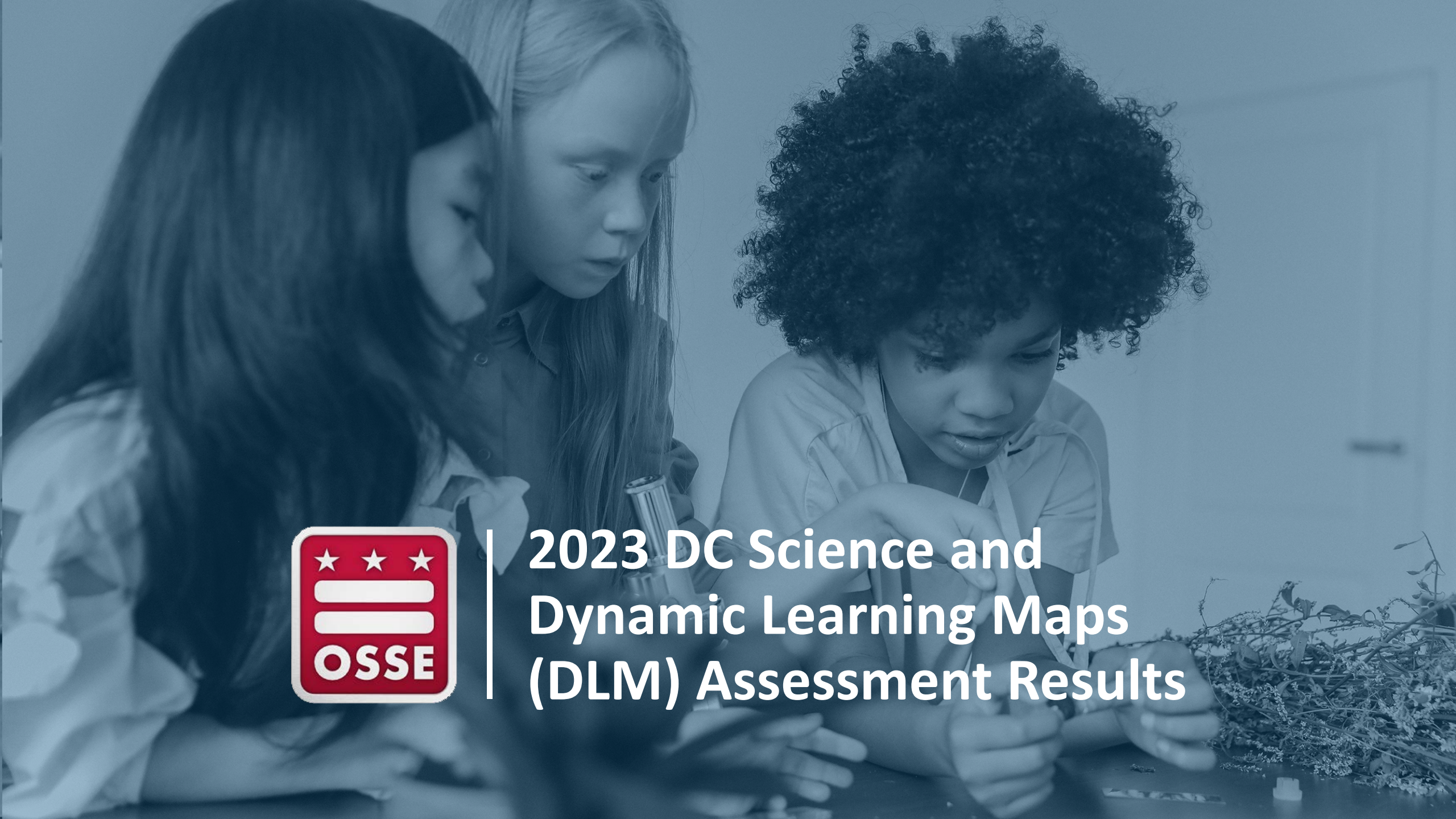


2023 DC Science and Dynamic Learning Maps (DLM) Assessment Results

Science Assessment in the District of Columbia

- DC Science is aligned to the Next Generation Science Standards (NGSS) and administered to students in grades 5, 8 and high school biology. Dynamic Learning Maps Alternate Science Assessment (DLM) is administered to students with the most significant cognitive disabilities in grades 5, 8 and high school biology.

- Science assessments in the District are aligned to the NGSS. The NGSS measure scientific knowledge and skills most critical in the NGSS, such as scientific thinking and problem-solving.

- The NGSS identify scientific and engineering practices (SEPs), cross-cutting concepts (CCCs) and disciplinary core ideas (DCIs) in science that all K-12 students should master to be prepared for success in college and 21st century careers.

- DC adopted the NGSS in December 2013.

- DC Science and DLM were first administered in 2019.

Reporting

DC Science Performance Level Definitions

Master Claim: Students use scientific principles, skills and behaviors to make sense of phenomena and address real-world problems.

Exceeds Expectations	A student who *Exceeds Expectations* demonstrates thorough understanding and sophisticated reasoning when applying DCIs, using SEPs and using CCCs to make sense of phenomena or address solutions in the natural or designated world.
Meets Expectations	A student who *Meets Expectations* demonstrates a substantial understanding and relevant reasoning with applying DCIs, using SEPs and using CCCs to make sense of phenomena or address solutions in the natural or designated world.
Approaching Expectations	A student who *Approaches Expectations* demonstrates a basic understanding and draws connections between and among science dimensions when applying DCIs, using SEPs and using CCCs to make sense of phenomena or address solutions in the natural or designated world.
Partially Meets Expectations	A student who *Partially Meets Expectations* demonstrates a below-basic understanding and is not yet making connections between and among science dimensions when using DCIs, using SEPs and using CCCs to make sense of phenomena or address solutions in the natural or designated world.

Reporting Results – DC Science

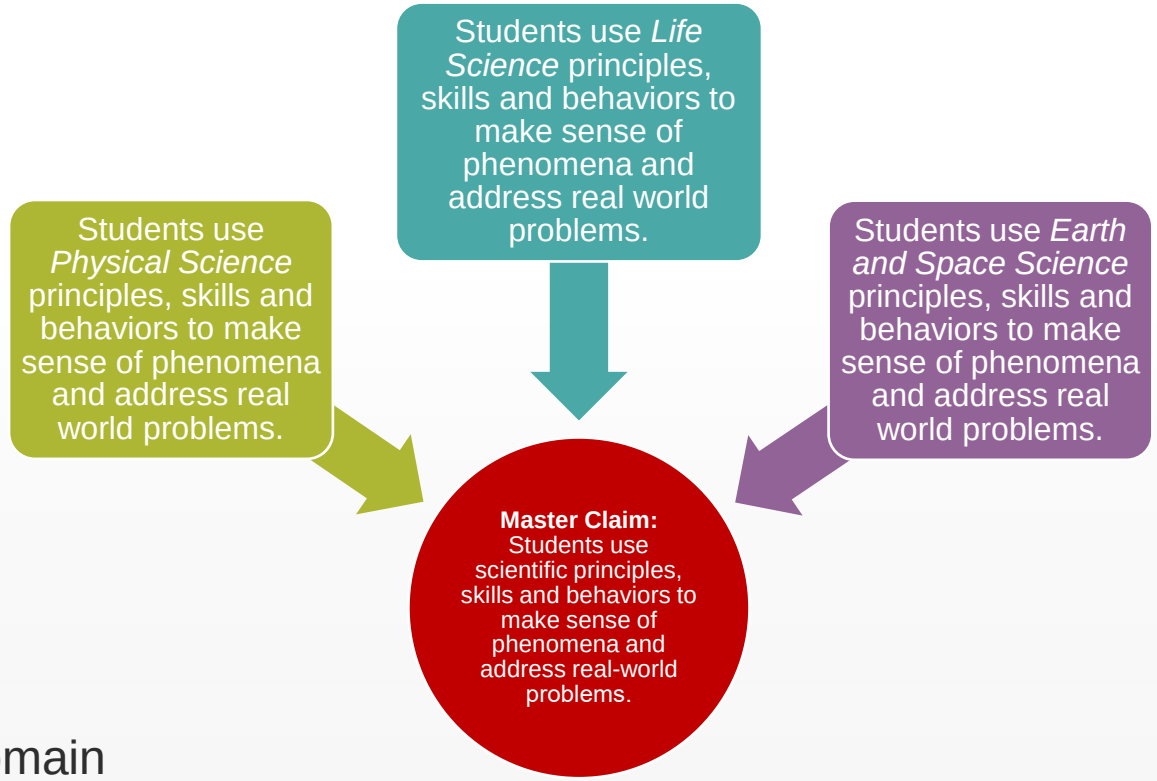
The DC Science Individual Student Reports (ISRs) include:

1. Student Scale Score
   - Metric scale ranging 300 to 600 with 450 denoting “Met Expectations”

2. Four levels of performance:
   - Level 4 - Exceeded Expectations
   - Level 3 - Met Expectations
   - Level 2 - Approached Expectations
   - Level 1 - Partially Met Expectations

3. Domain and sub-domain claims for:
   - Physical Science
   - Life Science
   - Earth and Space Science

4. Sub-domain performance:
   - Three performance levels for each domain



DLM Performance Level Descriptors

DLM student score reports provide results related to a student's overall performance level for the subject. Student results are reported using the four performance levels approved by the partner states:

Advanced	The student demonstrates *advanced* understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements.
At Target	The student's understanding of and ability to apply content knowledge and skills represented by the Essential Elements is *at target.*
Approaching the Target	The student's understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements is *approaching the target.*
Emerging	The student demonstrates *emerging* understanding of and ability to apply content knowledge and skills represented by the Essential Elements.

Detailed Performance Level Descriptors for each grade can be found on the DLM Assessment Results page.

Reporting Results – DLM

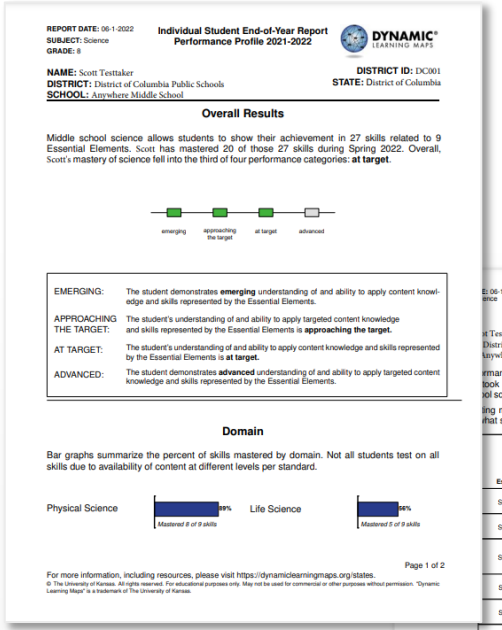
The DLM ISRs include:

1. Student Scale Score
   - Overall results of Essential Elements with “At Target” denoting mastery

2. Four levels of performance:
   - Level 4 - Advanced
   - Level 3 - At Target
   - Level 2 - Approaching the Target
   - Level 1 - Emerging

3. Domain and sub-domain claims for:
   - Physical Science
   - Life Science
   - Earth and Space Science

4. Sub-domain performance:
   - Three linkage levels for each Essential Element tested



REPORT DATE: 06-1-2022
SUBJECT: Science
GRADE: 8

Individual Student End-of-Year Report
Performance Profile 2021-2022

DYNAMIC LEARNING MAPS

NAME: Scott Testtaker
DISTRICT: District of Columbia Public Schools
SCHOOL: Anywhere Middle School

DISTRICT ID: DC001
STATE: District of Columbia

Overall Results

Middle school science allows students to show their achievement in 27 skills related to 9 Essential Elements. Scott has mastered 20 of those 27 skills during Spring 2022. Overall, Scott's mastery of science fell into the third of four performance categories: **at target**.

emerging | approaching the target | at target | advanced

EMERGING:	The student demonstrates **emerging** understanding of and ability to apply content knowledge and skills represented by the Essential Elements.
APPROACHING THE TARGET:	The student's understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements is **approaching the target.**
AT TARGET:	The student's understanding of and ability to apply content knowledge and skills represented by the Essential Elements is **at target.**
ADVANCED:	The student demonstrates **advanced** understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements.

Domain

Bar graphs summarize the percent of skills mastered by domain. Not all students test on all skills due to availability of content at different levels per standard.

Physical Science 89% *Mastered 8 of 9 skills*
Life Science 56% *Mastered 5 of 9 skills*

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For more information, including resources, please visit https://dynamiclearningmaps.org/states.

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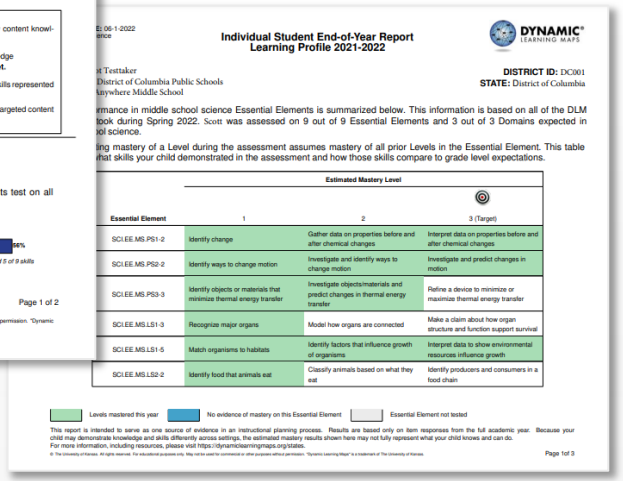

Individual Student End-of-Year Report
Learning Profile 2021-2022

DYNAMIC LEARNING MAPS

DISTRICT ID: DC001
STATE: District of Columbia

Essential Element	Estimated Mastery Level 1	2	3 (Target)
SCI.EE.MS.PS1-2	Identify change	Gather data on properties before and after chemical changes	Interpret data on properties before and after chemical changes
SCI.EE.MS.PS2-2	Identify ways to change motion	Investigate and identify ways to change motion	Investigate and predict changes in motion
SCI.EE.MS.PS3-3	Identify objects or materials that minimize thermal energy transfer	Investigate objects/materials and predict changes in thermal energy transfer	Refine a device to minimize or maximize thermal energy transfer
SCI.EE.MS.LS1-3	Recognize major organs	Model how organs are connected	Make a claim about how organ structure and function support survival
SCI.EE.MS.LS1-5	Match organisms to habitats	Identify factors that influence growth of organisms	Interpret data to show environmental resources influence growth
SCI.EE.MS.LS2-2	Identify food that animals eat	Classify animals based on what they eat	Identify producers and consumers in a food chain

Levels mastered this year | No evidence of mastery on this Essential Element | Essential Element not tested

This report is intended to serve as one source of evidence in an instructional planning process. Results are based only on item responses from the full academic year. Because your child may demonstrate knowledge and skills differently across settings, the estimated mastery results shown here may not fully represent what your child knows and can do.
For more information, including resources, please visit https://dynamiclearningmaps.org/states.

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2023 Results

Key Takeaways

- Participation rates increased for all student groups between the 2021-22 and 2022-23 school year administrations. The highest participation rate was in Grade 5.

- Overall percentage of students meeting or exceeding grade-level expectations in science stayed constant between the 2021-22 and 2022-23 school year administrations.

- Grade 5 saw the greatest proficiency rate increase. The overall percentage of grade 5 students meeting or exceeding grade-level expectations is in line with pre-pandemic levels.

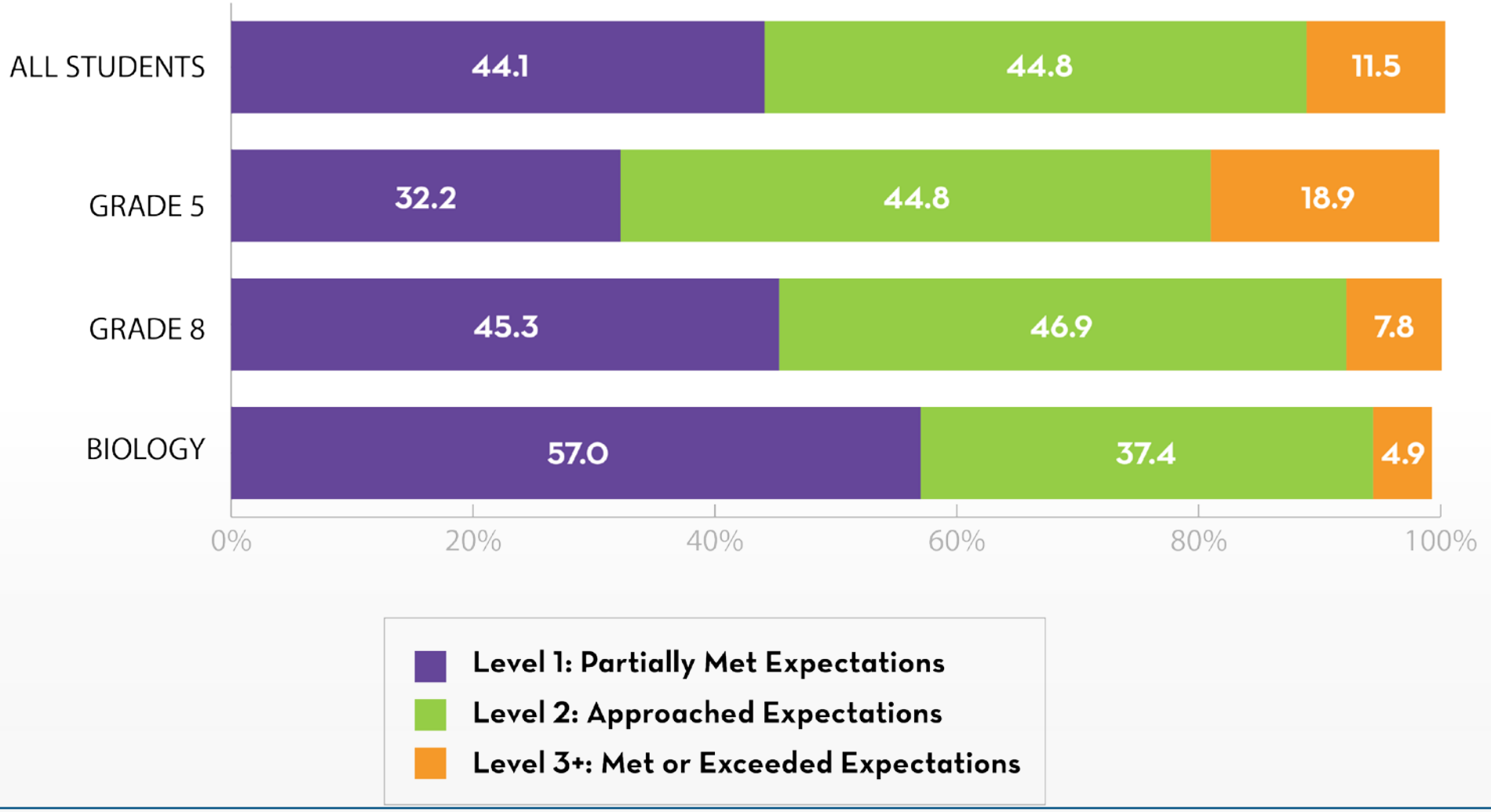
- 2023 marked the third administration of DC Science in the District. The DC Science assessment provides data useful in helping us understand where science instruction needs to go in the future.

- DC Science assessment results reinforce the continuing need to provide additional science resources and instructional time to students.

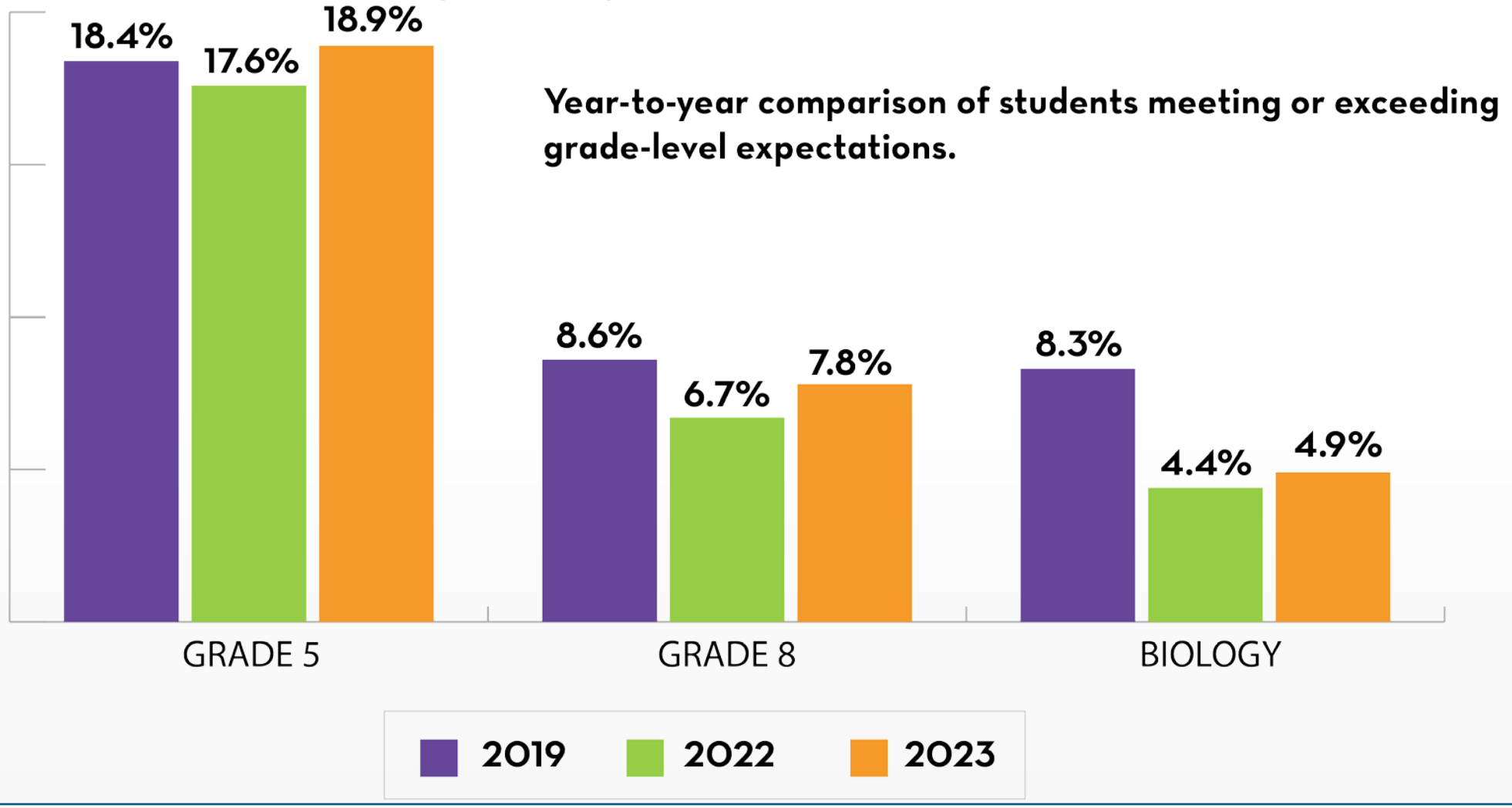
2023 DC Science and DLM Assessment Participation

	Grade 5	Grade 8	High School Biology	Total
Eligible Participants	6,334	5,558	5,841	17,733
Actual Participants	6,208	5,262	4,899	16,369
Participation Rate	98.01%	94.67%	83.87%	92.31%

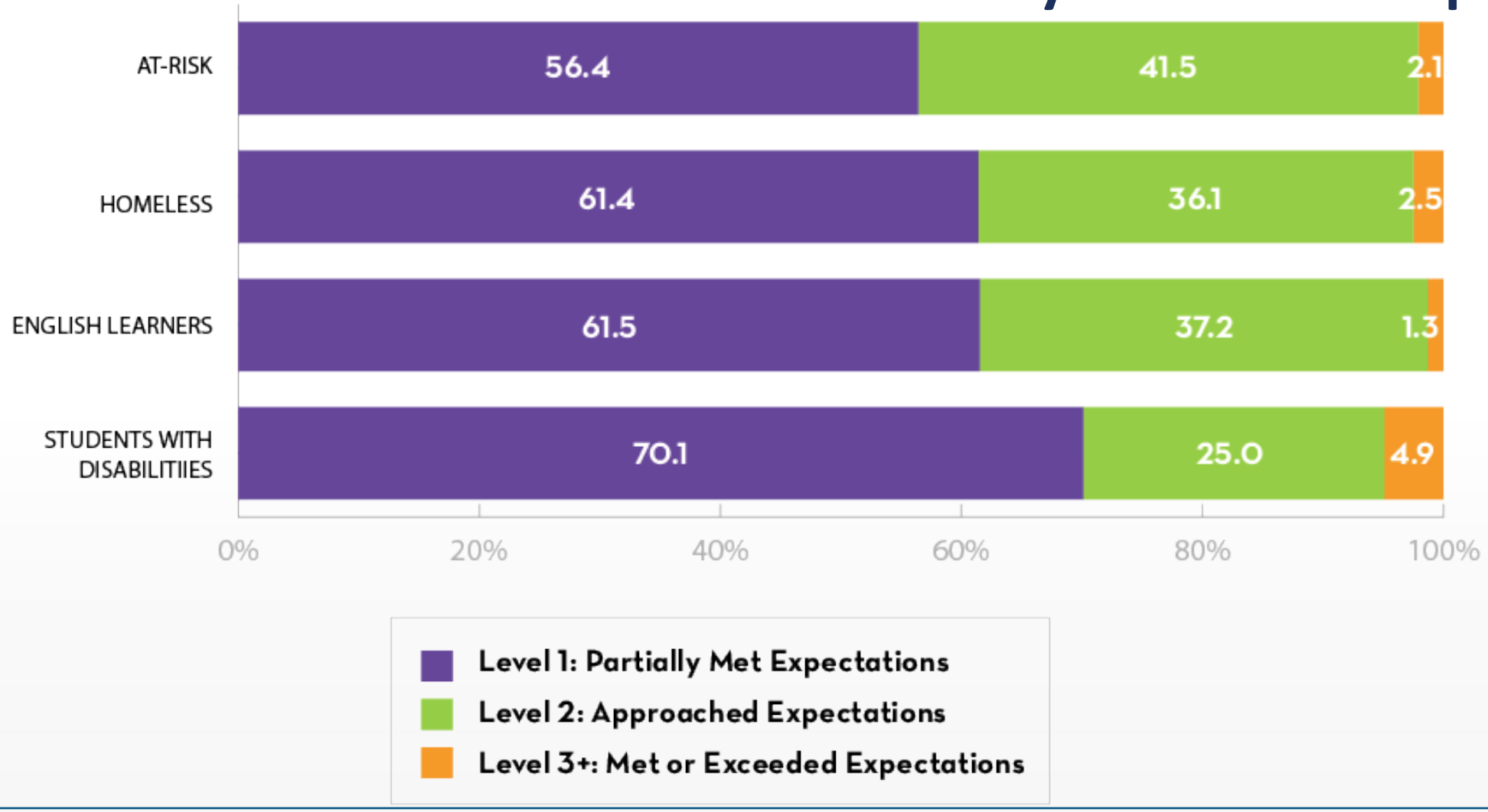
2023 Results for DC Science and DLM by Grade



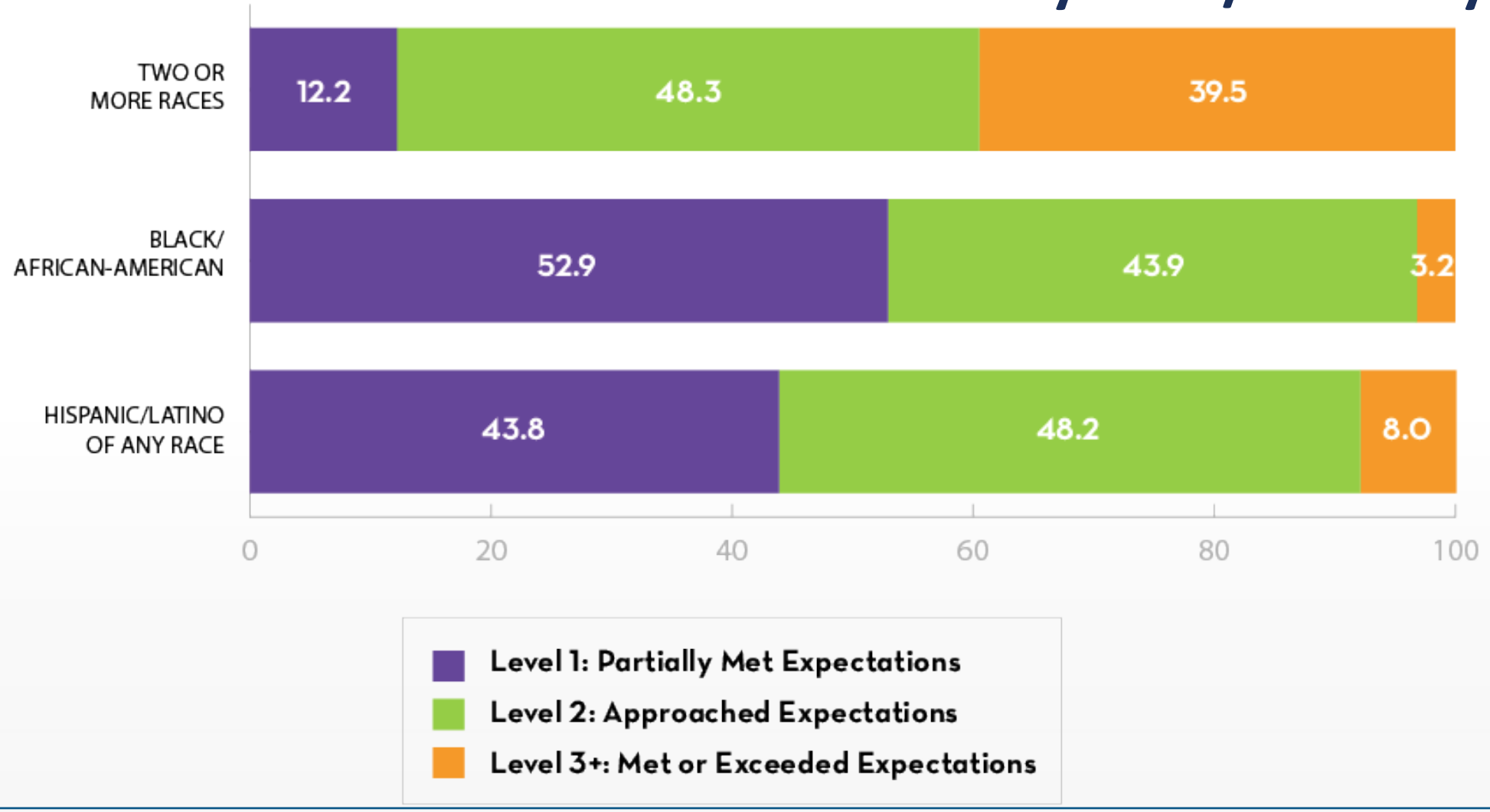
Science Proficiency Comparison



2023 Results for DC Science and DLM by Student Group



2023 Results for DC Science and DLM by Race/Ethnicity



*Missing student groups cannot be reported due to data suppression rules and student privacy laws.

Additional Resources

Science Assessment Resources

- DC Science Assessment Webpage: osse.dc.gov/science
- 2022-23 DC Science and DLM Results and Related Page
- DC Science Assessment Resources:
  - dc.mypearsonsupport.com/scienceAssessmentResources/
- Dynamic Learning Maps (DLM) Assessment Resources: dynamiclearningmaps.org/district-of-columbia
- Explore the Next Generation Science Standards (NGSS): www.nextgenscience.org/
- Read portions of the NRC Framework for K-12 Science Education online for free. It is the detailed vision behind NGSS.