

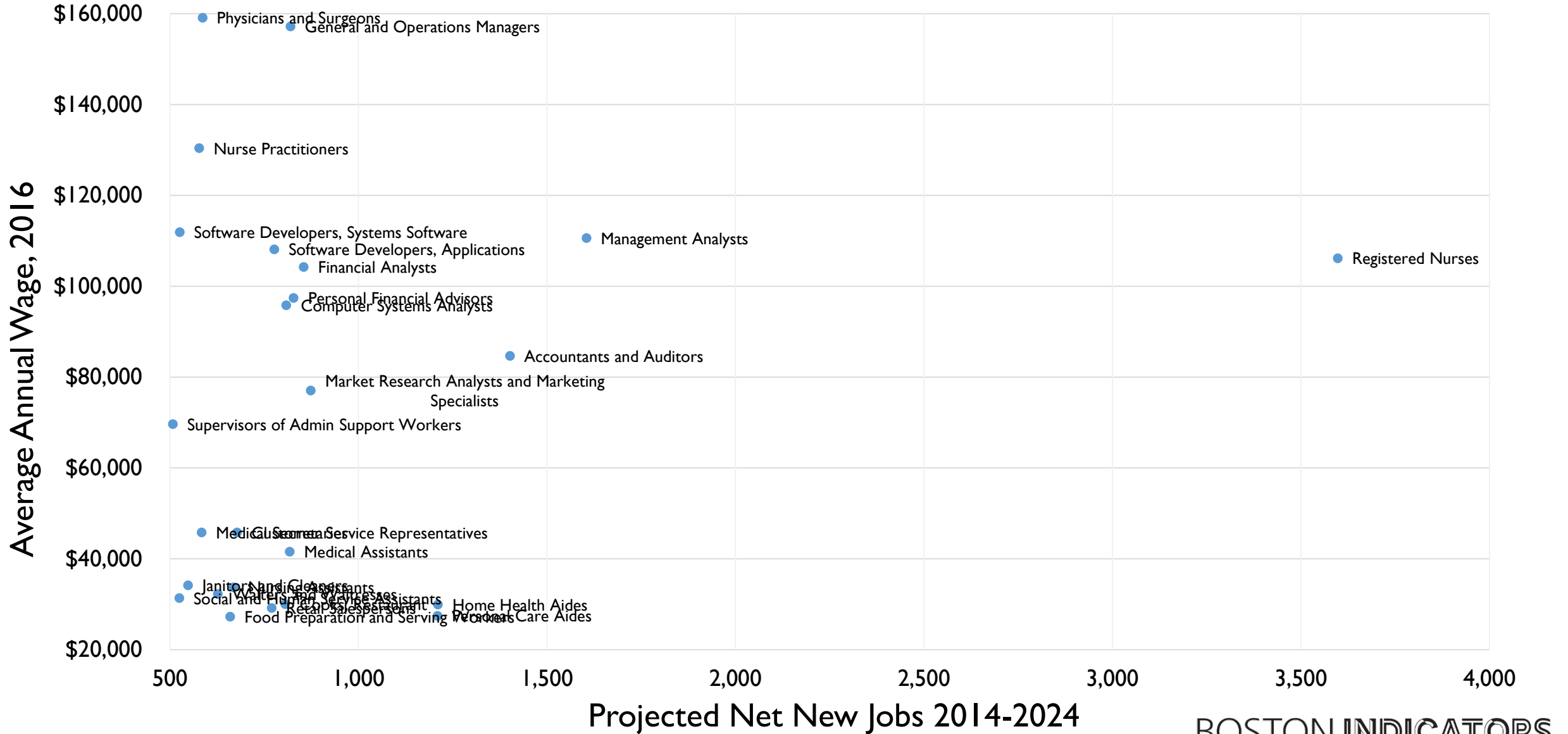
Getting it Right

Progress and Problems in Raising Science Achievement in Boston

Wednesday, January 23, 2019
8:30-10:30 a.m.

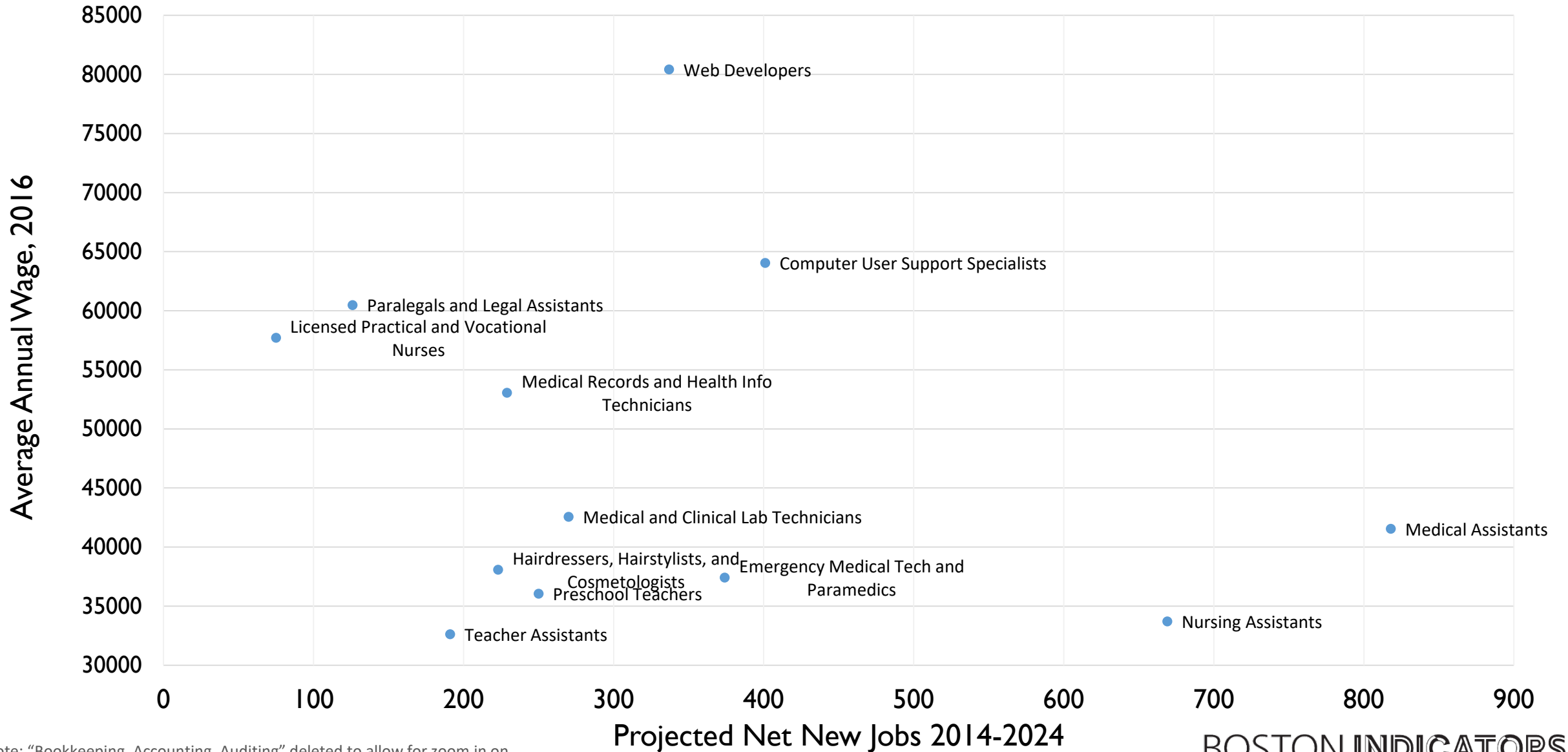
Top 25 Growing Occupations

Boston Workforce Development Area



Jobs requiring more than high school but less than 4-year college

Boston Workforce Development Area



Note: "Bookkeeping, Accounting, Auditing" deleted to allow for zoom in on occupations w/ growth. They are projected to decline 570 jobs.

MCAS 101

English Language Arts (ELA) and Math

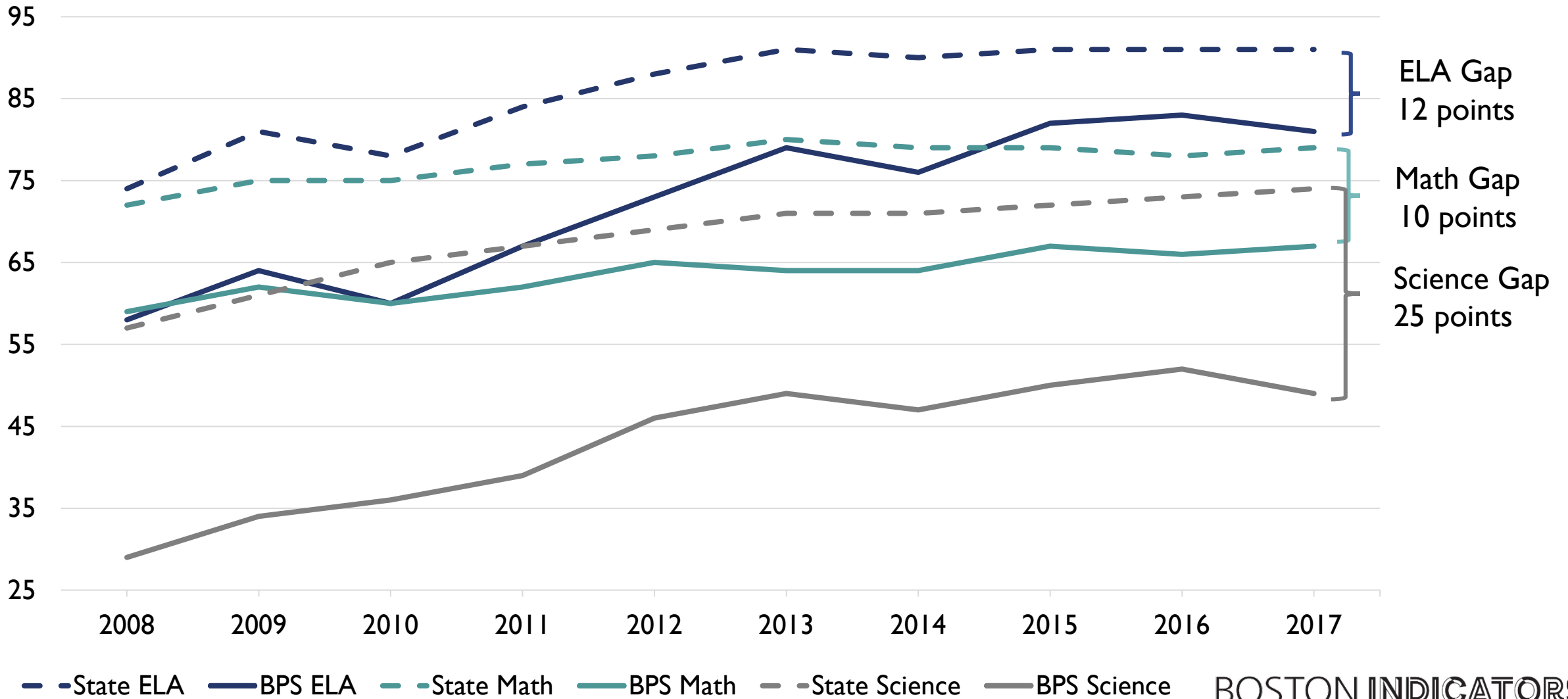
- Grades 3, 4, 5, 6, 7, 8 and 10
- Grad requirement: Must score Proficient or Advanced on 10th grade exams

Science

- Grades 5, 8 and 9 or 10
- Grade 5 and 8 students all take the same “Science and Technology/Engineering” exams
- High school students choose one of:
 - Biology
 - Intro Physics
 - Technology/Engineering
 - Chemistry
- Graduation requirement: Must score Needs Improvement or higher

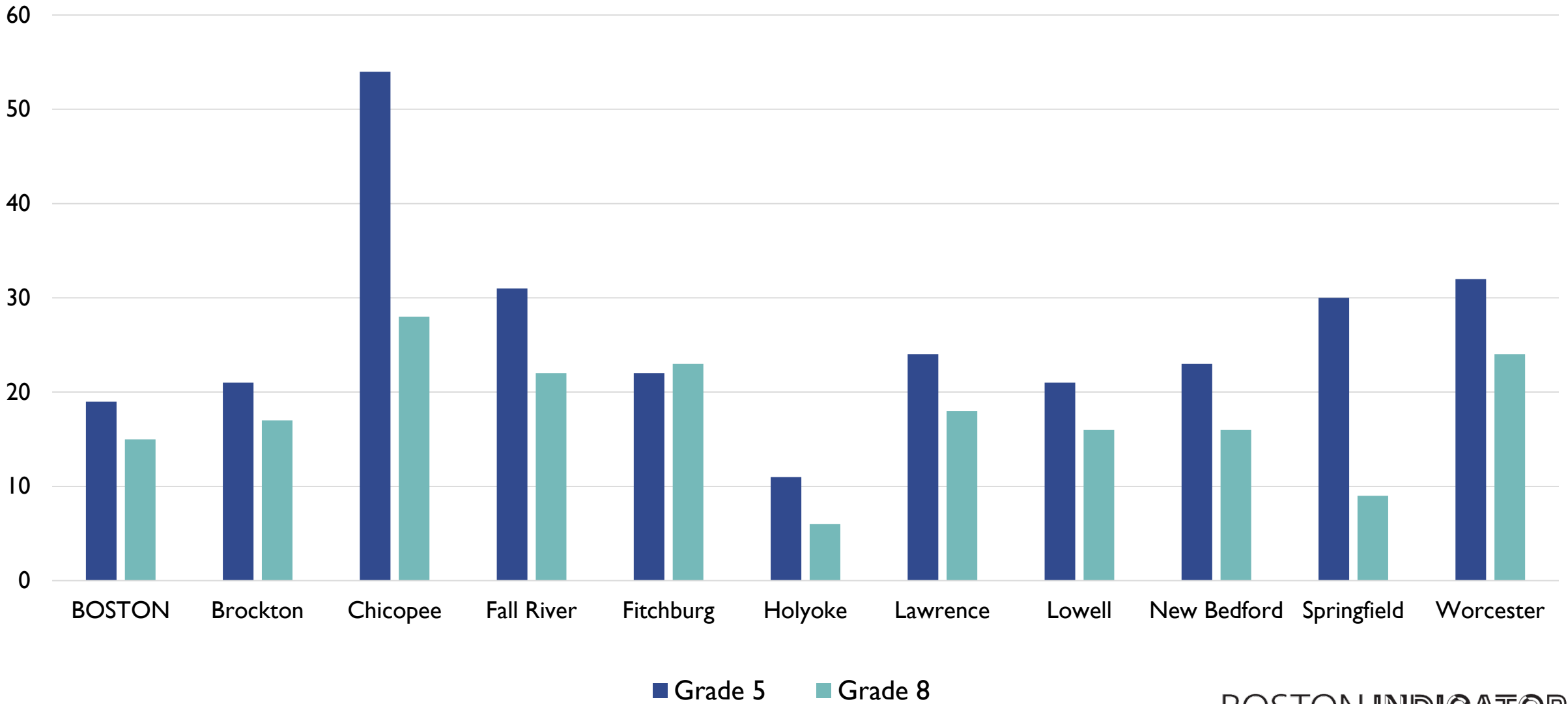
The gap between BPS and the state in Science is bigger than the gaps for Math and ELA.

High school MCAS results. Percent scoring Proficient or Advanced.



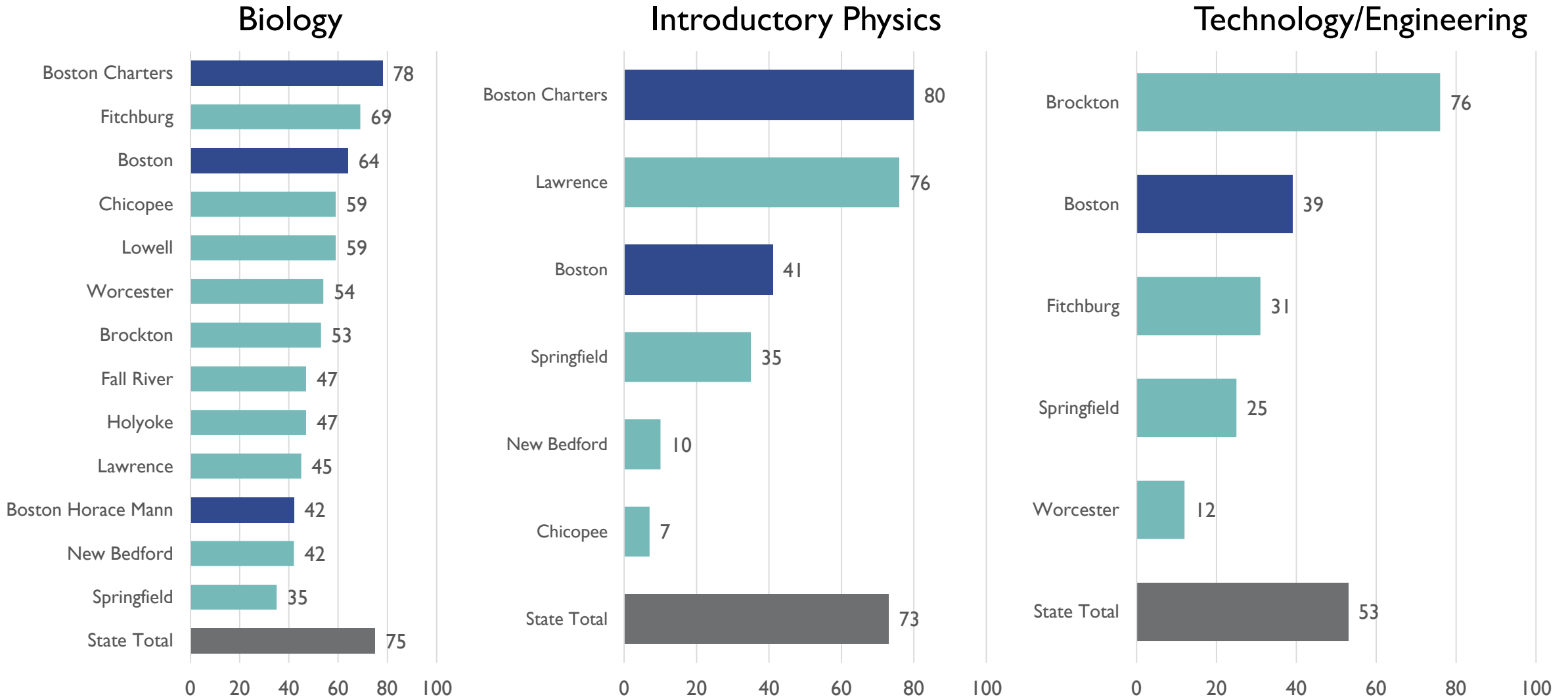
BPS performs low on grades 5 & 8 Science compared to similar districts.

Science MCAS. Percent scoring Proficient or Advanced. 2017.



Boston performs a bit better at the high school level.

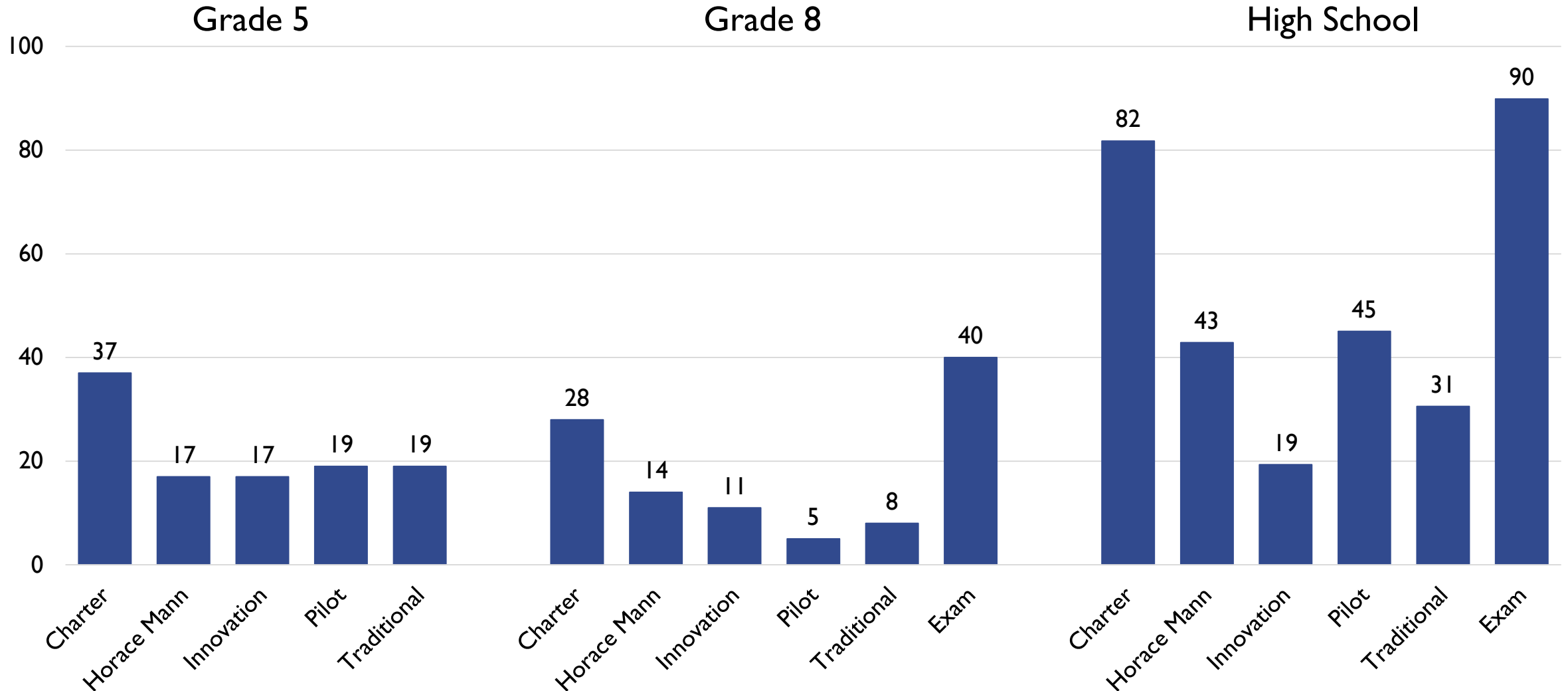
High School MCAS. % Proficient or Advanced. 2017.



Note: Some school types and districts not shown due to small sample sizes.

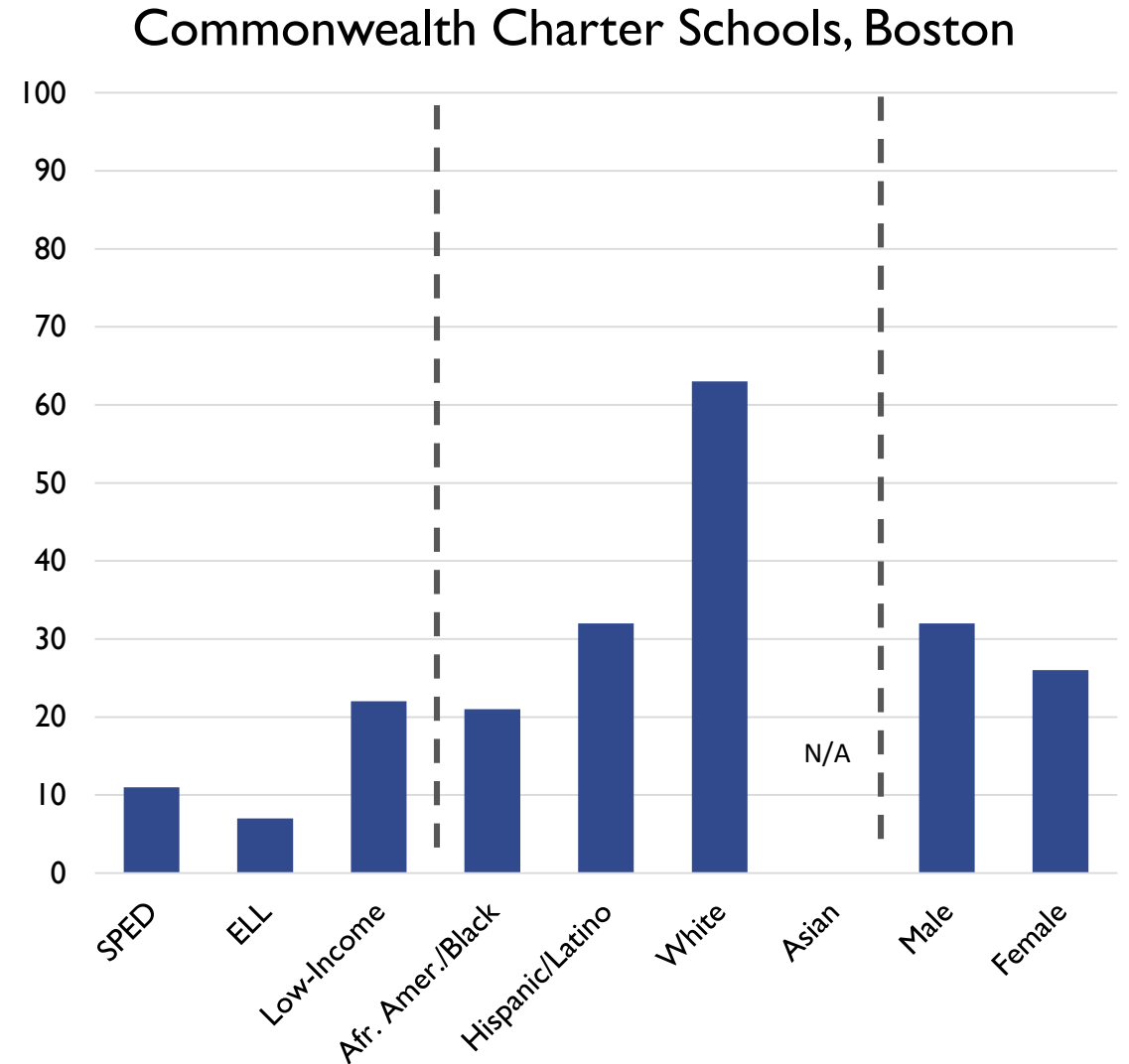
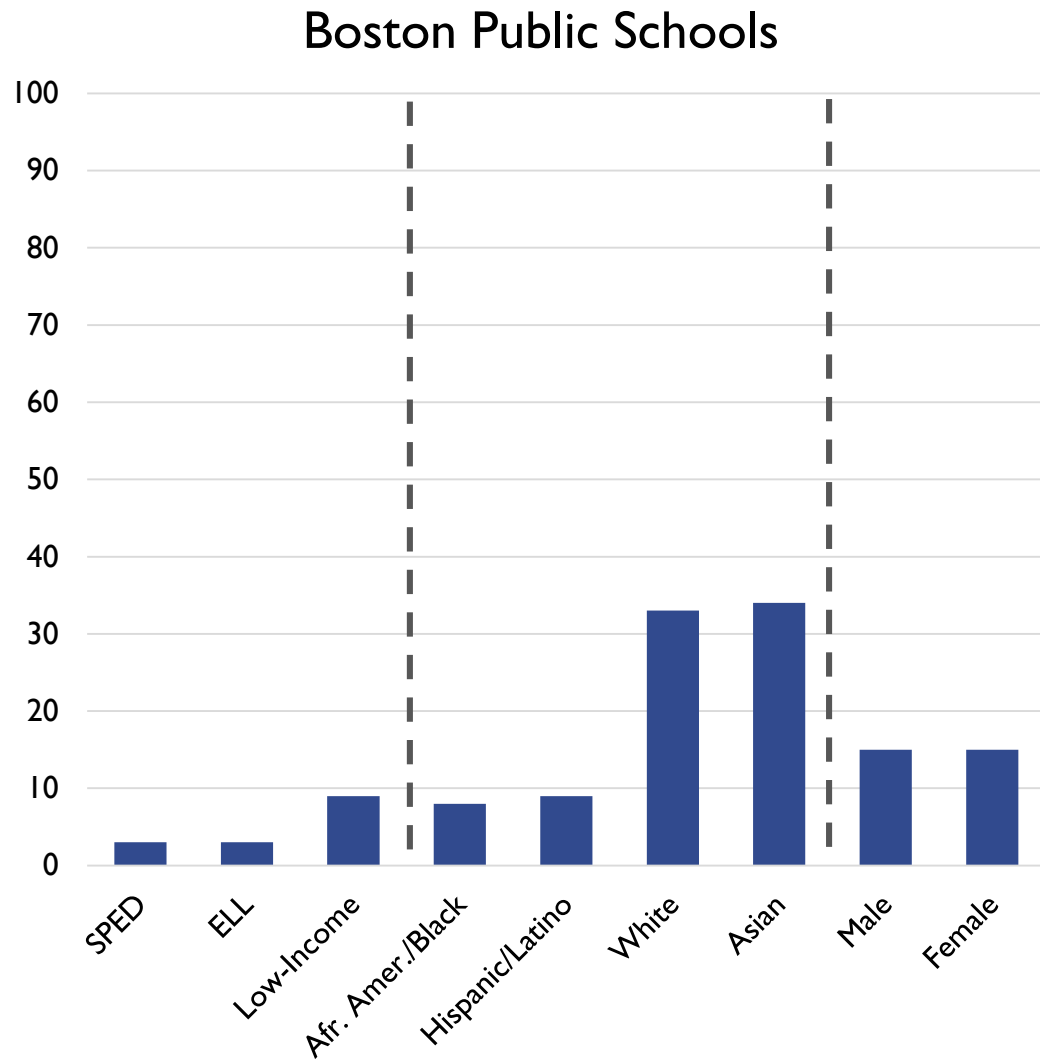
Students in exam schools and Commonwealth Charters tend to perform higher on MCAS science exams.

Boston schools by category. Science MCAS. % Proficient or Advanced. 2017.



Science achievement varies widely by student subgroup.

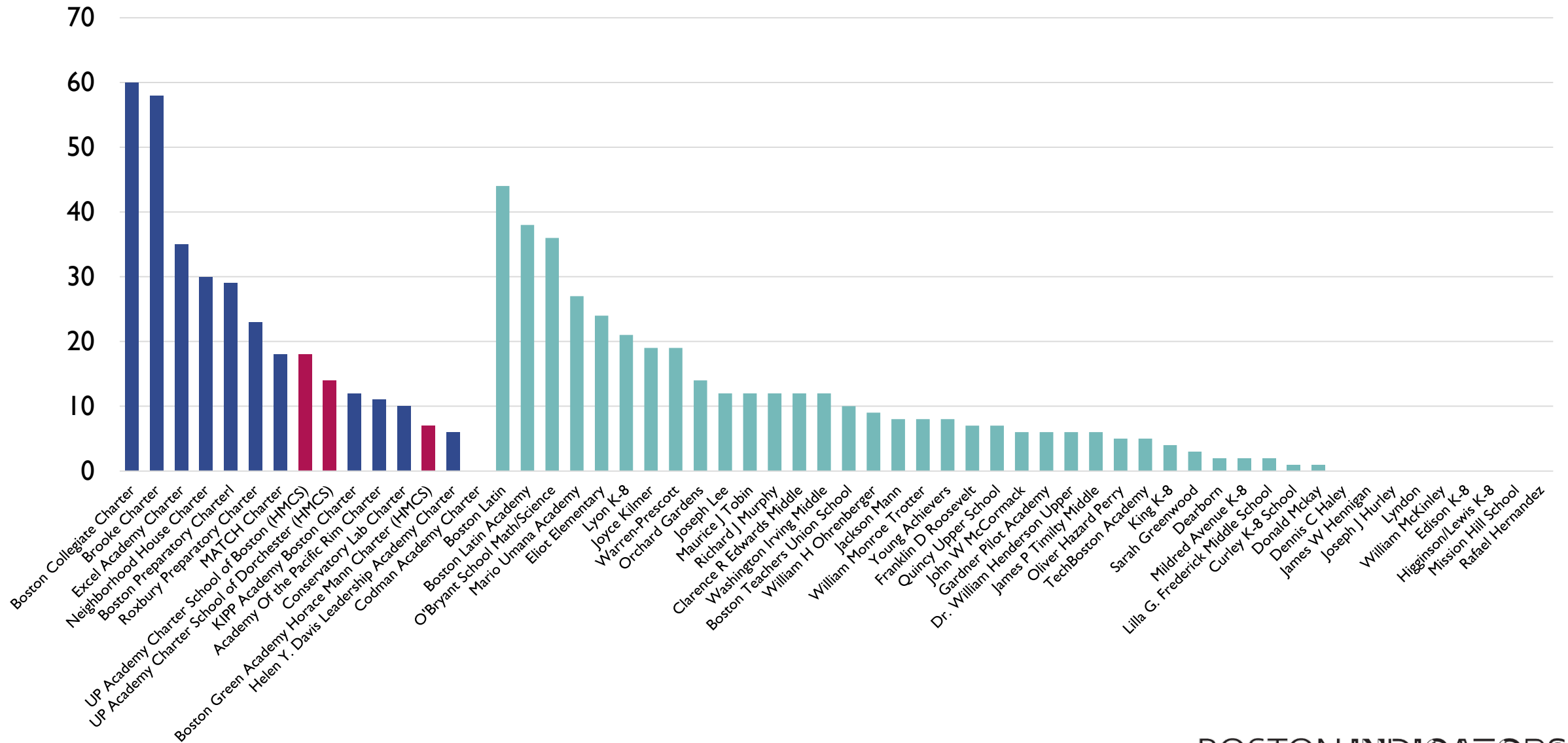
Grade 8 MCAS Science. Percent scoring Proficient or Advanced. 2017.



Note: Not reporting Asian results for Charter Schools due to small sample size.

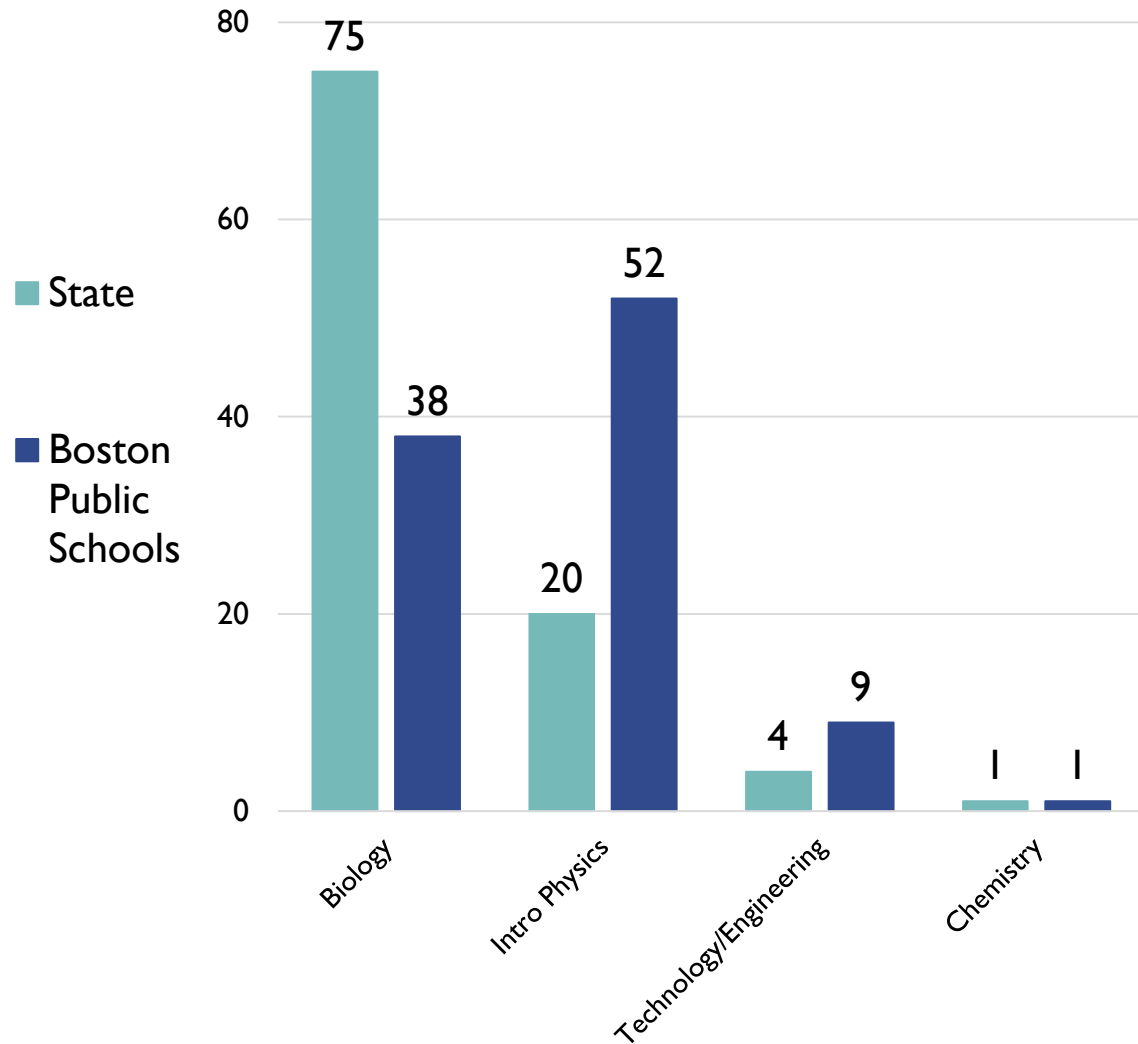
Science achievement also varies widely *within* school categories.

Grade 8 Science MCAS. Percent scoring Proficient or Advanced. 2017.



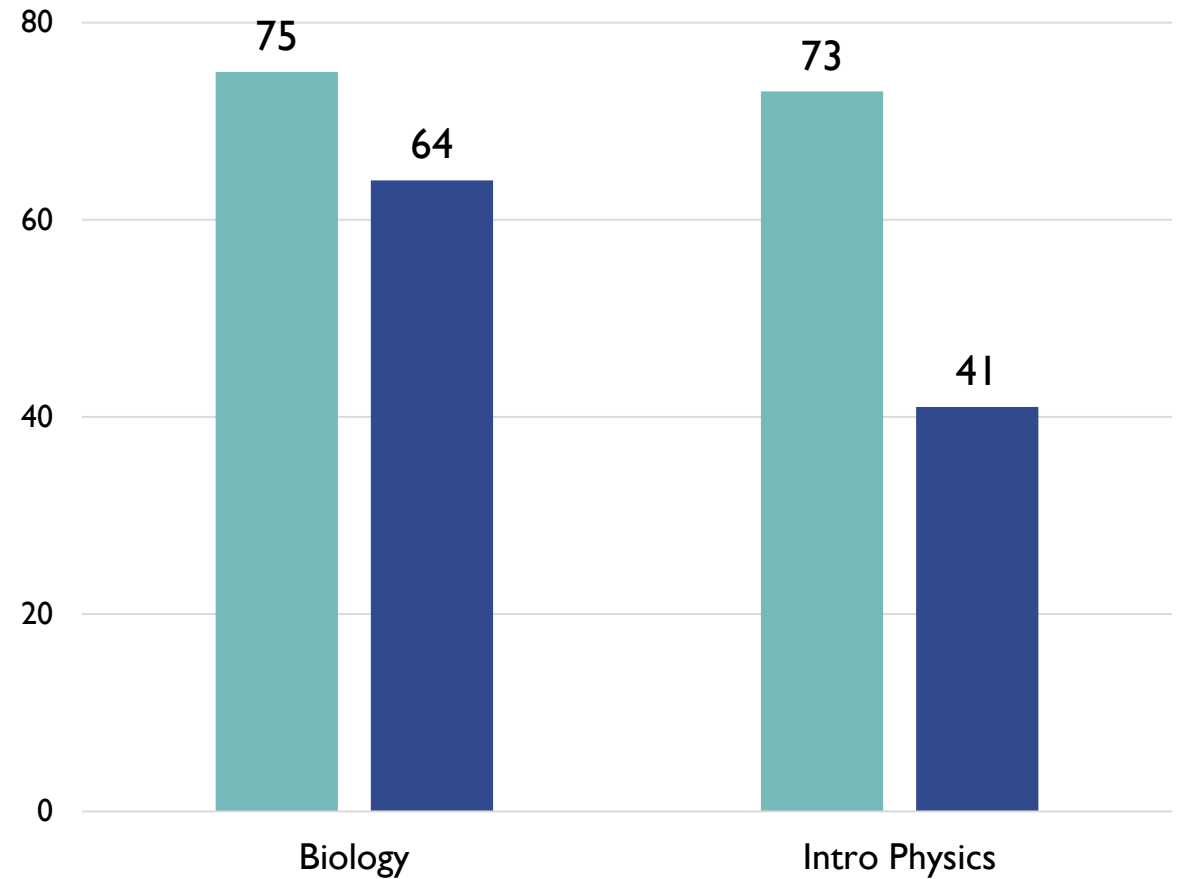
Boston students are more likely to take the Intro Physics exam...

% of high school students taking each exam. 2017.



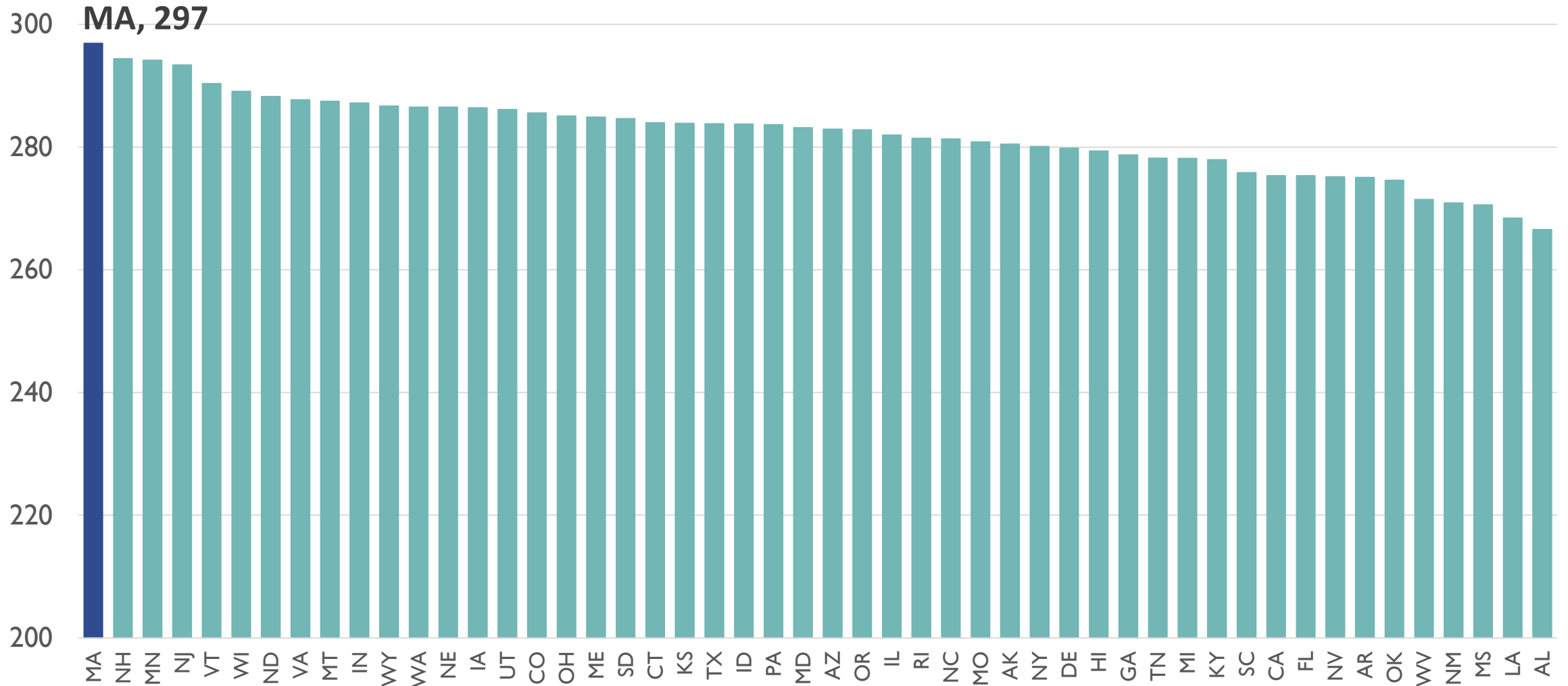
...which has lower proficiency rates.

High School MCAS. % scoring Proficient or Advanced. 2017.



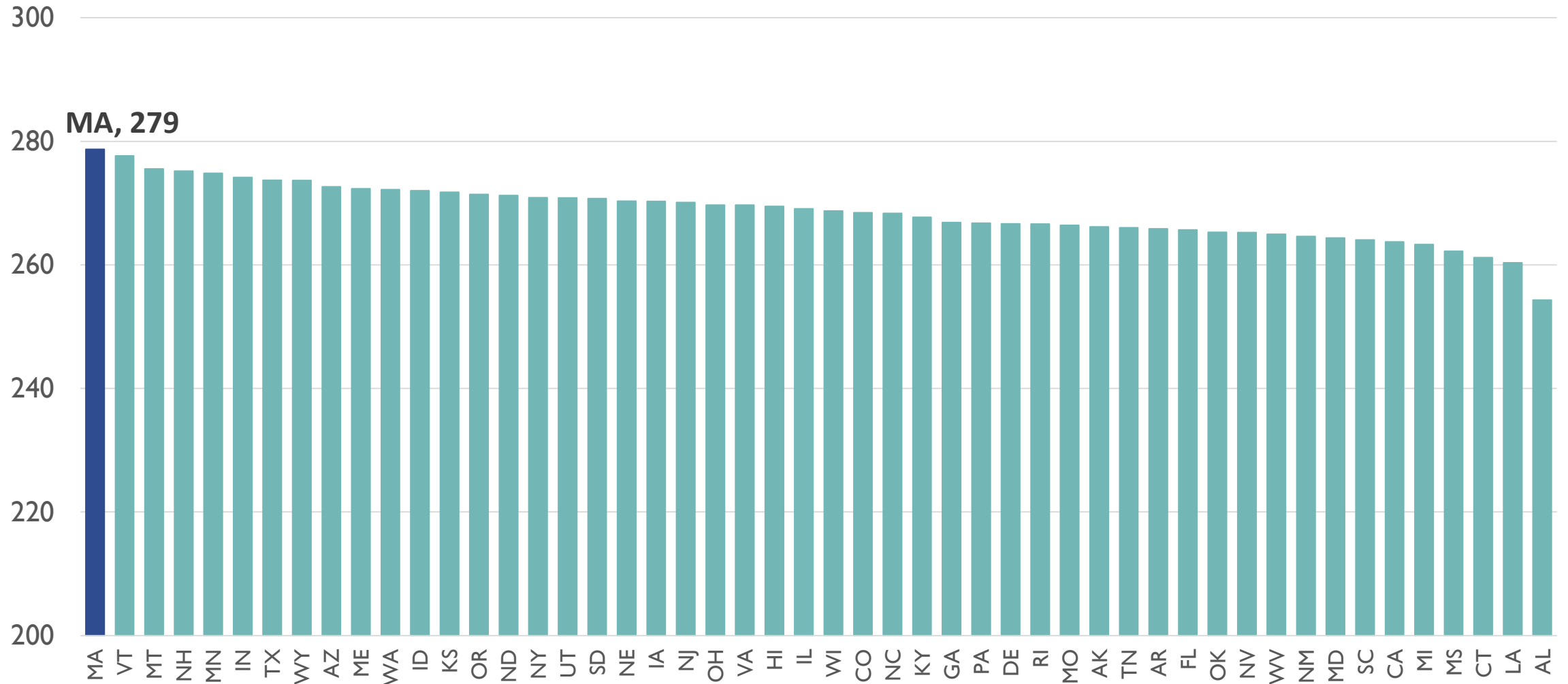
NAEP Grade 8 Math, All Students (#1 in the nation)

NAEP average scale score, grade 8 math, 2015



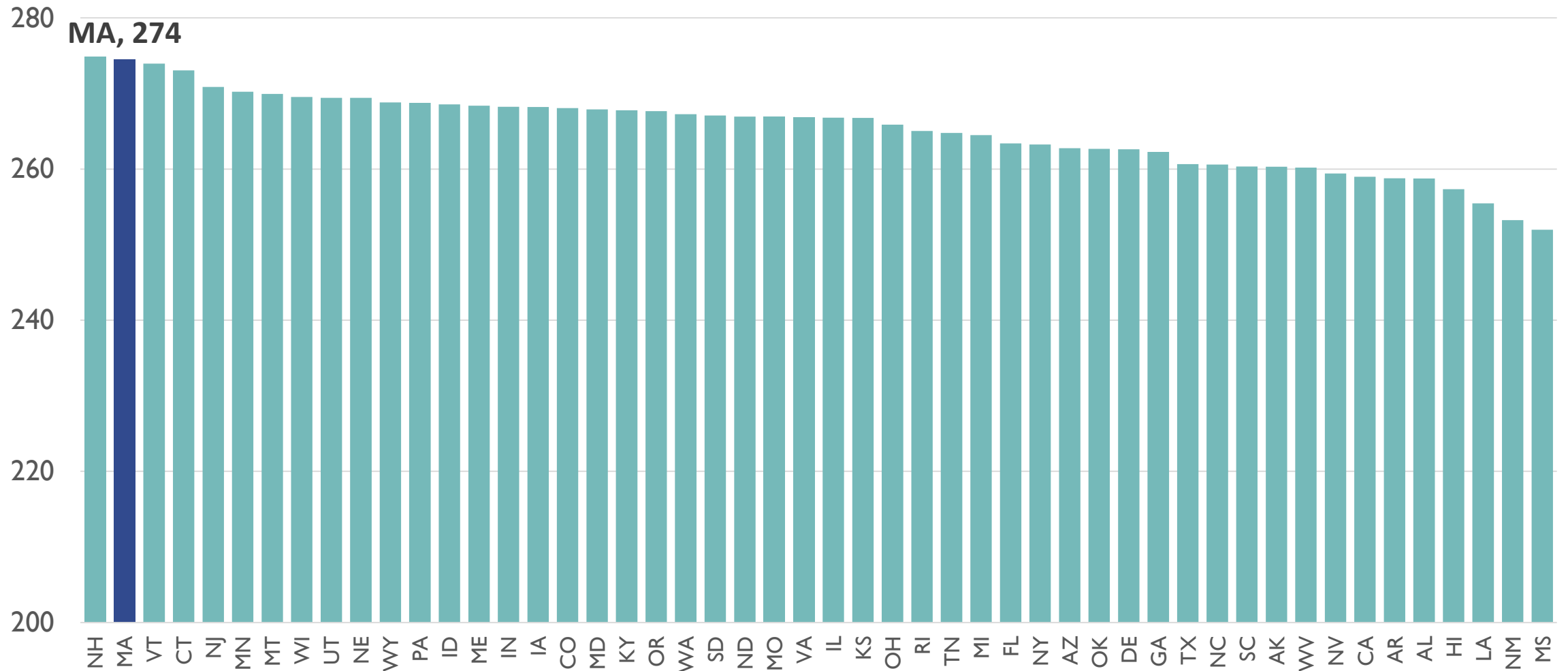
NAEP Grade 8 Math, Low-Income Students (#1)

NAEP average scale score, grade 8 math, 2015



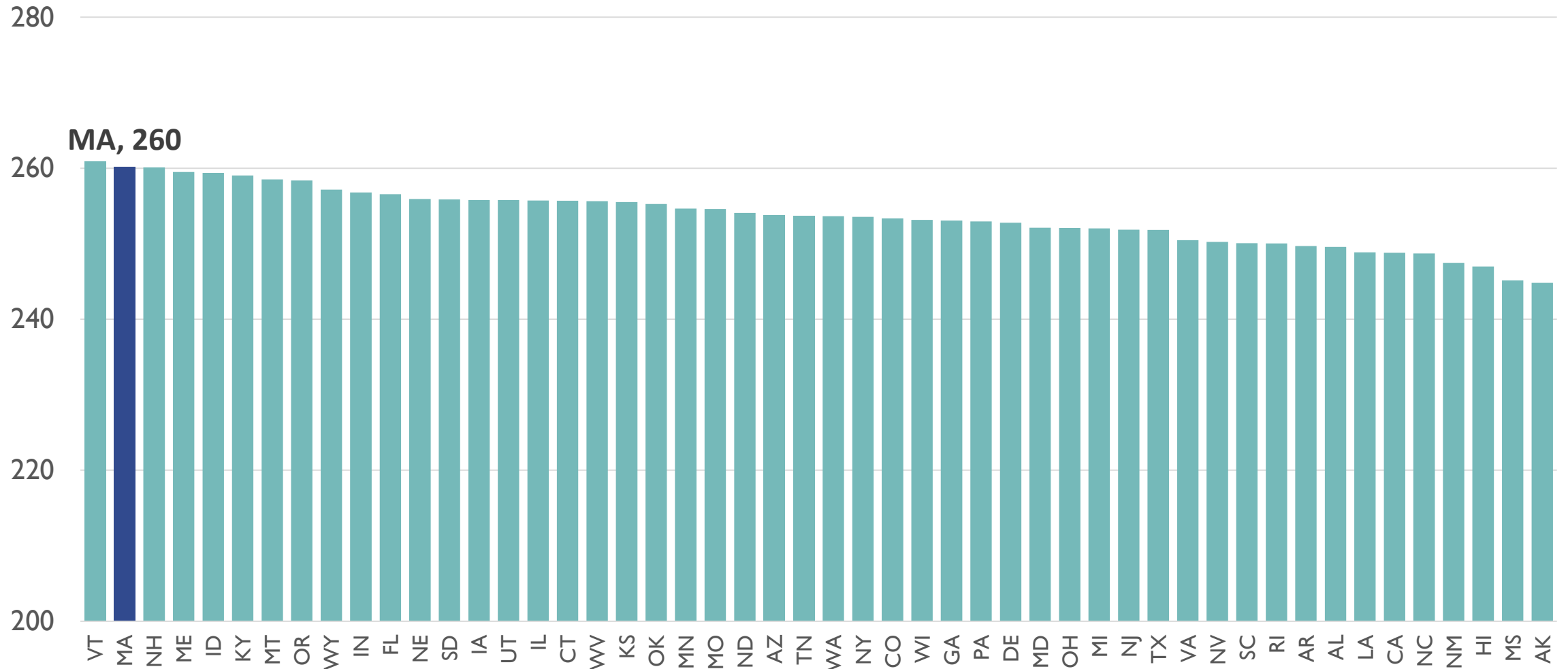
NAEP Grade 8 Reading, All Students (#2)

NAEP average scale score, grade 8 reading, 2015



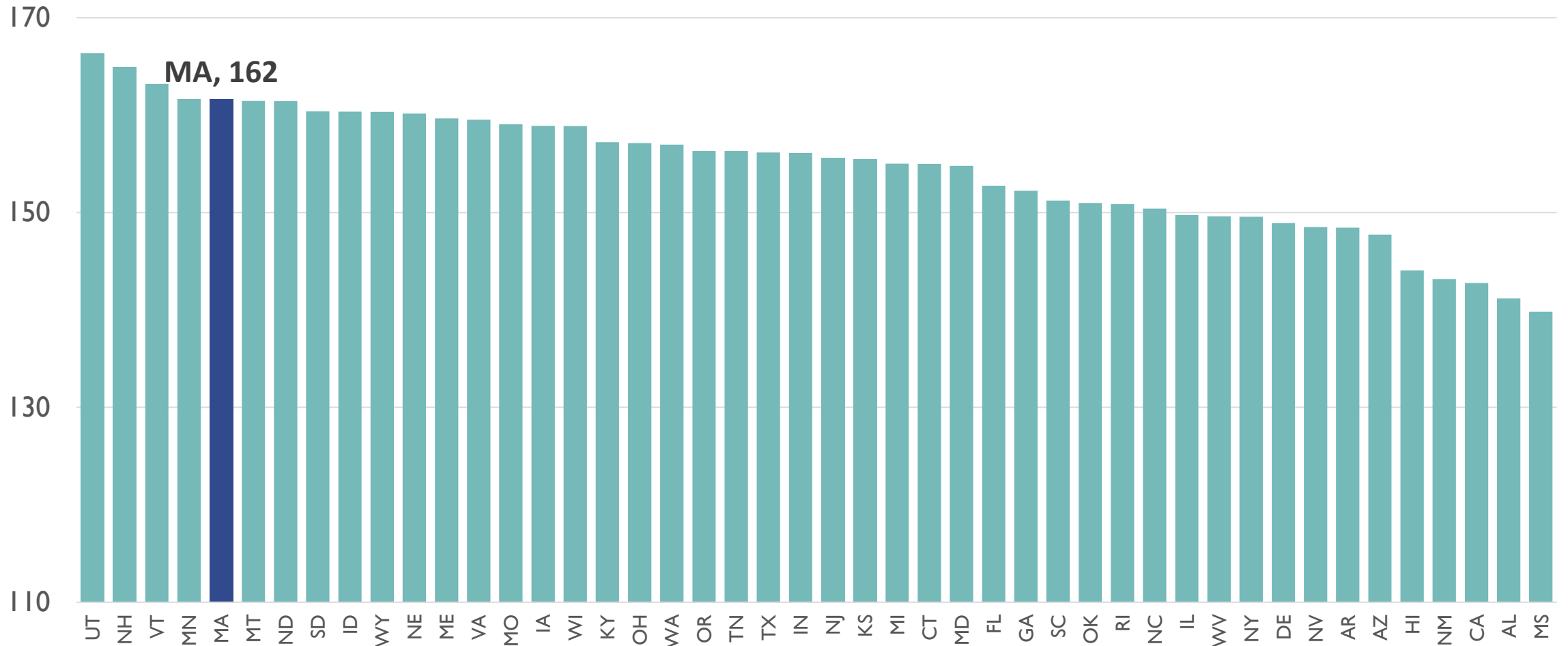
NAEP Grade 8 Reading, Low-Income Students (#2)

NAEP average scale score, grade 8 reading, 2015



NAEP Grade 8 Science, All Students (#5)

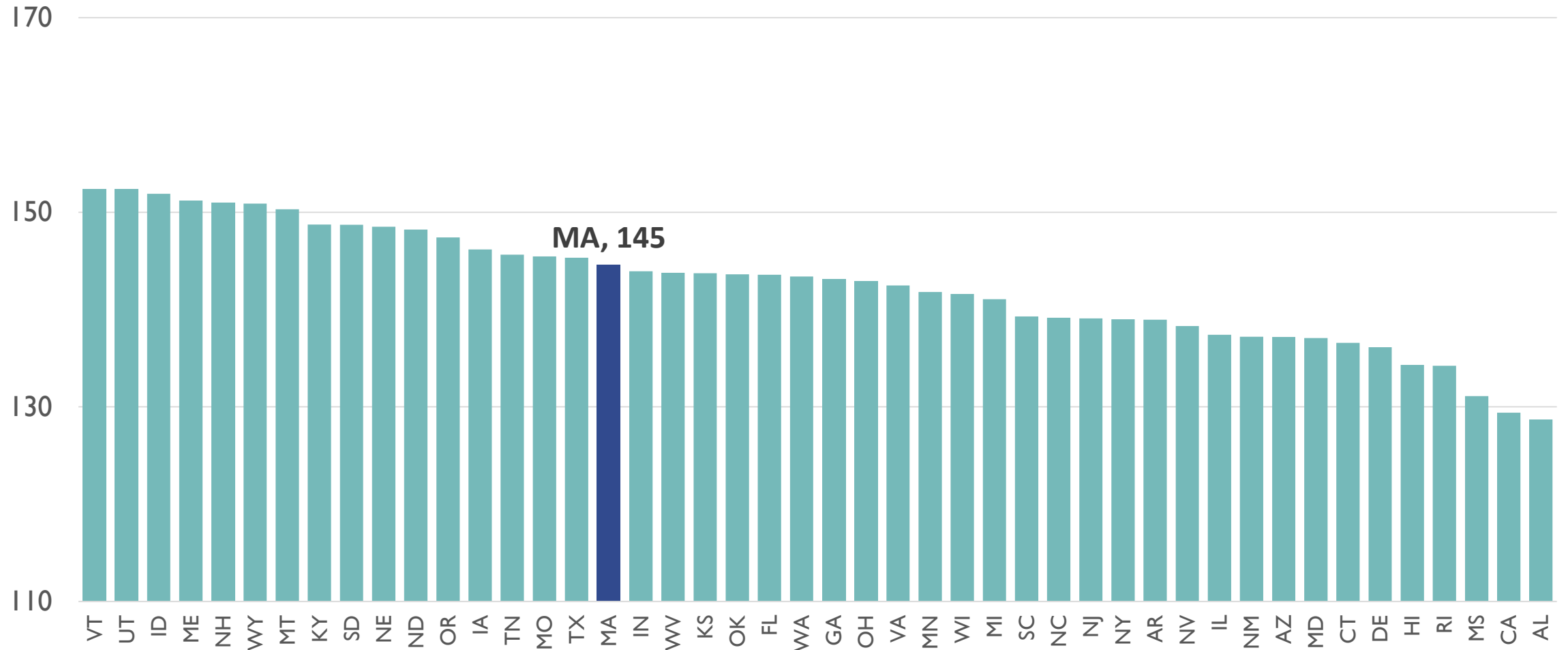
NAEP average scale score, grade 8 science, 2015



Note: NAEP did not report 2015 Science outcomes for four states: AK, CO, LA and PA.

NAEP Grade 8 Science, Low-Income Students (#17)

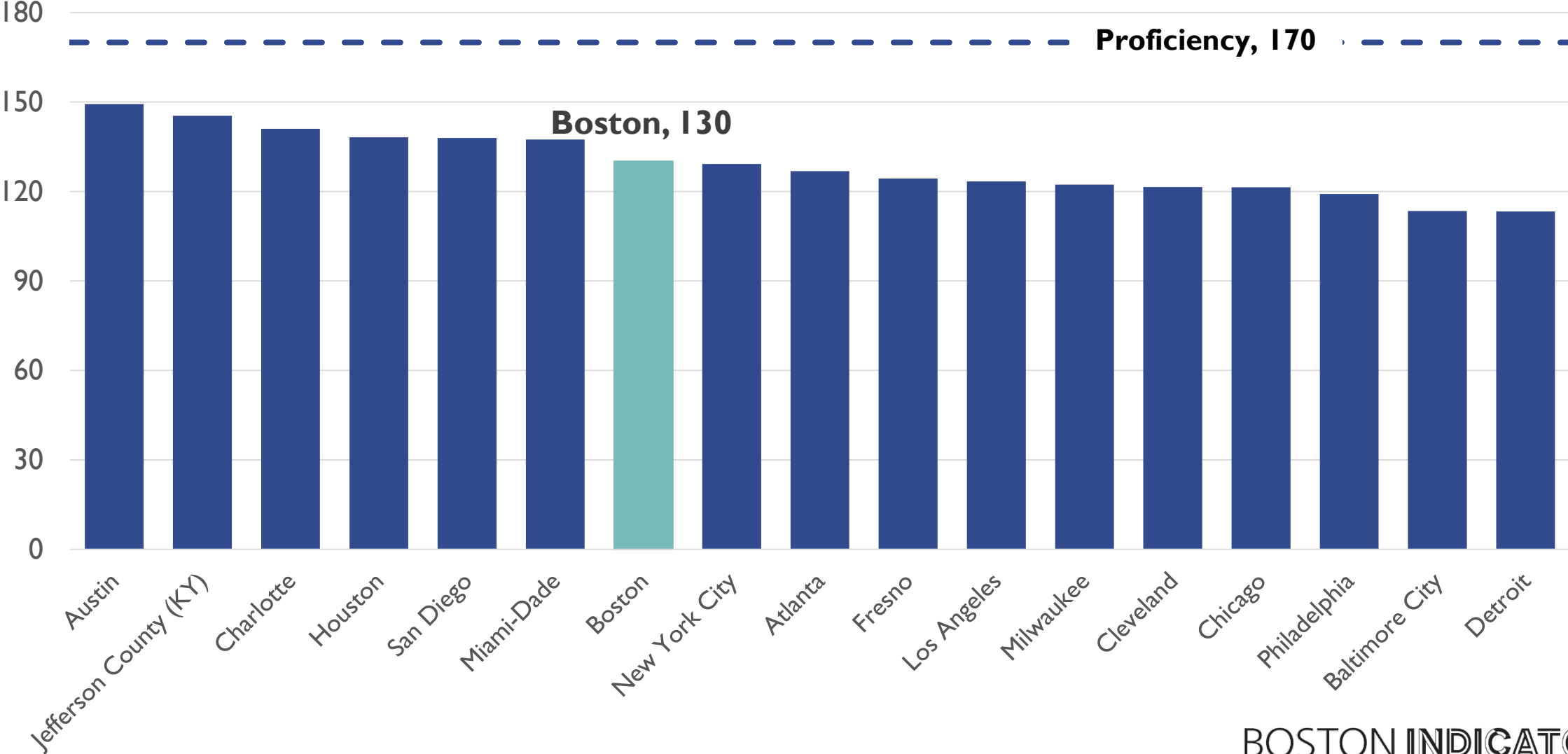
NAEP average scale score, grade 8 science, 2015



Note: NAEP did not report 2015 Science outcomes for four states: AK, CO, LA and PA.

Boston students are in the middle of the pack among urban districts and are significantly below proficient.

NAEP average scale score, grade 8 science, 2009



Key Findings

- MCAS achievement is much lower for Science than it is for ELA and Math.
 - This is true both at the state level and for Boston.
- BPS students generally performing better on Science exams at the high school level than at the elementary level.
- Multiple schools have 0 kids scoring proficient or advanced.
- In 2017, 0 kids district-wide scored Advanced on Grade 8 Science
- Compared to other states, Massachusetts is at or very near top of the nation in math and ELA, but not for Science.

Thank you!

www.bostonindicators.org