# Melrose Public Schools
# 2017 MCAS Results

# Essential Questions
# 2017 MCAS Results

- How is MCAS 2.0 different from PARCC and the Legacy MCAS?
- What are our achievement gaps within subgroups?
- How does item analysis inform our curriculum, instruction, and learning?
- What can achievement tell us about curriculum, instruction, and learning at MPS?

# Background on MCAS 2.0 Next Generation

# MCAS Achievement Levels

## ★ Legacy

### Advanced

Students at this level demonstrate a comprehensive and in-depth understanding of rigorous subject matter, and provide sophisticated solutions to complex problems.

### Proficient

Students at this level demonstrate a solid understanding of challenging subject matter and solve a wide variety of problems.

### Needs Improvement

Students at this level demonstrate a partial understanding of subject matter and solve some simple problems.

### Warning

Students at this level demonstrate a minimal understanding of subject matter and do not solve simple problems.

## ★ Next-generation

**Exceeding Expectations**
A student who performed at this level exceeded grade-level expectations by demonstrating mastery of the subject matter.

**Meeting Expectations**
A student who performed at this level met grade-level expectations and is academically on track to succeed in the current grade in this subject.

**Partially Meeting Expectations**
A student who performed at this level partially met grade-level expectations in this subject. The school, in consultation with the student's parent/guardian, should consider whether the student needs additional academic assistance to succeed in this subject.

**Not Meeting Expectations**
A student who performed at this level did not meet grade-level expectations in this subject. The school, in consultation with the student's parent/guardian, should determine the coordinated academic assistance and/or additional instruction the student needs to succeed in this subject.

# Parent/Guardian Report

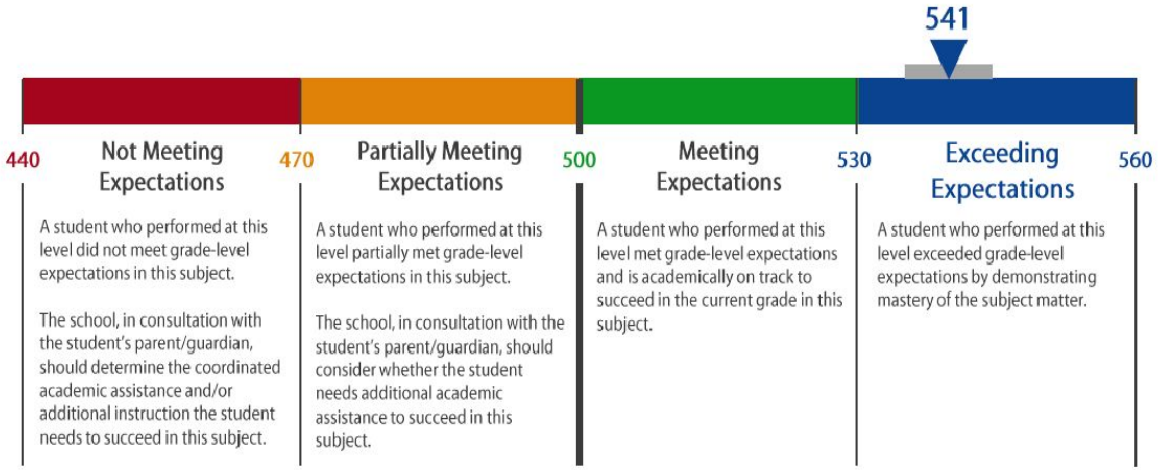
Name: Doe, Jonathan H.
SASID: 1234567890

## Mathematics Results

Grade 8
Spring 2017
Computer-based test

Your Child's Achievement Level: **Exceeding Expectations**

Your Child's Score: **541**




A student who performed at this level did not meet grade-level expectations in this subject.

The school, in consultation with the student's parent/guardian, should determine the coordinated academic assistance and/or additional instruction the student needs to succeed in this subject.

A student who performed at this level partially met grade-level expectations in this subject.

The school, in consultation with the student's parent/guardian, should consider whether the student needs additional academic assistance to succeed in this subject.

A student who performed at this level met grade-level expectations and is academically on track to succeed in the current grade in this subject.

A student who performed at this level exceeded grade-level expectations by demonstrating mastery of the subject matter.

In the figure above, the triangle indicates your child's score on the test. The gray bar shows the range of likely scores your child would receive if he or she took the test multiple times.

**How your child performed compared to the school, district, and state**

| Your Child's Score | Average Score | | | |
|---|---|---|---|---|
| | School | District | | State |
| 541 | 485 | 502 | 499 | 515 |

# Parent/Guardian Report

## How your child performed on the test in each reporting category and on each individual test question

| Reporting Category | Points earned by **your child** | Average number of points earned by Meeting Expectations students who scored close to 500. |
|---|---|---|
| Operations & Algebraic Thinking | 7 out of 10 | 6.0 out of 10 |
| Numbers & Operations in Base Ten | 10 out of 10 | 6.8 out of 10 |
| Numbers & Operations - Fractions | 5 out of 5 | 4.0 out of 5 |
| Measurement & Data | 8 out of 9 | 6.1 out of 9 |
| Geometry | 3 out of 4 | 2.5 out of 4 |

### Individual Test Questions

| Question Number | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Points Earned | 1/2 | 3/4 | 0/1 | 0/1 | 3/3 | 1/4 | 1/1 | 1/1 | 1/1 | 0/1 | 1/1 | 1/2 | 1/2 | 1/1 | 1/1 | 0/1 | 4/4 | 3/4 | 0/4 | 1/1 | 1/1 | 1/1 | 0/1 | 0/1 | 0/1 | 2/3 | 5/6 | 0/1 | 1/1 | 1/1 |

**Key**
x/y = x points earned out of y possible points
Blank space/y = no answer provided

Go online to see a description of every test question at www.doe.mass.edu/mcas/parents.

# Interpreting the Results

- In general, the new standards for Meeting Expectations are **more rigorous** than the standards for reaching the Proficient level on the legacy MCAS.
- **The results do NOT mean that students learned more or less**; the next-generation MCAS **measures learning in a different way**
- **2017 is the baseline year** — the first year of a new assessment — and we expect scores to change over time, as occurred when the legacy MCAS debuted in 1998.
- **Massachusetts educators** set these standards, and they raised them in order to make sure our students will be college - and career- ready.
- **In some grades and subjects** (grade 4 English Language Arts and math, grade 7 math), **the percent of students** Meeting Expectations **will likely be similar** to the percent that were Proficient previously. **In other grades and subjects** (grade 8 English Language Arts), **the percent of students** Meeting Expectations **will likely be lower** than the previous percent of Proficient students.

# Resources for More Information

## For Parents

www.doe.mass.edu/mcas/parents

- Parent Guide to the MCAS (available in several languages
- Annotated Parent/Guardian Reports (PPT)
- Frequently Asked Questions (FAQs)
- What are the Achievement Level Descriptors?
- Item Descriptions for Grades 3–8 ELA and Mathematics
- Parent/guardian report templates and translations

## For Educators

www.doe.mass.edu/mcas/parents

- Parent Guide to the MCAS (available in several languages
- Annotated Parent/Guardian Reports (PPT)
- Frequently Asked Questions (FAQs)
- What are the Achievement Level Descriptors?
- Item Descriptions for Grades 3–8 ELA and Mathematics
- Parent/guardian report templates and translations

# Organization of Presentation

- For each grade span, i.e. Grades 3-5, 6-8, and grade 10, in the subject areas of ELA, math, and science, the presentation will outline the following:
  - Strengths observed in the MCAS results
  - Areas of need  in the MCAS results
  - Action plan to address areas of need

# High Needs Subgroups

High Needs-The high needs group is an unduplicated count of all students in a school or district belonging to at least one of the following individual subgroups:

- Students with Disabilities,
- English language learners (ELL) and former ELL students
- Low Income Students (eligible for free/reduced price school lunch)

# Impactful Positive Practices

- Aligned curriculum in ELA and Mathematics
- Continued alignment of Science curriculum to new standards
- Systematic tiered instruction in ELA and Mathematics for identified students
- Analysis of students' data well-established and effective
- Identified core instructional practices at all levels to support qual
- Instructional coaches and content facilitators to provide in-coaching support
- Building more opportunities for teacher leadership

# Opportunities for Growth

- Achievement gap for our students with disabilities and high needs students continues. We need to ensure students have consistent access to general education and that our tiered systems of support align.
- Scores can now be reviewed at the individual teacher level. Focus on insuring fidelity to standards, curriculum, and instruction.
- Restored item analysis provides opportunity to analyze areas where our curriculum and instruction can be better aligned without teaching to the test.

*How is MCAS 2.0 different from PARCC and the Legacy MCAS?*

*What are our achievement gaps within subgroups?*

*How does the item analysis inform our curriculum, instruction, and learning*

*What can achievement tell us about curriculum, instruction, and learning at MPS?*

# ENGLISH LANGUAGE ARTS

# District ELA MCAS 2.0 All Students

| | Meeting/ Exceeding | Exceeding Expectations | Meeting Expectations | Partially Meeting Expectations | Not Meeting Expectations |
|---|---|---|---|---|---|
| Grade 3 | 63% | 12% | 51% | 35% | 2% |
| Grade 4 | 67% | 12% | 55% | 32% | 1% |
| Grade 5 | 68% | 16% | 53% | 29% | 3% |
| Grade 6 | 65% | 13% | 52% | 31% | 5% |
| Grade 7 | 62% | 5% | 57% | 36% | 2% |
| Grade 8 | 75% | 21% | 54% | 23% | 2% |

# District ELA MCAS 2.0 Students w/Disabilities

| | Meeting/ Exceeding | Exceeding Expectations | Meeting Expectations | Partially Meeting Expectations | Not Meeting Expectations |
|---|---|---|---|---|---|
| Grade 3 | 25% | 0% | 25% | 67% | 8% |
| Grade 4 | 33% | 8% | 24% | 63% | 4% |
| Grade 5 | 20% | 2% | 18% | 62% | 18% |
| Grade 6 | 19% | 0% | 19% | 60% | 21% |
| Grade 7 | 16% | 0% | 16% | 71% | 13% |
| Grade 8 | 35% | 2% | 33% | 56% | 9% |

# District ELA MCAS 2.0 High Needs

| | Meeting/ Exceeding | Exceeding Expectations | Meeting Expectations | Partially Meeting Expectations | Not Meeting Expectations |
|---|---|---|---|---|---|
| Grade 3 | 38% | 6% | 32% | 57% | 5% |
| Grade 4 | 41% | 9% | 32% | 56% | 3% |
| Grade 5 | 39% | 2% | 37% | 51% | 10% |
| Grade 6 | 32% | 3% | 29% | 55% | 13% |
| Grade 7 | 35% | 0% | 35% | 58% | 7% |
| Grade 8 | 42% | 5% | 38% | 50% | 8% |

# ELA MCAS 2.0 Grade 3 by School

| | Meeting/ Exceeding | Exceeding Expectations | Meeting Expectations | Partially Meeting Expectations | Not Meeting Expectations |
|---|---|---|---|---|---|
| Hoover | 65% | 18% | 45% | 30% | 5% |
| Horace Mann | 62% | 15% | 48% | 38% | 0% |
| Lincoln | 60% | 3% | 57% | 38% | 2% |
| Roosevelt | 68% | 13% | 55% | 31% | 2% |
| Winthrop | 62% | 15% | 48% | 38% | 0% |

# ELA MCAS 2.0 Grade 4 by School

| | Meeting/ Exceeding | Exceeding Expectations | Meeting Expectations | Partially Meeting Expectations | Not Meeting Expectations |
|---|---|---|---|---|---|
| Hoover | 64% | 23% | 41% | 36% | 0% |
| Horace Mann | 76% | 9% | 67% | 24% | 0% |
| Lincoln | 62% | 18% | 43% | 37% | 2% |
| Roosevelt | 58% | 2% | 56% | 39% | 3% |
| Winthrop | 75% | 12% | 63% | 25% | 0% |

# ELA MCAS 2.0 Grade 5 by School

| | Meeting/ Exceeding | Exceeding Expectations | Meeting Expectations | Partially Meeting Expectations | Not Meeting Expectations |
|---|---|---|---|---|---|
| Hoover | 70% | 11% | 59% | 27% | 3% |
| Horace Mann | 63% | 16% | 47% | 37% | 0% |
| Lincoln | 72% | 19% | 53% | 23% | 5% |
| Roosevelt | 68% | 18% | 50% | 27% | 5% |
| Winthrop | 67% | 13% | 54% | 31% | 2% |

# % of Students Achieving Exceeding/Meeting ELA by Subgroup

| | Gr. 3 | Gr. 4 | Gr. 5 | Gr. 6 | Gr. 7 | Gr. 8 |
|---|---|---|---|---|---|---|
| All | 63% | 67% | 68% | 75% | 62% | 75% |
| High Needs | 38% | 41% | 39% | 42% | 35% | 42% |
| Students w/ disabilities | 25% | 33% | 20% | 35% | 16% | 35% |
| Low Income | 44% | 32% | 44% | 62% | 56% | 42% |
| African American | 33% | 36% | 50% | 44% | 42% | 44% |
| Hispanic | 67% | 75% | 47% | | | |

Subgroups with a gap to Exceeding/Meeting Expectations of 20+ percentage points.

# Grade 3-8 % Correct by Topic

| Strand/ Topic | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|
| **Language** | 61% | 77% | 71% | 68% | 73% | 73% |
| **Reading** | 72% | 73% | 85% | 71% | 78% | 82% |
| **Writing** | 45% | 55% | 55% | 46% | 52% | 57% |

# Grade 3-8 % Correct by Question Type

| Question Type | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|
| **All Items** | 65% | 71% | 73% | 63% | 68% | 72% |
| **Constructed Response** | 39% | 47% | not reported | not reported | not reported | not reported |
| **Essay** | 49% | 59% | 61% | 55% | 61% | 66% |
| **Selected Response** | 75% | 80% | 83% | 71% | 76% | 76% |

# Next Steps ELA Elementary

- Align reader's responses in grades K-5 with text based essay prompts in MCAS 2.0.
- Implement online assessment format throughout the school year in grades 4 and 5 to provide students opportunities to practice in this format.
- Provide students with instruction in digital literacy skills needed for online testing.
- Identify subgroup populations in need of additional supports and align tiered instruction.

# Next Steps ELA Middle School

- Reword all prompts for writing and multiple choice questions in ELA common assessments to provide students more experience with the specific language used.
- Provide opportunities for practice with online assessments for grades six through eight students.
- Assign students to intervention groupings focusing on reading and newly-designed writing units.

# Next Steps ELA Middle School

- Identify subgroup populations in need of additional supports and align tiered instruction.
- Provide students additional opportunities to practice reading and writing skills in science and social students.
- Utilize increased common planning time with Special Education teachers and ELA teachers to improve collaboration to support implementation of inclusive practices.

# 2017 Grade 10 Legacy MCAS Results English Language Arts

| Grade | % Advanced & Proficient | % Needs Improvement | % Warning |
|---|---|---|---|
| All | 99% | 1% | 0% |
| African American | 94% | 6% | 0% |
| High Needs | 97% | 3% | 0% |
| Students w/ Disabilities | 94% | 6% | 0% |

# 2010-2017 Grade 10 Change Over Time Reducing Gaps to Proficiency in ELA

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|---|
| All | 89 | 88 | 94 | 95 | 98 | 98 | 95 | 99 |
| Students w/ Disabilities | 51 | 57 | 67 | 59 | 88 | 91 | 77 | 94 |
| Low Income | 60 | 73 | 97 | 91 | 100 | 96 | 86 | 97 |
| High Needs | 60 | 69 | 82 | 79 | 94 | 92 | 86 | 97 |
| African American | 76 | 50 | 88 | 92 | 100 | 100 | 95 | 95 |
| Hispanic | | 93 | | | | | | |

Subgroups with a gap to Proficiency of 20+ percentage points.

# ELA Next Steps 9-12

- Reword all prompts for writing and multiple choice questions in ELA common assessments for grade nine to provide students more experience with the specific ways language is used in MCAS 2.0.
- Implement online assessment practice for grade nine students to provide opportunities for practice in the digital format used in MCAS 2.0.
- Maintain practices in test preparation, remediation and review for current grade ten ELA students to ensure they will achieve results similar or superior to scores reported on the 2017 Legacy MCAS testing.

*How is MCAS 2.0 different from PARCC and Legacy MCAS? What are our achievement gaps within subgroups?*

*How does the item analysis inform our curriculum, instruction, and learning*

*What can achievement tell us about curriculum, instruction, and learning at MPS?*

# MATHEMATICS

# District Math MCAS 2.0 Data

| | Meeting/ Exceeding | Exceeding Expectations | Meeting Expectations | Partially Meeting Expectations | Not Meeting Expectations |
|---|---|---|---|---|---|
| Grade 3 | 73% | 19% | 54% | 24% | 3% |
| Grade 4 | 73% | 15% | 58% | 23% | 4% |
| Grade 5 | 67% | 13% | 54% | 31% | 2% |
| Grade 6 | 62% | 11% | 51% | 34% | 4% |
| Grade 7 | 59% | 10% | 49% | 38% | 3% |
| Grade 8 | 51% | 9% | 42% | 46% | 4% |

# District Math MCAS 2.0
# Students w/ Disabilities

| | Meeting/ Exceeding | Exceeding Expectations | Meeting Expectations | Partially Meeting Expectations | Not Meeting Expectations |
|---|---|---|---|---|---|
| Grade 3 | 38% | 8% | 29% | 50% | 12% |
| Grade 4 | 37% | 2% | 35% | 43% | 20% |
| Grade 5 | 29% | 0% | 29% | 64% | 7% |
| Grade 6 | 19% | 4% | 15% | 62% | 19% |
| Grade 7 | 21% | 3% | 18% | 61% | 18% |
| Grade 8 | 21% | 0% | 21% | 60% | 19% |

# District Math MCAS 2.0 High Needs

| | Meeting/ Exceeding | Exceeding Expectations | Meeting Expectations | Partially Meeting Expectations | Not Meeting Expectations |
|---|---|---|---|---|---|
| Grade 3 | 49% | 20% | 29% | 44% | 7% |
| Grade 4 | 46% | 3% | 44% | 41% | 13% |
| Grade 5 | 42% | 5% | 37% | 56% | 4% |
| Grade 6 | 32% | 3% | 29% | 56% | 12% |
| Grade 7 | 30% | 3% | 28% | 59% | 10% |
| Grade 8 | 20% | 0% | 20% | 65% | 15% |

# Math MCAS 2.0 Grade 3 by School

| | Meeting/ Exceeding | Exceeding Expectations | Meeting Expectations | Partially Meeting Expectations | Not Meeting Expectations |
|---|---|---|---|---|---|
| Hoover | 85% | 15% | 70% | 10% | 5% |
| Horace Mann | 78% | 10% | 68% | 22% | 0% |
| Lincoln | 63% | 24% | 40% | 32% | 5% |
| Roosevelt | 74% | 21% | 52% | 23% | 3% |
| Winthrop | 72% | 21% | 51% | 28% | 0% |

# Math MCAS 2.0 Grade 4 by School

| | Meeting/ Exceeding | Exceeding Expectations | Meeting Expectations | Partially Meeting Expectations | Not Meeting Expectations |
|---|---|---|---|---|---|
| Hoover | 73% | 27% | 45% | 27% | 0% |
| Horace Mann | 85% | 13% | 72% | 13% | 2% |
| Lincoln | 63% | 15% | 48% | 27% | 10% |
| Roosevelt | 70% | 8% | 62% | 25% | 5% |
| Winthrop | 74% | 16% | 58% | 25% | 2% |

# Math MCAS 2.0 Grade 5 by School

| | Meeting/ Exceeding | Exceeding Expectations | Meeting Expectations | Partially Meeting Expectations | Not Meeting Expectations |
|---|---|---|---|---|---|
| Hoover | 84% | 19% | 55% | 16% | 0% |
| Horace Mann | 68% | 24% | 45% | 32% | 0% |
| Lincoln | 64% | 11% | 53% | 33% | 3% |
| Roosevelt | 66% | 8% | 58% | 31% | 3% |
| Winthrop | 61% | 10% | 51% | 39% | 0% |

# % of Students Exceeding/Meeting Expectations Math by Subgroup

| | Gr. 3 | Gr. 4 | Gr. 5 | Gr. 6 | Gr. 7 | Gr. 8 |
|---|---|---|---|---|---|---|
| All | 73% | 73% | 67% | 62% | 59% | 51% |
| High Needs | 49% | 46% | 42% | 32% | 30% | 20% |
| Students w/ disabilities | 38% | 37% | 29% | 19% | 21% | 21% |
| Low Income | 56% | 39% | 40% | 34% | 41% | 24% |
| African American | 47% | 43% | 46% | 53% | 25% | 12% |
| Hispanic | 64% | 50% | 37% | | | |

Subgroups with a gap to Exceeding/Meeting Expectations of 20+ percentage points.

# Grade 3-5 % Correct by Topic

| Strand/Topic | 3 | 4 | 5 |
|---|---|---|---|
| **Geometry** | 76% | 69% | 79% |
| **Measurement & Data** | 76% | 67% | 53% |
| **Number & Operations in Base 10** | 79% | 81% | 67% |
| **Number & Operations-Fractions** | 70% | 73% | 69% |
| **Operations & Algebraic Thinking** | 74% | 61% | 79% |

# Grade 6-8 % Correct by Topic

| Strand/Topic | 6 | 7 | 8 |
|---|---|---|---|
| **Expressions and Equations** | 66% | 52% | 45% |
| **Functions** | | | 53% |
| **Geometry** | 48% | 42% | 64% |
| **Ratios and Proportional Relationships** | 48% | 43% | |
| **Statistics & Probability** | 66% | 64% | 80% |
| **Number System** | 49% | 64% | 56% |

# Grade 3-8 % Correct by Question Type

| Strand/ Topic | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|
| **All Items** | 75% | 70% | 68% | 56% | 53% | 56% |
| **Constructed Response** | 66% | 63% | 62% | 48% | 44% | 38% |
| **Short Answer** | 69% | 64% | 64% | 57% | 44% | 51% |
| **Selected Response** | 80% | 78% | 72% | 63% | 67% | 66% |

# Next Steps Math Elementary

- Identify subgroup populations in need of additional supports and align tiered instruction.
- Implement Envision Pearson 2.0 in grades K-2.
- Practice online assessment format in grades 4 and 5 to provide students opportunities to use this format.

# Next Steps Math Middle School

- Pilot new Math program in grades 6-8, Envision 2.0. Review data throughout the school year to determine effectiveness of the program.
- Assess students at least twice per units using math performance tasks, similar to constructed response on MCAS 2.0.
- Practice online assessment format throughout the school year to provide students opportunities to use this format.
- Incorporate a spiral review into homework and math lab/intervention classes
- Focus on using math vocabulary/language in performance tasks/constructed responses.
- Ensure math small group classrooms collaborate with general education math teachers to insure pacing.

# 2017 Grade 10 Legacy MCAS Results Mathematics

| Grade | % Advanced & Proficient | % Needs Improvement | % Warning |
|---|---|---|---|
| All | 86% | 11% | 3% |
| African American | 57% | 14% | 29% |
| High Needs | 59% | 29% | 12% |
| Students w/ Disabilities | 46% | 35% | 19% |

# 2010-2017 Grade 10 Change Over Time Reducing Gaps to Proficiency in Math

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|---|
| All | 82 | 79 | 82 | 88 | 86 | 88 | 84 | 86 |
| Students w/ Disabilities | 40 | 27 | 31 | 55 | 43 | 50 | 32 | 46 |
| Low Income | 65 | 51 | 75 | 79 | 79 | 75 | 59 | 68 |
| High Needs | 51 | 46 | 53 | 68 | 65 | 63 | 48 | 56 |
| African American | 41 | 44 | 69 | 83 | 77 | 86 | 81 | 59 |
| Asian | 82 | | 75 | | | 91 | | |
| Hispanic | | 53 | 73 | | | | 64 | |

Subgroups with a gap to Proficiency of 20+ percentage points.

# Math Grades 9-12 Next Steps

- For 10th graders, continue the use of traditional open response questions from the Legacy MCAS.
- For 9th graders, transition to performance tasks similar to constructed response questions from MCAS 2.0.
- All students will be given online assessments throughout the year to prepare for online testing in 2019.
- For current grade 10 students, continue to use MCAS questions as formative assessments.

# Math Grades 9-12 Next Steps

- Collect more frequent data points on students with disabilities to identify challenges and remediate immediately.
- Identify students in grade 9 who were Not Meeting or Partially Meeting and students in grade 10 who were Needs Improvement or Warning and provide targeted remediation.

*How is MCAS 2.0 different from PARCC and Legacy MCAS? What are our achievement gaps within subgroups?*

*How does the item analysis inform our curriculum, instruction, and learning*

*What can achievement tell us about curriculum, instruction, and learning at MPS?*

# SCIENCE

**Note: The science exam at all grades is the Legacy MCAS version.**

# 2017 District Results
# Science and Technology/Engineering (STE)

| Grade | % Advanced and Proficient | % Needs Improvement | % Warning |
|---|---|---|---|
| 10 | 85% | 13% | 3% |
| 8 | 50% | 44% | 6% |
| 5 | 49% | 45% | 6% |

Grade 5 are district results; Grades 8 and 10 are school results.

# 2012 -2016 % of Advanced and Proficient in Science

| | 2012 | | 2013 | | 2014 | | 2015 | | 2016 | | 2017 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Adv. | Prof. | Adv. | Prof. | Adv. | Prof. | Adv. | Prof. | Adv. | Prof. | Adv. | Prof. |
| Gr. 10 | 19 | 46 | 26 | 38 | 33 | 51 | 38 | 45 | 44 | 42 | 43 | 42 |
| Gr. 8 | 7 | 46 | 7 | 45 | 8 | 44 | 2 | 47 | 11 | 46 | 5 | 44 |
| Gr. 5 | 34 | 32 | 26 | 34 | 29 | 35 | 22 | 41 | 26 | 44 | 29 | 32 |

# % of Students Achieving Advanced or Proficient in Science by Subgroup

| | Gr. 5 | Gr. 8 | Gr. 10 |
|---|---|---|---|
| All | 62% | 49% | 85% |
| High Needs | 32% | 27% | 60% |
| Students w/ disabilities | 22% | 30% | 49% |
| Low Income | 38% | 24% | 63% |
| African American | 32% | 19% | 73% |
| Hispanic | 37% | | 67% |

Subgroups with a gap to Proficiency of 20+ percentage points.

Grade 5 are district results; Grades 8 and 10 are school results.

# Grade 5 Science by School

| School | % Advanced | % Proficient | % Needs Improvement | % Warning |
|---|---|---|---|---|
| Hoover | 51% | 24% | 22% | 3% |
| Horace Mann | 24% | 39% | 24% | 13% |
| Lincoln | 25% | 30% | 42% | 3% |
| Roosevelt | 29% | 34% | 32% | 5% |
| Winthrop | 25% | 34% | 41% | 0% |

# Grade 5-8 % Correct by Topic

| Standard/Topic | Grade 5 | Grade 8 |
|---|---|---|
| Earth and Space Science | 69% | 62% |
| Life Science | 73% | 71% |
| Physical Science | 76% | 68% |
| Technology/Engineering | 72% | 73% |

# All Exams % Correct by Question Type

| Item Type | Grade 5 | Grade 8 | Grade 10 |
|---|---|---|---|
| **All Items** | 73% | 69% | 72% |
| **Multiple Choice** | 81% | 73% | 81% |
| **Open Response** | 55% | 58% | 54% |

# Science Grades K-5 Next Steps

- Support specific fifth grade teachers at individual schools with highest proportion of students at Needs Improvement. Ensure alignment in instruction and curriculum at these schools.
- Implement new physical and earth science units aligned to the new Science Curriculum Frameworks.
- Create this year new life science units in grades K-5 for the 2018-2019 school year.
- Strengthen implementation of science practice and inquiry based instruction.

# Science Grades 6-8 Next Steps

- Placement in intervention classes at the middle school by topic.
- Students will be assessed on open response and scientific writing with increasing frequency by trimester throughout the year in grade 8.
- Increase opportunities for open response and scientific writing in grades 6 and 7.
- Identify and implement instructional practices to increase use of scientific vocabulary.

# Science Grades 9-12 Next Steps

- Track open response questions in each topic and on all assessments. Analyze common mistakes and provide opportunities for reteaching.
- Provide opportunities for self-assessment and peer feedback on open response questions.