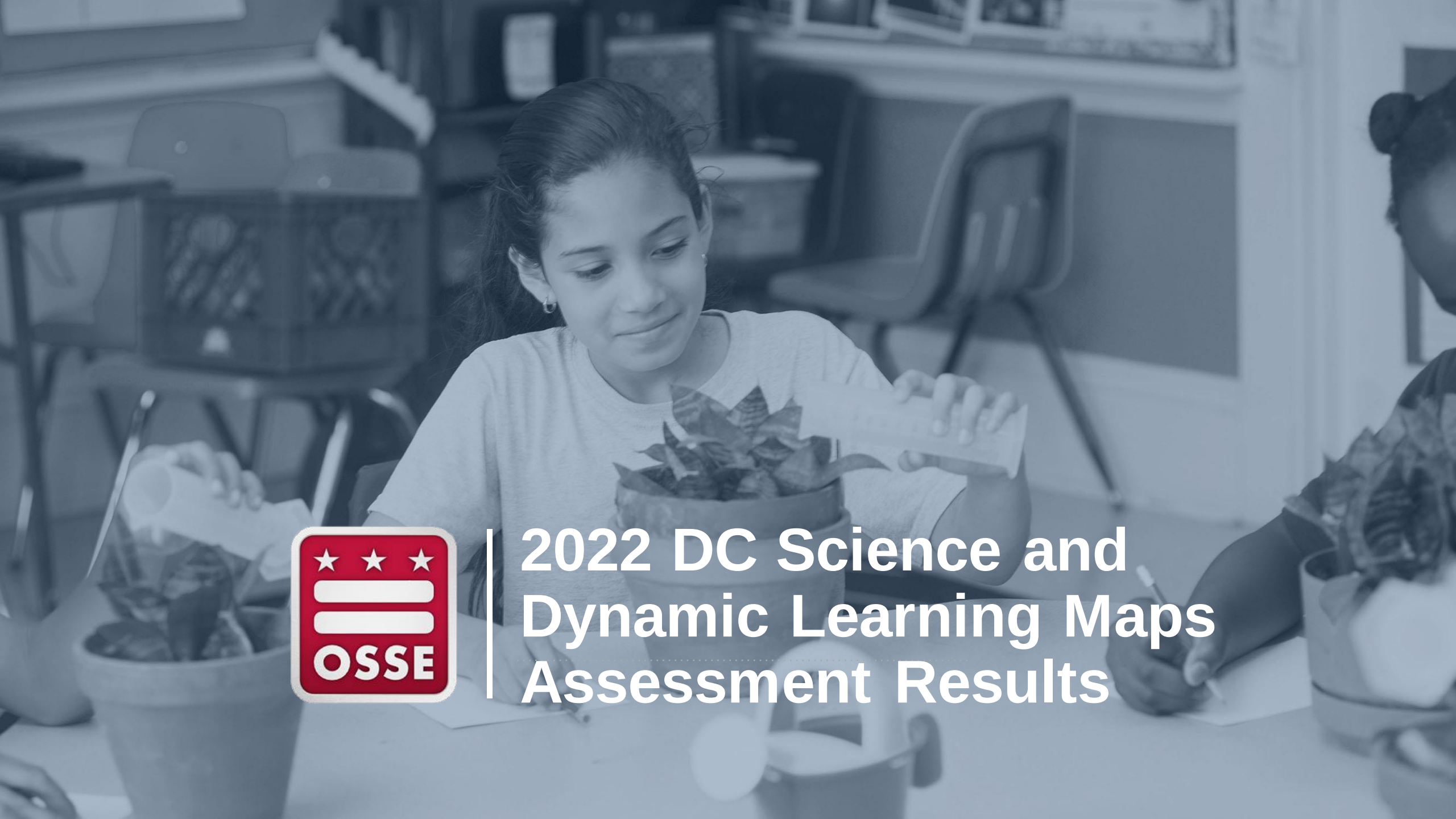


2022 DC Science and Dynamic Learning Maps Assessment Results

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.

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 through 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 designed world.
Approaching the Target	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 Goals – DC Science

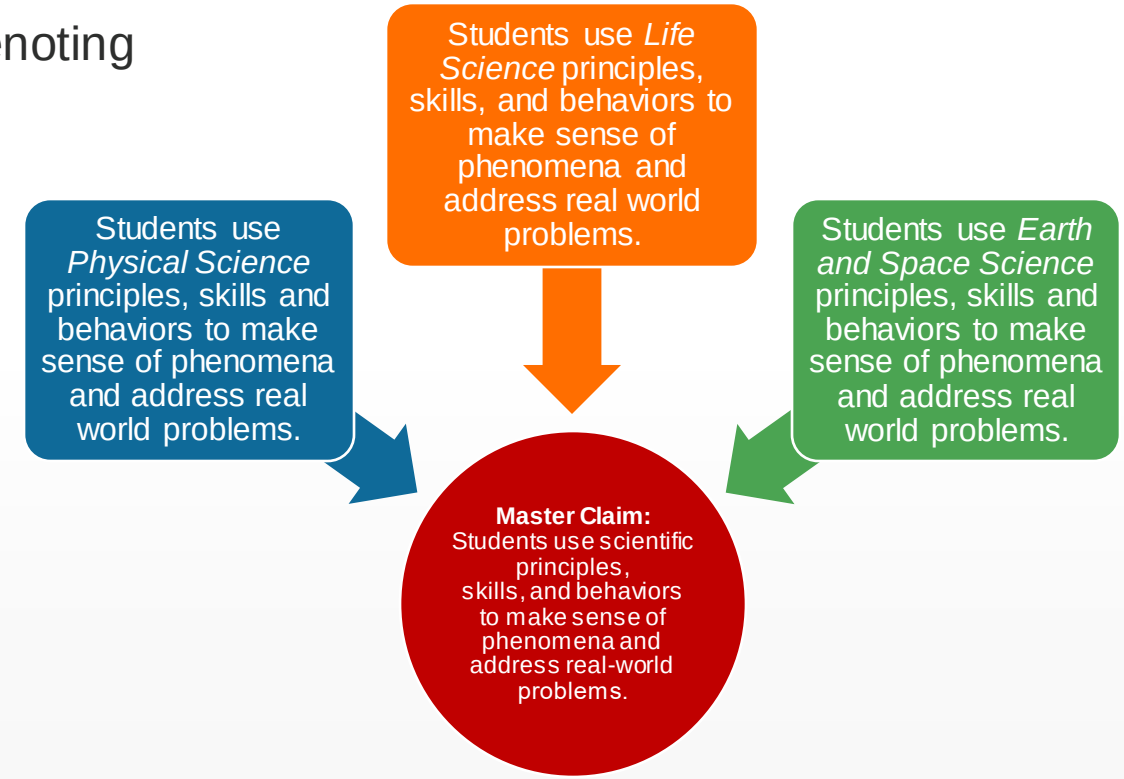
The DC Science and DLM Individual Student Reports (ISRs) include:

1. Student 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 Goals - DLM

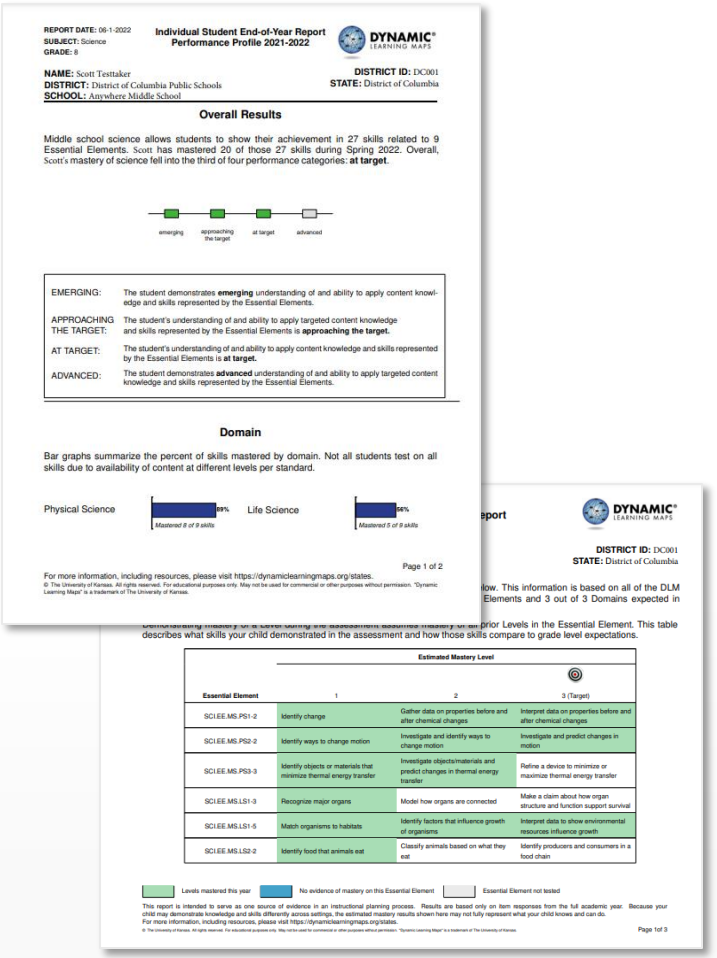
The DC Science and DLM Individual Student Reports (ISRs) include:

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

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



2022 Results

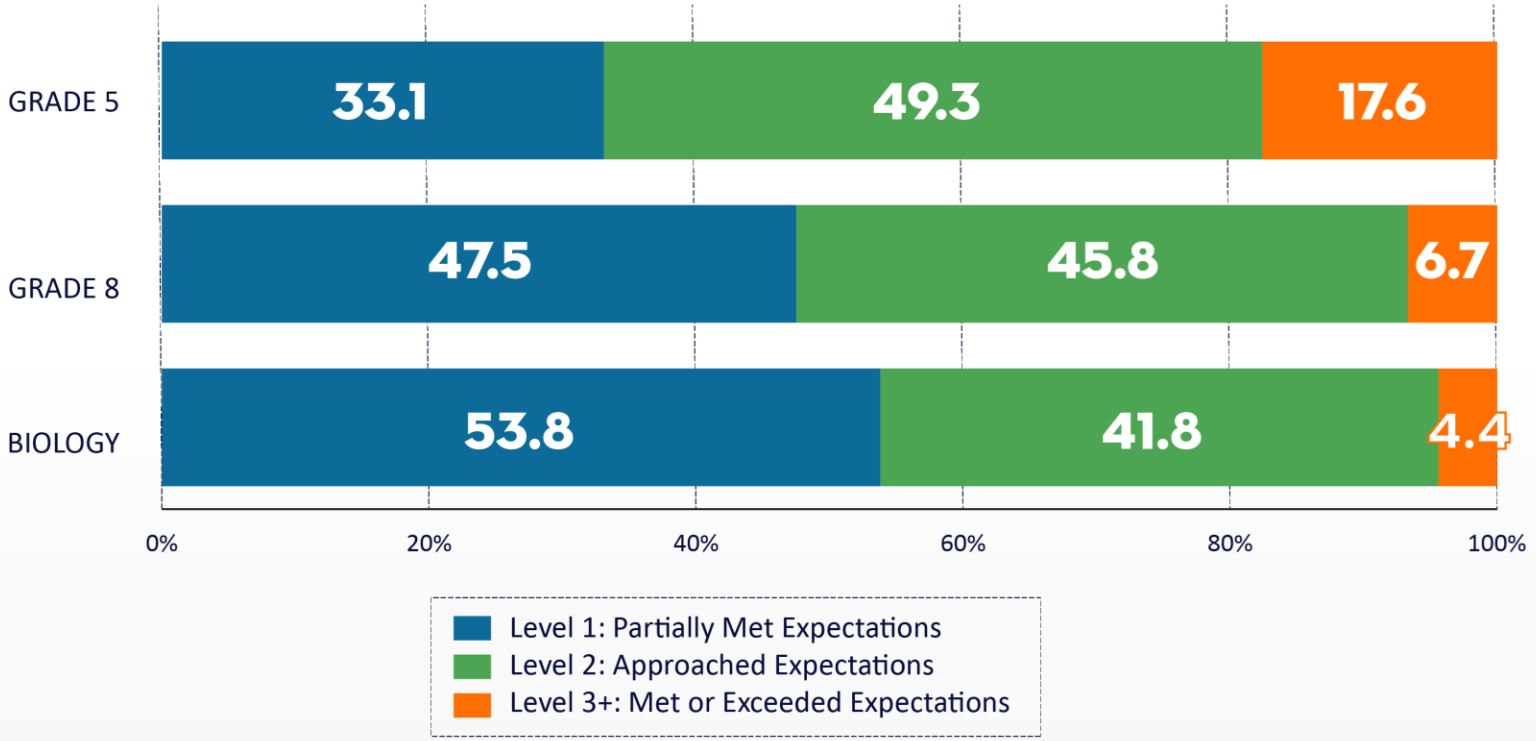
Key Takeaways

- Overall science proficiency decreased; saw declines across all student groups.
- Participation rates fell for all student groups between the 2018-19 and 2021-22 administrations. The highest participation rate was in Grade 5.
- 2022 marked the second administration of DC Science in the District. The first administration was in 2019. The DC Science assessment is still in its beginning phase and provides baseline 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 in response to the pandemic.

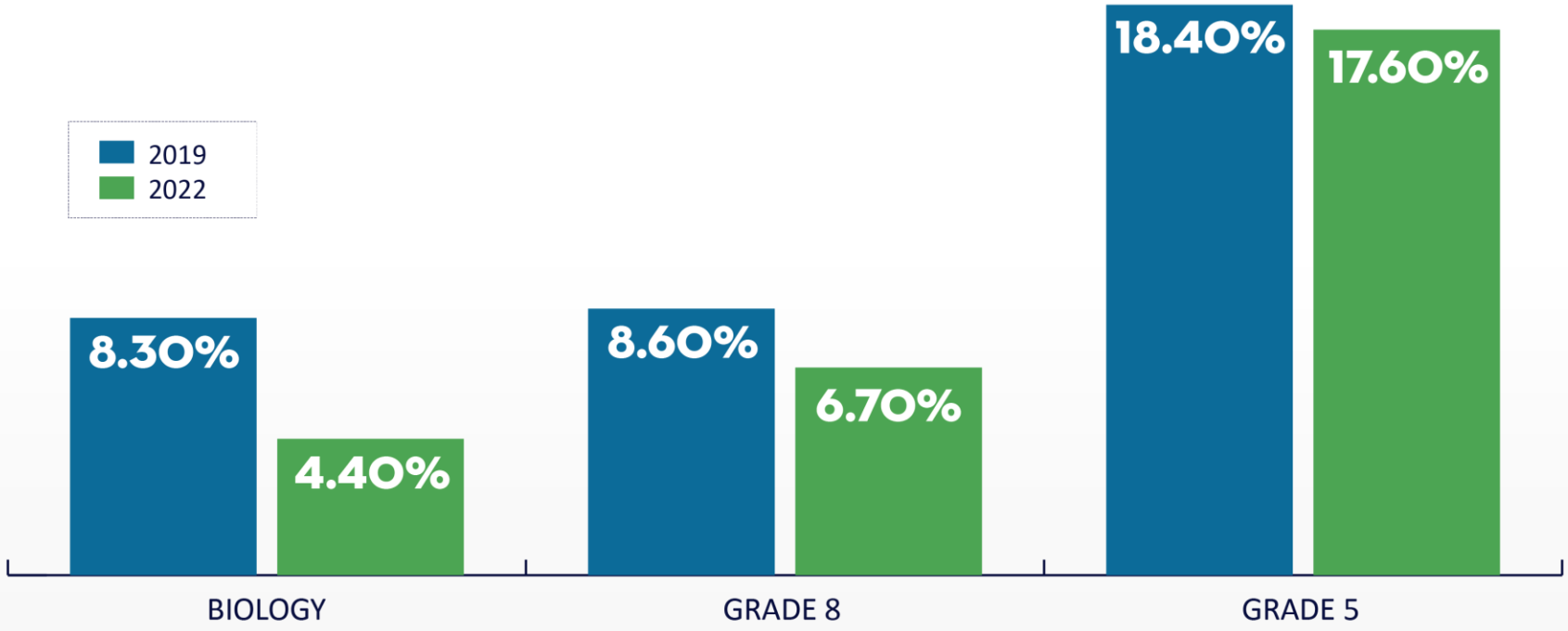
DC Science and DLM Assessment Participation

	Grade 5	Grade 8	High School Biology	Total
Eligible Participants	6,172	5,624	5,806	17,602
Actual Participants	5,886	5,086	4,649	15,621
Participation Rate	95.37%	90.43%	80.07%	88.74%

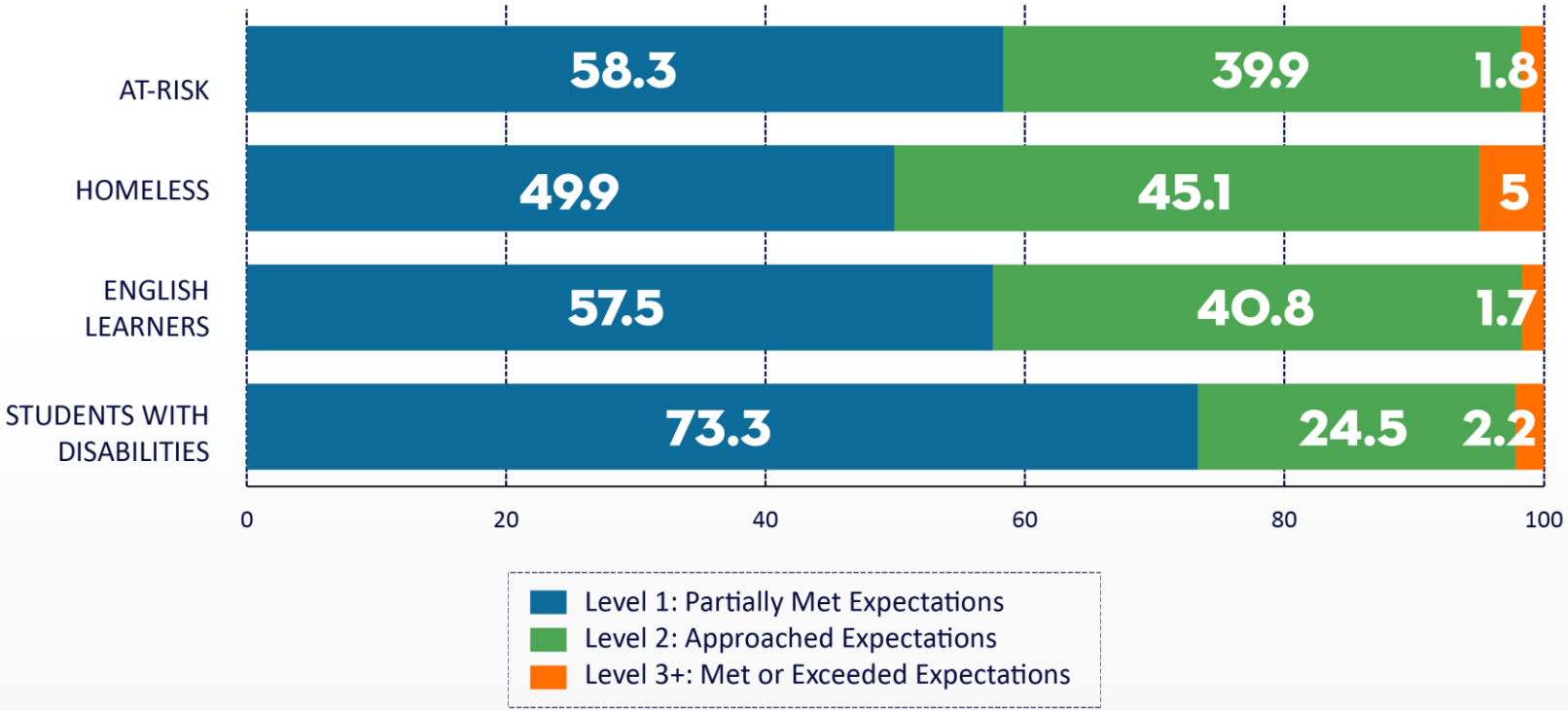
2022 Results for DC Science and DLM by Grade



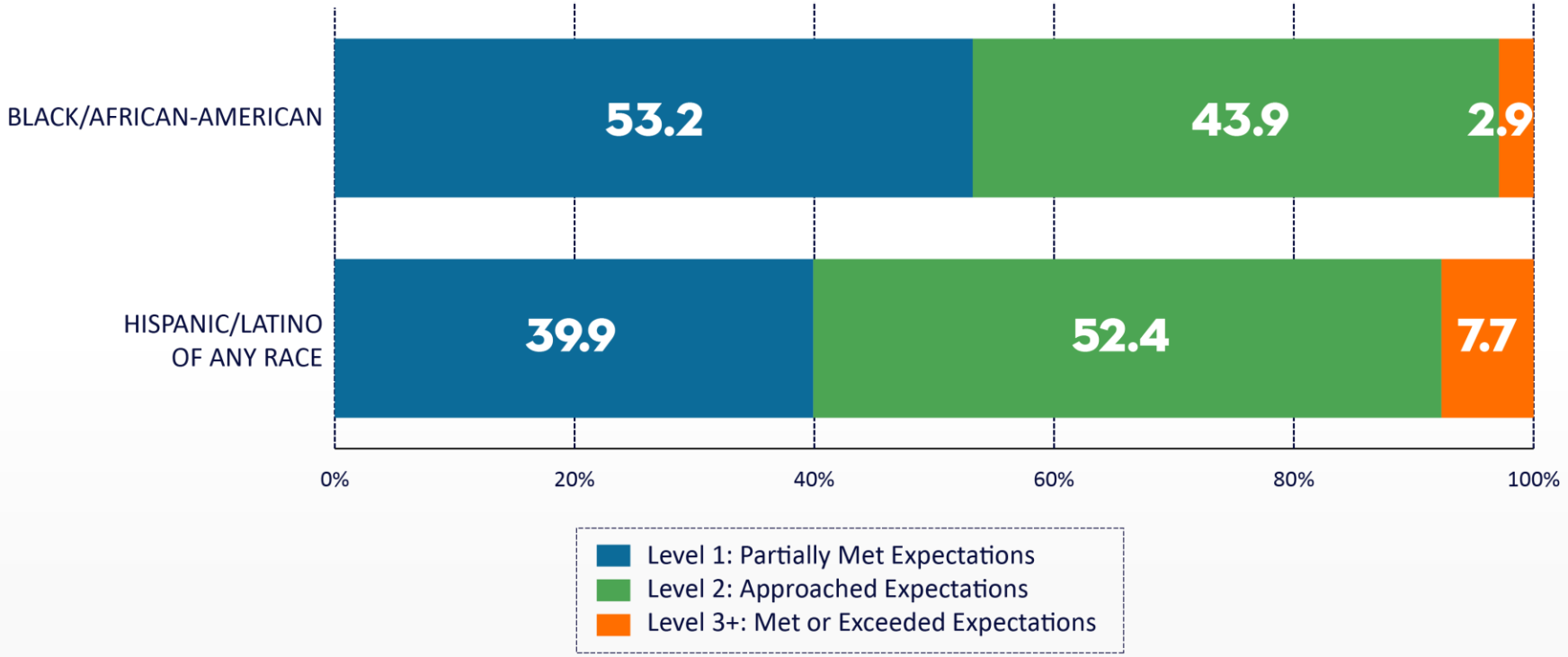
Science proficiency decreased across all grades



2022 Results for DC Science and DLM by Group



2022 Results for DC Science and DLM by Race/Ethnicity



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

Assessment Resources

Science Assessment Resources

- DC Science Assessment Webpage: osse.dc.gov/science
- 2021-22 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.