

# Start Strong Results

Fall 2022

Presented by

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# Participation Rate for Metuchen

Total eligible: 1463

Total part.: 1447

Participation: 98.9%

The Start Strong data has helped us identify:

1. What do we do well systematically
  - a. Metuchen systematically provides quality Tier I (general educational programming) curriculum and instruction.
  - b. Metuchen systematically provides quality Tier II (small group and RtI) supports to identified students
2. Who needs “strong support”
3. What are some of the best supports we can give systematically
  - a. Tier III supports for identified sub-groups

# What is Start Strong? Points to know...

“As a result of the disruption to education due to the COVID-19 pandemic, opportunities to deliver instruction and supports for learning acceleration remain a critical priority at the New Jersey Department of Education

The Start Strong assessment is a valuable tool for teachers, parents, and schools that provide results in real time. The identification of the most appropriate level of supports students need in English language arts, mathematics, and science based on priority New Jersey Student Learning Standards from the prior academic year is not only informative, but essential.

*NJDOE Start Strong Broadcast July 2022*



# What is Start Strong? Points to know

## Who was tested?

- ELA grades 4-10
- Math grades 4-8, Algebra I and II, Geometry
- Science Grades 6, 9 and 12

## Scoring:

- By standard, in many cases, by standards
  - Correct, incorrect, **partial**
- By amount of support that “may be needed”
  - Less support, some support or strong support needed

# What can Start Strong tell us?

- Where do our students need the **least support**: ELA
- Where do our students need **some support**: Math and Science
- Where do our students need **strong support** (2 subjects or more):
  - Sub-groups with 30% or more needing **strong support**
    - Economically Disadvantaged
    - ELL
    - Special Education
    - Black
- Some info about individual student needs:
  - Which students need strong support with some standards this year
  - Individual Student Score Reports sent to parents December 16, 2022

# ELA Proficiency by Grade

| <i>ELA Test Name</i> | <i>N<br/>2022</i> | Less Support May Be Needed | Some Support May Be Needed | Strong Support May Be Needed |
|----------------------|-------------------|----------------------------|----------------------------|------------------------------|
| <b>Grade 04 ELA</b>  | <b>173</b>        | <b>58%</b>                 | <b>20%</b>                 | <b>22%</b>                   |
| <b>Grade 05 ELA</b>  | <b>202</b>        | <b>64%</b>                 | <b>23%</b>                 | <b>12%</b>                   |
| <b>Grade 06 ELA</b>  | <b>170</b>        | <b>63%</b>                 | <b>21%</b>                 | <b>16%</b>                   |
| <b>Grade 07 ELA</b>  | <b>197</b>        | <b>64%</b>                 | <b>19%</b>                 | <b>16%</b>                   |
| <b>Grade 08 ELA</b>  | <b>186</b>        | <b>67%</b>                 | <b>19%</b>                 | <b>14%</b>                   |
| <b>Grade 09 ELA</b>  | <b>162</b>        | <b>70%</b>                 | <b>11%</b>                 | <b>19%</b>                   |
| <b>Grade 10 ELA</b>  | <b>177</b>        | <b>72%</b>                 | <b>19%</b>                 | <b>10%</b>                   |

# Sub-groups: ELA Proficiency Grades 4-10

| <b>Race</b>             | <b>N</b> | <b>Less Support</b> | <b>Some Support</b> | <b>Strong Support</b> |
|-------------------------|----------|---------------------|---------------------|-----------------------|
| <b>Asian</b>            |          | <b>77%</b>          | <b>11%</b>          | <b>12%</b>            |
| <b>Black</b>            |          | <b>45%</b>          | <b>34%</b>          | <b>21%</b>            |
| <b>Hispanic</b>         |          | <b>56%</b>          | <b>22%</b>          | <b>22%</b>            |
| <b>Multiple Races</b>   |          | <b>67%</b>          | <b>23%</b>          | <b>16%</b>            |
| <b>White</b>            |          | <b>63%</b>          | <b>21%</b>          | <b>16%</b>            |
| <b>Special Ed</b>       |          | <b>30%</b>          | <b>28%</b>          | <b>42%</b>            |
| <b>504</b>              |          | <b>63%</b>          | <b>23%</b>          | <b>14%</b>            |
| <b>ELL</b>              |          | <b>14%</b>          | <b>5%</b>           | <b>81%</b>            |
| <b>Economic Disadv.</b> |          | <b>46%</b>          | <b>23%</b>          | <b>30%</b>            |

# Math Proficiency by Grade

| <i>Math Test Name</i>       | <i>N</i><br><b>2022</b> | <b>Less Support</b> | <b>Some Support</b> | <b>Strong Support</b> |
|-----------------------------|-------------------------|---------------------|---------------------|-----------------------|
| <b>Grade 04 Mathematics</b> | 170                     | <b>46%</b>          | <b>26%</b>          | <b>28%</b>            |
| <b>Grade 05 Mathematics</b> | <b>203</b>              | <b>53%</b>          | <b>22%</b>          | <b>24%</b>            |
| <b>Grade 06 Mathematics</b> | 173                     | <b>55%</b>          | <b>24%</b>          | <b>22%</b>            |
| <b>Grade 07 Mathematics</b> | 169                     | <b>48%</b>          | <b>30%</b>          | <b>22%</b>            |
| <b>Grade 08 Mathematics</b> | 99                      | <b>33%</b>          | <b>51%</b>          | <b>16%</b>            |
| <b>Algebra I</b>            | 189                     | <b>43%</b>          | <b>29%</b>          | <b>28%</b>            |
| <b>Algebra II</b>           | 145                     | <b>59%</b>          | <b>25%</b>          | <b>16%</b>            |
| <b>Geometry</b>             | 176                     | <b>56%</b>          | <b>27%</b>          | <b>18%</b>            |



# Sub-groups: Math Proficiency Grades 4-12

| <b>Race</b>             | <b>N</b> | <b>Less Support</b> | <b>Some Support</b> | <b>Strong Support</b> |
|-------------------------|----------|---------------------|---------------------|-----------------------|
| <b>Asian</b>            |          | <b>72%</b>          | <b>18%</b>          | <b>10%</b>            |
| <b>Black</b>            |          | <b>22%</b>          | <b>28%</b>          | <b>50%</b>            |
| <b>Hispanic</b>         |          | <b>32%</b>          | <b>33%</b>          | <b>36%</b>            |
| <b>Multiple Races</b>   |          | <b>56%</b>          | <b>17%</b>          | <b>27%</b>            |
| <b>White</b>            |          | <b>45%</b>          | <b>33%</b>          | <b>22%</b>            |
| <b>Special Ed</b>       |          | <b>18%</b>          | <b>28%</b>          | <b>54%</b>            |
| <b>504</b>              |          | <b>50%</b>          | <b>26%</b>          | <b>24%</b>            |
| <b>ELL</b>              |          | <b>23%</b>          | <b>33%</b>          | <b>43%</b>            |
| <b>Economic Disadv.</b> |          | <b>27%</b>          | <b>29%</b>          | <b>44%</b>            |

# Science Proficiency by Grade

| <b><i>Science Test Name</i></b> | <b><i>N</i></b> | <b>Less Support</b> | <b>Some Support</b> | <b>Strong Support</b> |
|---------------------------------|-----------------|---------------------|---------------------|-----------------------|
| <b>Grade 06 Science</b>         | <b>173</b>      | <b>42%</b>          | <b>35%</b>          | <b>23%</b>            |
| <b>Grade 09 Science</b>         | <b>162</b>      | <b>32%</b>          | <b>43%</b>          | <b>25%</b>            |
| <b>Grade 12 Science</b>         | <b>180</b>      | <b>50%</b>          | <b>27%</b>          | <b>23%</b>            |

# Sub-groups: Science Proficiency Grades 6, 9, 12

| <b>Race</b>      | <b>N</b> | <b>Less Support</b> | <b>Some Support</b> | <b>Strong Support</b> |
|------------------|----------|---------------------|---------------------|-----------------------|
| Asian            |          | 57%                 | 27%                 | 16%                   |
| Black            |          | 15%                 | 42%                 | 42%                   |
| Hispanic         |          | 37%                 | 36%                 | 28%                   |
| Multiple Races   |          | 44%                 | 29%                 | 26%                   |
| White            |          | 37%                 | 39%                 | 24%                   |
| Special Ed       |          | 8%                  | 22%                 | 70%                   |
| 504              |          | 39%                 | 39%                 | 22%                   |
| ELL              |          | 9%                  | 27%                 | 64%                   |
| Economic Disadv. |          | 21%                 | 36%                 | 42%                   |

# Strong Conclusions that can be drawn for Metuchen

The Start Strong data has helped us identify:

1. What do we do well systematically
  - a. **Metuchen systematically provides quality Tier I** (general educational programming) curriculum and instruction.
  - b. **Metuchen systematically provides quality Tier II** (small group and RtI) supports to identified students
2. Who needs “strong support” (**identified sub-groups**)\*
3. What are some of the best supports we can give systematically
  - a. **Tier III supports for identified sub-groups**

**\*Identified Sub-groups:**  
Economically Disadvantaged  
ELL  
Special Education  
Black

# What is our big plan to provide strong support where needed?

## **For all identified students:**

- Address standards that multiple data points show are in need of enhanced instruction
- Tier II: Provide targeted interventions at the individual level to all identified students needing strong support through targeted small group instruction and RtI services

## **For identified sub-groups:**

- Tier III: Provide stronger supports for identified sub-groups through Tier III RtI services
- This year only - One-on-One Virtual Tutoring with funding through the use of federal funds (ARP ESSER III) - 20% of which is mandated for student sub-groups that data show need the strongest supports



# ARP ESSER Use of Funds Requirements



LEAs must reserve at least 20% of funds to address learning loss through implementation of evidence-based interventions and ensure that those interventions respond to students' social, emotional, and academic needs and address the disproportionate impact of COVID-19 on underrepresented student subgroups:

- Each major racial and ethnic group
- Children from low-income families
- Children with disabilities
- Children and youth in foster care
- English learners
- Gender
- Migrant students
- Students experiencing homelessness



# School-based Glows, Grows and Next Steps

Each School Vice Principal, Content Area Supervisor and Assistant Superintendent analyzed the following data sets to identify correlations between:

- 2022 Start Strong Fall results
- 2022 NJSLA Spring Results
- 2022-2023 local benchmark results

To identify areas of success and areas in need of improvement

# CES ELA Glows

- Grade 4
  - High Performance Standards
    - RI.3.4 - Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.
    - RL.3.4.A - Determine or clarify the meaning of unknown and multiple-meaning word and phrases based on grade 3 reading and content, choosing flexibly from a range of strategies. Use sentence-level context as a clue to the meaning of a word or phrase.
    - RL.3.7 - Explain how specific aspects of a text's illustrations contribute to what is conveyed by the words in a story (e.g., create mood, emphasize aspects of a character or setting).



# CES ELA Grows

- Grade 4
  - Low Performance Standards
    - RI.3.1 - Ask and answer questions, and make relevant connections to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
    - RI.3.2 - Determine the main idea of a text; recount the key details and explain how they support the main idea.

# CES ELA Next Steps for all

- Textual evidence and key details to determine the main idea in informational text strategies
  - Systematic PD and implementation of inquiry based research projects
  - Focus in on reading strategies instruction during readers workshop for observations:
    - I Do - mini-lesson
    - We Do - small group guided reading focused on text evidence and key details to support main idea
    - You Do - individual practice

# CES Mathematics Glows

- Grade 4
  - High Performance Standards
    - 3.OA.A.3 - Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
    - 3.OA.B.6 - Understand division as an unknown-factor problem.
    - 3.MD.A.1 - Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.

# CES Mathematics Grows

- Grade 4
  - Low Performance Standards
    - 3.NF.A.3.A - Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.
    - 3.NF.A.3.B - Recognize and generate simple equivalent fractions, e.g.,  $\frac{1}{2} = \frac{2}{4}$ ,  $\frac{4}{6} = \frac{2}{3}$ . Explain why the fractions are equivalent, e.g., by using a visual fraction model.
    - 3.NF.A.3.D - Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions, e.g., by using a visual fraction model.

# CES Math Next Steps for All

- Teachers utilizing multiple data points (ie. iReady reports - Prerequisite, Diagnostic Growth) to provide small group and differentiated instruction
- Ensure Workshop Model fidelity during informal walkthroughs and formal observations
- Completion of 40-60 minutes of personalized instruction on iReady My Path per week
- Math Coach supports teachers and students by providing resources and activities for centers/small group instruction to address prerequisite skills and areas identified as concerns
- Implementation of Math Pacing Guides

# Math Grade 4– Interventions

- Grade 4 identified Fractions (Major Cluster) as an area of focus
  - Spiraling fractions into small and whole group instruction
  - Grade 4 Push in RtI Services and coaching support to allow for students to stay in least restrictive environment
    - Incidental and equitable benefit having additional support in the room for all students

# EMS ELA Glows

## 5th Grade

- Refer to details and examples in a text and make relevant connections when explaining what the text says explicitly and when drawing inferences from the text.
- Determine or clarify the meaning of unknown and multiple meaning words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies. Use context as a clue to the meaning of a word or phrase.
- Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.

# EMS ELA Glows

## 6th Grade

- Quote accurately from a text, and make relevant connections when explaining what the text says explicitly when drawing inferences from the text.
- Determine the key details in a story, drama, or poem to identify the theme and to summarize the text.



# EMS ELA Glows

## 7th Grade:

- Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 6 reading and content, choosing flexibly from a range of strategies.
- Cite textual evidence and make relevant connections to support analysis of what the text says explicitly, as well as inferences drawn from the text.

## 8th Grade:

- Determine a central theme over the course of the text

# EMS ELA Grows

## 5th Grade:

- Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g. a character's thoughts, words, or actions)

## 6th Grade:

- Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

# EMS ELA Grows

## 7th Grade:

- Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.

## 8th Grade:

- Analyze how particular elements of the story or drama interact (how setting shapes characters or plot)

# EMS ELA Next Steps for all

- Small group instruction through the Workshop Model
- Targeted Instruction in Reading Writing Workshop
- Infusion of more inquiry based instruction and research in ELA and Social Studies.

# EMS Math Glows

5th Grade: Multiplication; Equivalent Fractions

6th Grade: Numbers in Base 10; Multiplication & Division of Fractions

7th Grade: Fractions and algebraic expressions

8th Grade: Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units

# EMS Math Glows

## Algebra 1:

- Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms

## Geometry:

- Radicals, Integer Exponents, Proportional Relationships, Lines and Linear Equations.

# EMS Math Grows

- 5th Grade: Find quotients based on place value, the properties of operations
- 6th Grade: Addition & Subtraction of Fractions; Measurement
- 7th Grade: Equations and Inequalities
- 8th Grade: Equations and Inequalities
- Algebra 1: Functions
- Geometry: Pythagorean Theorem



# EMS Math Next Steps

- Data Dive Sessions
- Real world problem solving strategies embedded into lessons



# MHS ELA Glows

## Grade 9 Glows

- Informational
  - Citing strong textual evidence, drawing inferences,
  - analyzing how a text draws connections between individuals, events, or ideas, analysis of multiple texts

## Grade 10 Glows

- Literature
  - Citing strong and relevant text as evidence
  - Determining the theme or central plot
  - Character Analysis
- Informational
  - Citing strong and thorough textual evidence
  - Vocabulary in context

# MHS ELA Grows

## **Grade 9 Grows**

- Informational
  - Use Context Clues

## **Grade 10 Grows**

- Informational
  - Analyze in detail how an author's ideas or claims are developed and refined by particular sentences, paragraphs, or portions of a larger text

# MHS ELA Next Steps for all

- Deep dive of Link-It Benchmarking to analyze vocabulary, reading comprehension, and all other strands of NJSLA standards
  - Use of data mined from various sources to drive instruction and lesson planning
  - Department meeting time dedicated to targeted instruction of NJSLA ELA standards based upon mined data from various sources
- RTI Programming:
  - Continued identification of students in need of support using multiple data points
  - Expansion of RTI support options to include support at the high school in both small group & push-in setting
  - Progress monitoring for specific learning targets, formative assessments, and benchmarks

# MHS Mathematics Glows

## Top Topics of success by course:

### Algebra 1: graphing

- Systems of equations
- Proportional relationships

### Geometry:

- Radicals, Integer Exponents, Proportional Relationships, Lines, Linear Equations

### Algebra 2:

- Interpreting Functions
- Rearranging Formulas

# MHS Mathematics Grows

## Top Topics of need by course:

### Algebra 1:

- Functions
- Geometry
  - a. Pythagorean Theorem and algebraic expressions (volume of cone, volume of cube, etc)

### Geometry:

- Pythagorean Theorem

### Algebra II

- Reasoning with Equations and Equalities
- Identifying Structure
  - Restructuring Expressions
- Completing the Square (alter structure and solve)

# MHS Mathematics Next Steps for all

All grades 6-12:

- ❑ Use of state and local assessment data to drive planning for instruction.
- ❑ Differentiate instruction using data results and implementation of the workshop model.
- ❑ Data Dives - data driven conversation to focus on power standards.
- ❑ Alignment of assessments to state assessment standards.

# MHS Mathematics Next Steps for all

- ❑ Collaboration on design and implementation of exemplar lessons.
- ❑ Purchase and instruction on the use of math manipulatives ([Algebra tiles](#)) to aid in concrete understanding of abstract concepts.
- ❑ Instruction on assessment accommodations and how to teach students to use those accommodations on state assessments.

# Science Glows for all students

## Areas of success:

- Grade 6 Science:
  - Practices: Critiquing
    - Strong overall in all practices
  - Content: Life Science
- Grade 9 Science:
  - Practices: Investigating
  - Content: Life Science
- Grade 12 Science:
  - Practices: Investigating
  - Content: Life Science



# Science Grows for all students

Areas in need of development:

- Grade 6 Science:
  - Test taking format: responding to questions that ask - mark all that are true
- Grade 9 Science:
  - Practices: Sensemaking
  - Content: Physical Science
- Grade 12 Science:
  - Practices: Sensemaking
  - Content: Physical Science

# Science Next Steps for all students

Targeted instruction, differentiation focusing on specific areas for each student.

Specific emphasis on:

- Authentic STEM 3.0/4.0 Problem Solving (real world)
  - Interdisciplinary Climate Change
  - UN Sustainable Goals

# Thank you!!

- VPs (STCs), Chris Thumann and tech team
- Teachers, Teachers, Teachers
- Supervisors
- Principals
- Superintendent
- Board of Education
- Parents
- Special Services and Ed. Specialists and Nurses
- Special Ed. Teachers, Teachers, Teachers
- Interventionists: Behavioral and Rtl
- Tutors, Summer programming staff
- Students