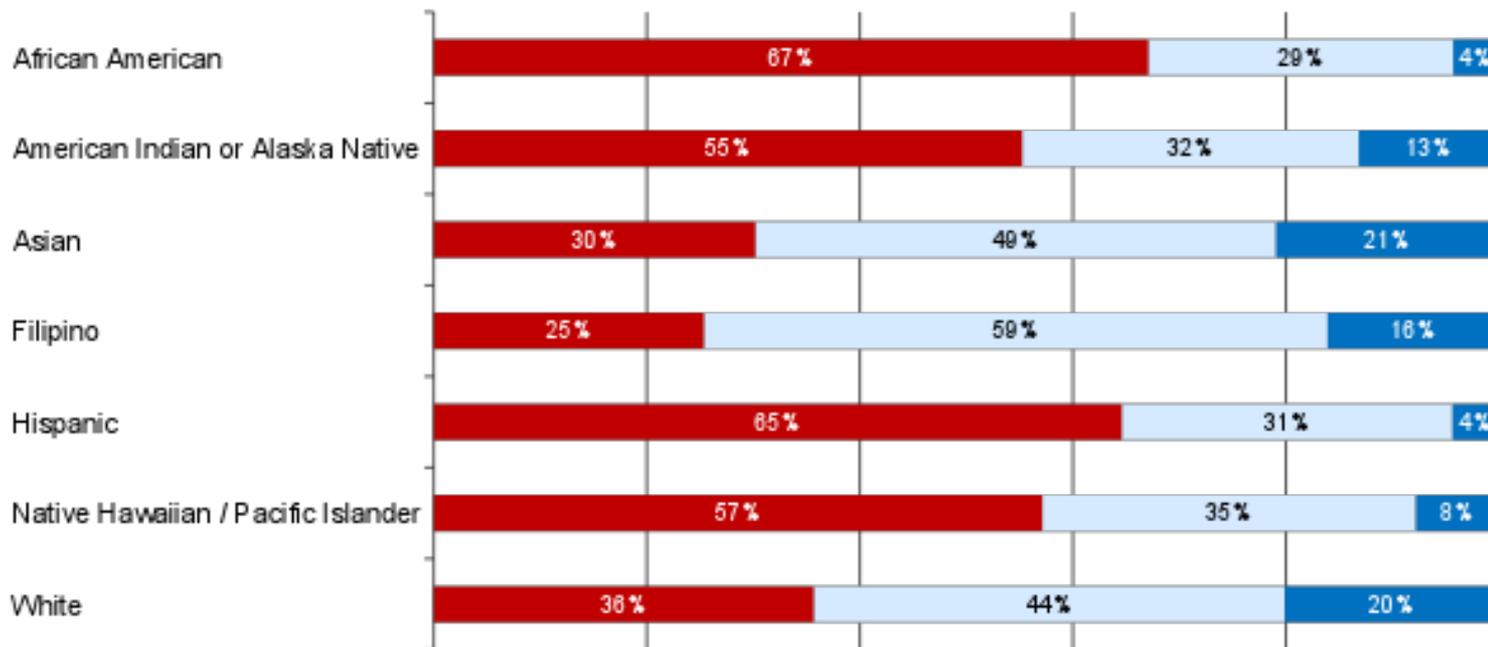
■ Below Standard ■ At/Near Standard ■ Above Standard



- Looking at each target area by ethnicity, we continue to see an achievement gap with African American and Hispanic/Latino students having the lowest performance.

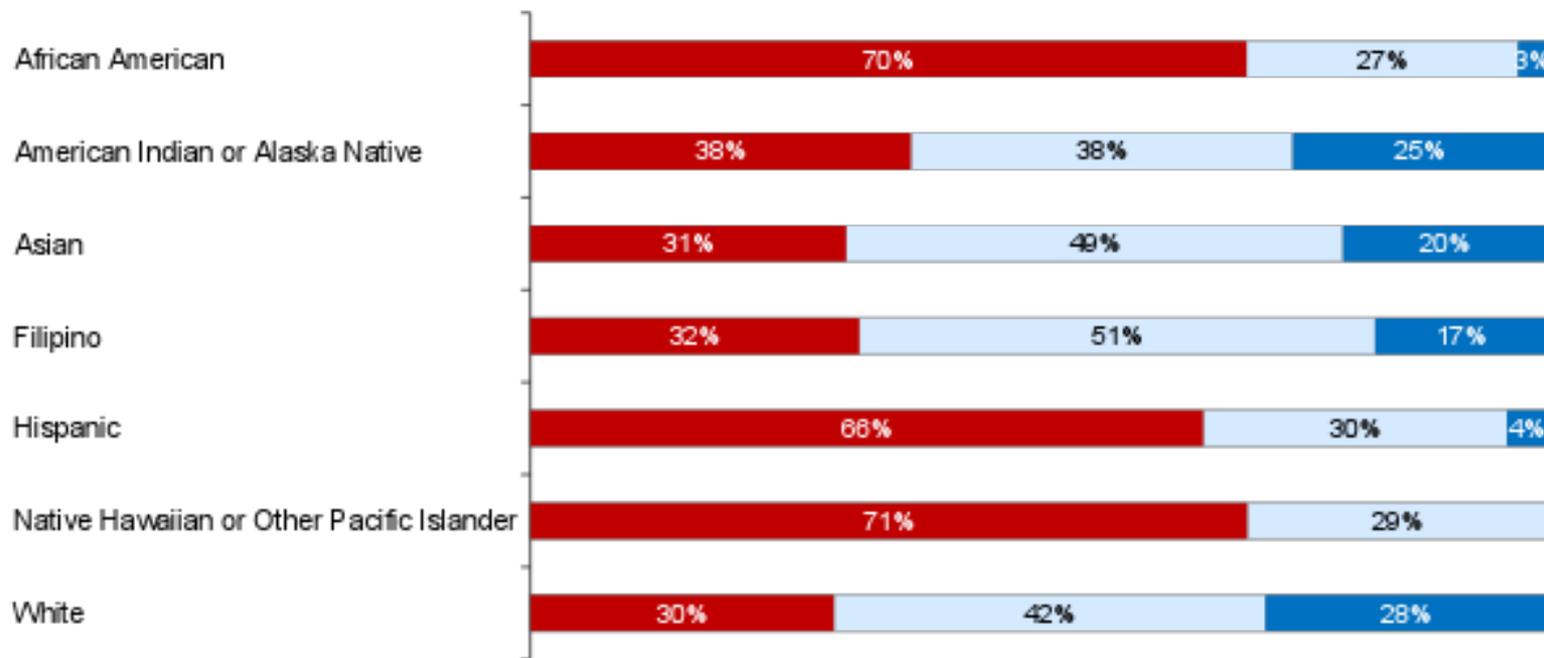
Number & Operations in Base Ten Results by Ethnicity

■ Below Standard ■ At/Near Standard ■ Above Standard



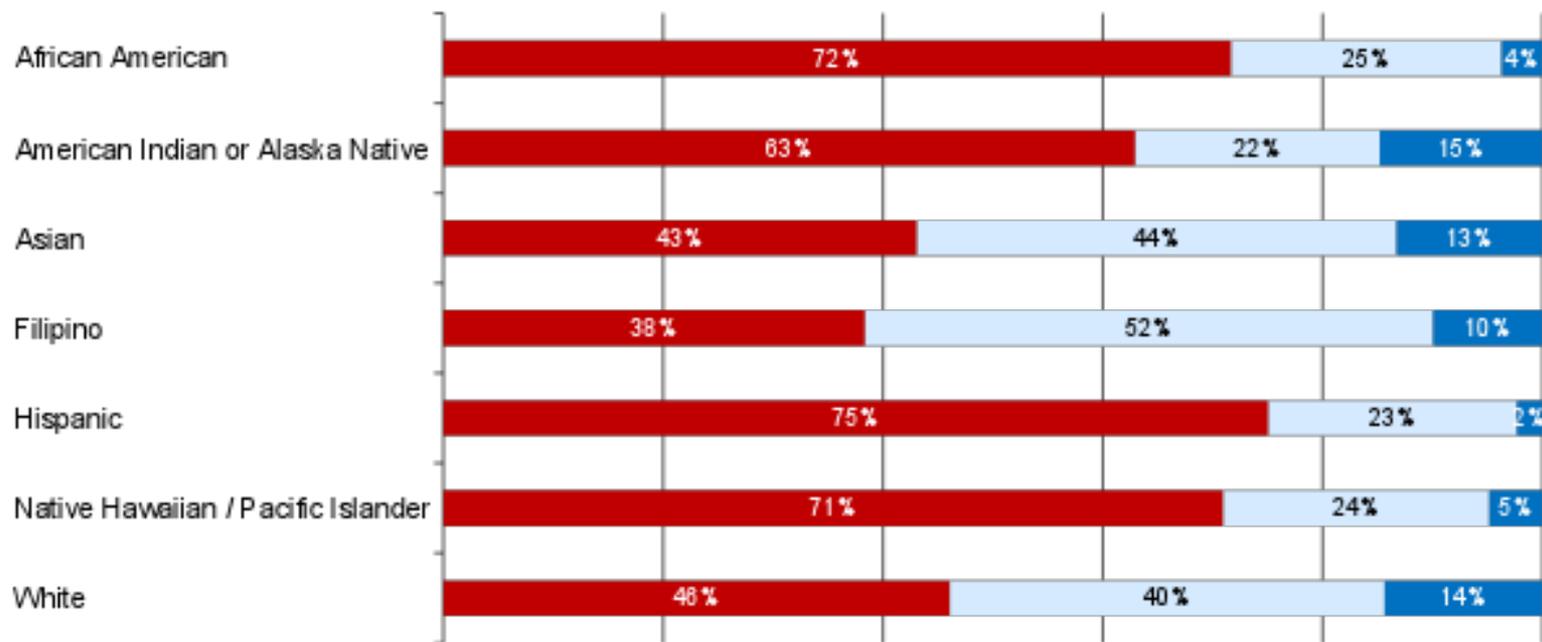
Expressions & Equations Results by Ethnicity

■ Below Standard ■ At/Near Standard ■ Above Standard



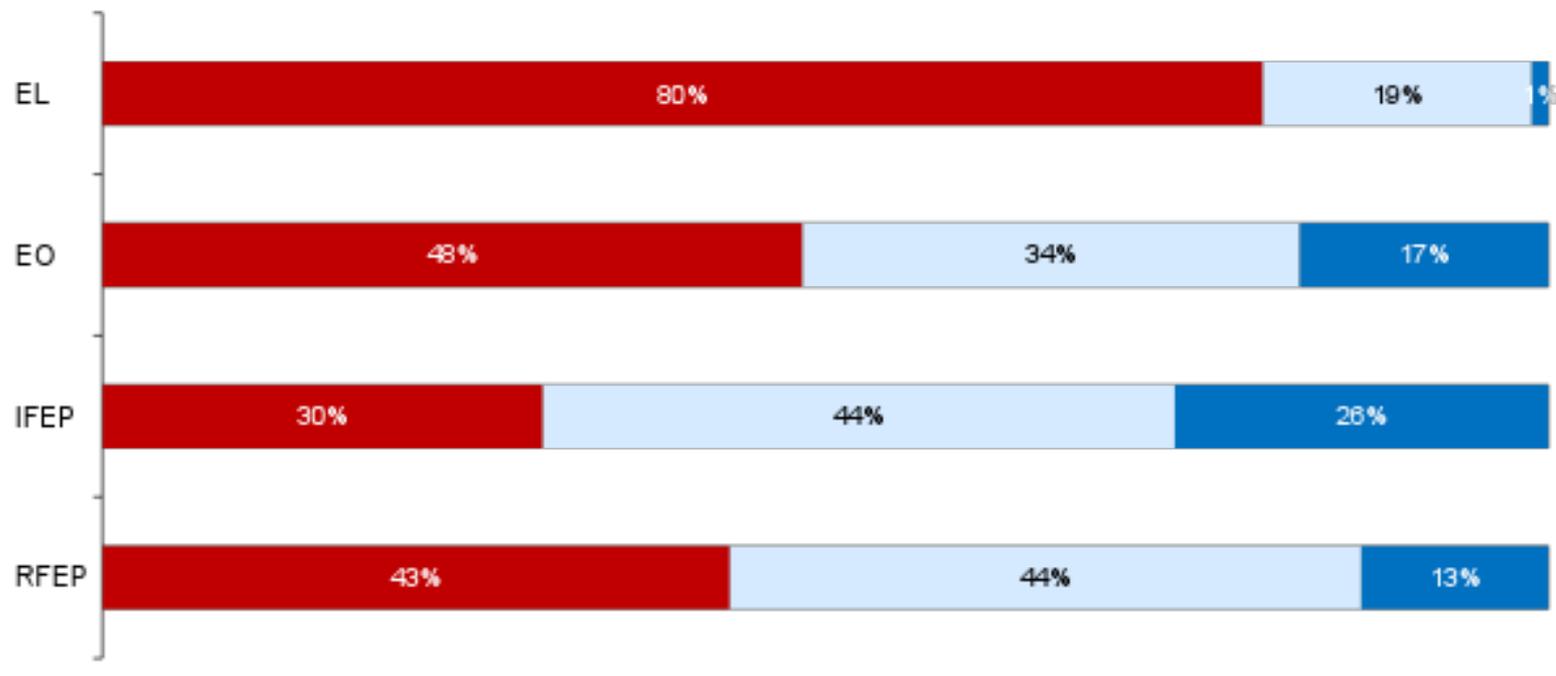
Operations & Algebraic Thinking Results by Ethnicity

■ Below Standard ■ At/Near Standard ■ Above Standard



The Number System Results by English Proficiency

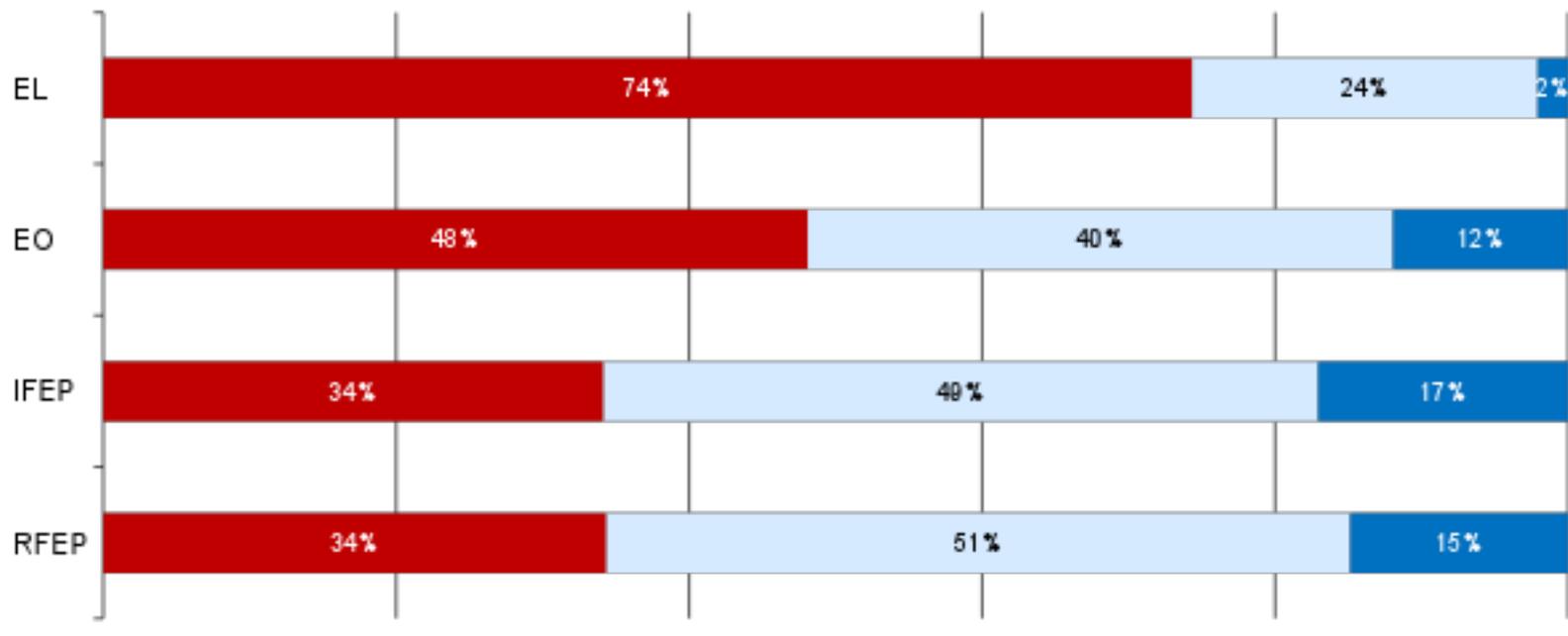
■ Below Standard ■ At/Near Standard ■ Above Standard



- When we look at performance by English proficiency, our English Learners have the overall lowest performance, while Redesignated students perform significantly better.

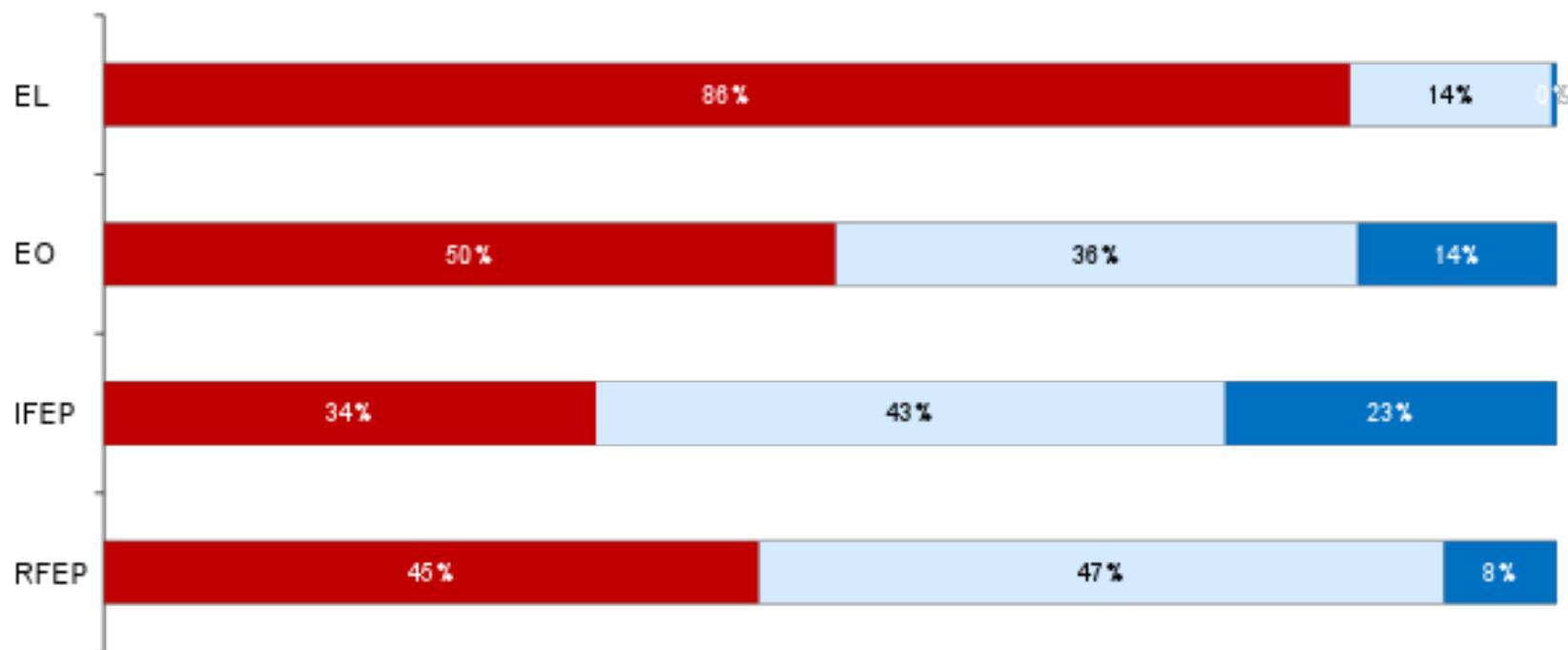
Number & Operations in Base Ten Results by English Proficiency

■ Below Standard ■ At/Near Standard ■ Above Standard



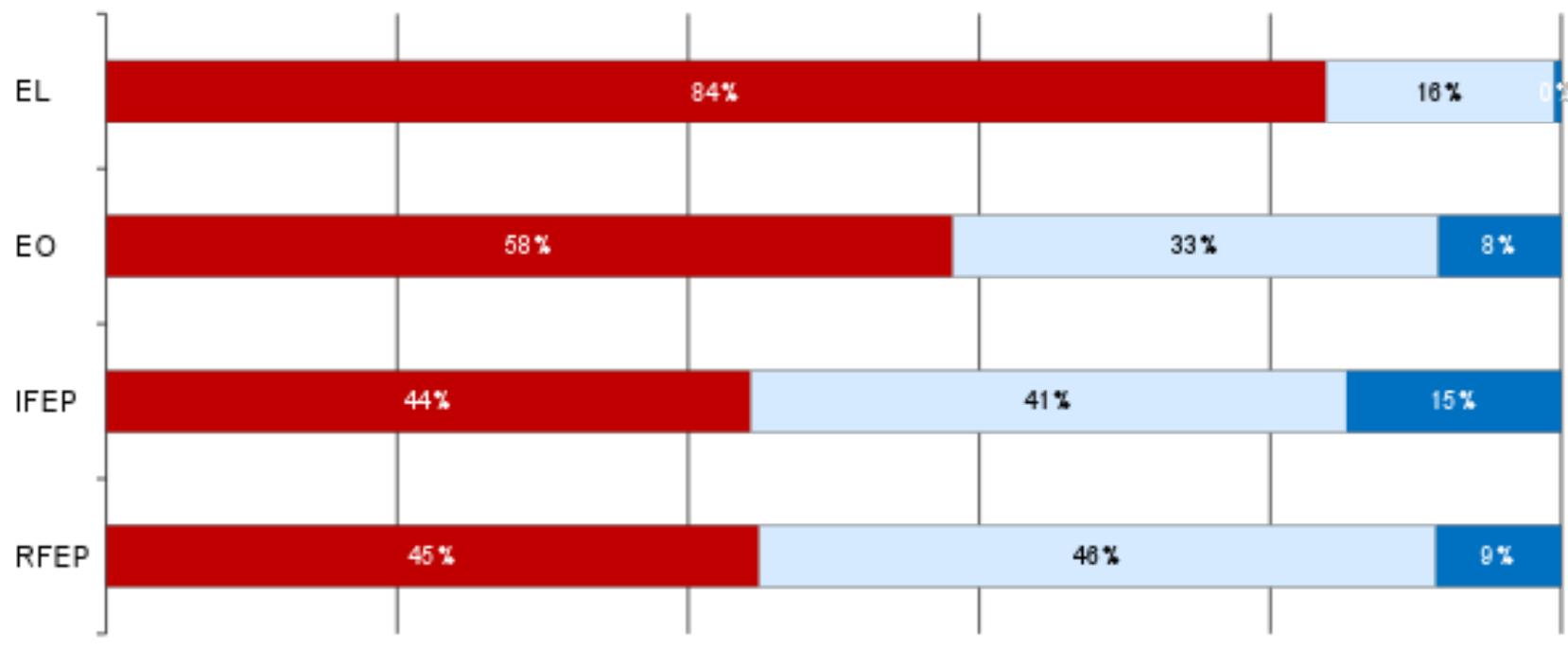
Expressions & Equations Results by English Proficiency

■ Below Standard ■ At/Near Standard ■ Above Standard



Operations & Algebraic Thinking Results by English Proficiency

■ Below Standard ■ At/Near Standard ■ Above Standard



Next Steps

All student data from these assessments are loaded into Illuminate for Principals, teachers and others to use and examine.

- Staff have used PD time and will continue to use time to examine the results
- Staff are becoming more familiar with the SBAC digital resource library for resources and support
- Coaches and central office leaders are supporting schools to understand standards and aligned lesson and unit plans
- Partners such as the Reach Institute, PISI, and SVMU will continue to support our schools and teachers
- We will examine our growth on our next math assessment

Research, Accountability, Assessment and Data

Our Vision

Research, Accountability, Assessment and Data is a collaborative team that supports the district to provide the highest quality education for all students by engaging with departments, schools, teachers and families to use accurate data and tools for school and district level planning and innovative research.



Research, Accountability, Assessment, and Data

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