AP PHYSICS COMPARATIVE ANALYSIS

Prepared for the New Jersey Center for Teaching and Learning

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Introduction

This report considers the performance of New Jersey students on AP Physics assessments from 2009 to 2018, the most recent year for which data are available. Note that the AP Physics B exam was last administered in 2014; as such, Hanover presents only data from 2009 to 2014 for this exam. AP Physics B was replaced by Physics 1 and Physics 2 in fall 2014;[1] for these two exams, Hanover presents data from 2015 to 2018. Below, we provide descriptions of each AP Physics course and exam:

- **AP Physics 1** focuses on the investigation of six big ideas in the introductory college-level physics sequence and seven science practices, providing students with enduring, conceptual understandings of foundational physics principles. Exam questions are based on learning objectives, which combine science practices with specific content.[2]
- **AP Physics 2** focuses on the investigation of seven big ideas in the introductory college-level physics sequence and seven science practices, providing students with enduring, conceptual understandings of foundational physics principles. Exam questions are based on learning objectives, which combine science practices with specific content.[2]
- **AP Physics C: Electricity and Magnetism** provides instruction in electrostatics; conductors, capacitors and dielectrics; electric circuits; magnetic fields; and electromagnetism. The exam includes questions posed in a laboratory or experimental setting. Questions assess understanding of content as well as experimental skills.[2]
- **AP Physics C: Mechanics** provides instruction in kinematics; Newton's laws of motion; work, energy and power; systems of particles and linear momentum; circular motion and rotation; and oscillations and gravitation. The exam includes questions posed in a laboratory or experimental setting. Questions assess understanding of content as well as experimental skills.[2]
- **AP Physics B** exam covered a full-year non-calculus college course on general physics, intended for students not majoring in a physical science or engineering.[3]

[1] "AP Physics B (Physics 1 and 2)." AP Higher Education. https://aphighered.collegeboard.org/courses-exams/stem/physics-b

[2] Bullet points were taken verbatim from [1] "STEM." AP Higher Education. https://aphighered.collegeboard.org/courses-exams/stem [2] "Course and Exam Pages." AP Central. https://apcentral.collegeboard.org/courses

[3] Bullet point was taken verbatim from "The AP Physics B Exam." AP Central. https://apcentral.collegeboard.org/courses/resources/ap-physics-b-exam

Methodology

Below, we detail the metrics calculated for this analysis:

- **Mean Score** – The College Board publishes mean scores by state and AP Physics assessment for each year online at "AP Program Participation and Performance Data 2018." We note that mean scores can often correlate negatively with participation rates; if only the highest-performing students take the test, scores will be higher. As such, we recommend interpreting mean scores with caution and considering participation rates at the same time. We also include other metrics to standardize performance across states.

- **Participation Score** – We calculate the percentage of students taking AP Physics assessments by dividing the number of test-takers by the number of individuals in each state aged 15-19, as reported by the U.S. Census Bureau, times one thousand. Note that this is an approximation of the participation rate, not an exact statistic, since students may take the test at any point in high school. Rather, this approach is intended to create a standardized measure of general participation across states.

- **Total Score** – A standardized measure equal to the state mean score times the number of test-takers divided by the 15-19 year-old population. We recommend using the total score as a more accurate measure for comparing performance across states.

Key Findings

- **All AP Physics Exams** (2009-2018)
  - In 2018, New Jersey had the highest aggregate (i.e., combined) total score in the country on all AP Physics exams. It has held that position since 2015.
  - This high total score is reflective of broad participation in AP Physics exams (New Jersey ranked second in the country in participation in 2018) and high performance from test-takers.
  - Finally, New Jersey's growth in total score from 2009 to 2018 was second in the country, behind only Illinois.

- **AP Physics 1** (2015-2018)
  - Since 2015, New Jersey outperformed the rest of the country in terms of total score on the AP Physics 1 exam. Both nationally and in New Jersey, the total score remained stable between 2015 and 2018. Since 2016, New Jersey has ranked fourth in the country in terms of total score, behind only Connecticut, Texas, and Hawaii.
  - New Jersey is ranked 28th in terms of growth in total score, with total scores remaining stable from 2015 to 2018.

- **AP Physics 2** (2015-2018)
  - New Jersey ranked third in the country in terms of total score, behind Connecticut and Hawaii, with a total score more than double the average in the rest of the country.
  - New Jersey is ranked ninth in terms of growth scores from 2015 to 2018.

Key Findings

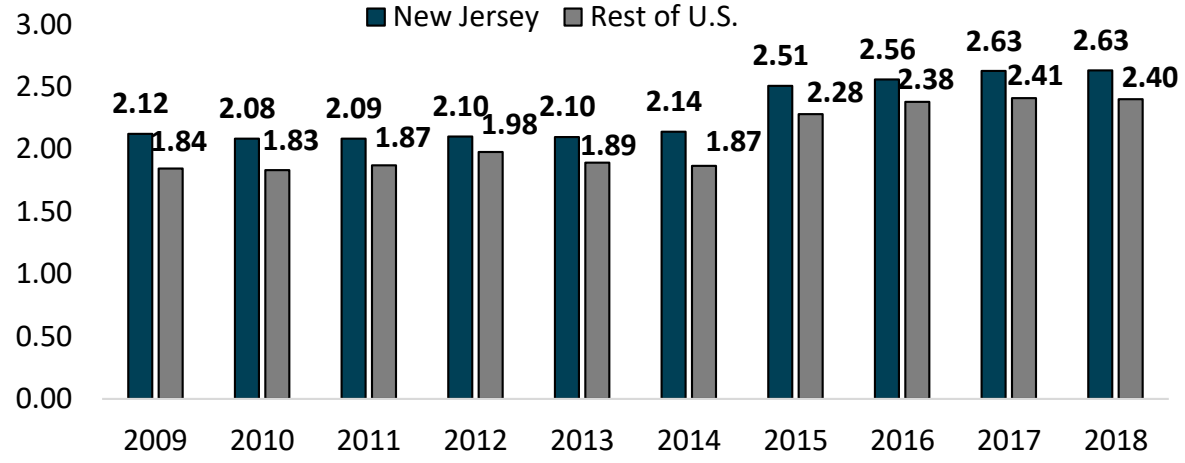
- **AP Physics C: Electricity and Magnetism** (2009-2018)
  - New Jersey's total score ranked first in the country in 2018, at three times the average for the rest of the country.
  - The state's scores from 2009 to 2018 put it fourth in the country in terms of growth in total score, behind Illinois, Maryland, and Massachusetts.
- **AP Physics C: Mechanics** (2009-2018)
  - New Jersey's total score ranked third in the country in 2018, at over two times the average for the rest of the country.
  - The state's scores from 2009 to 2018 put it second in the country in terms of growth in total score, behind only Massachusetts.
- **AP Physics B** (2009-2014)
  - While the AP Physics B test was being administered (until 2014), New Jersey ranked between sixth and eighth in terms of total score, well above the average for the rest of the country.
  - From 2009 to 2014, New Jersey's growth in total score put it 14th in the country in overall growth.

ALL PHYSICS EXAMS

Mean Score and Participation

Mean scores on AP exams rose nationally and in New Jersey from 2009 to 2018, most markedly from 2014 to 2015. New Jersey's mean score exceeded the national average during all years.

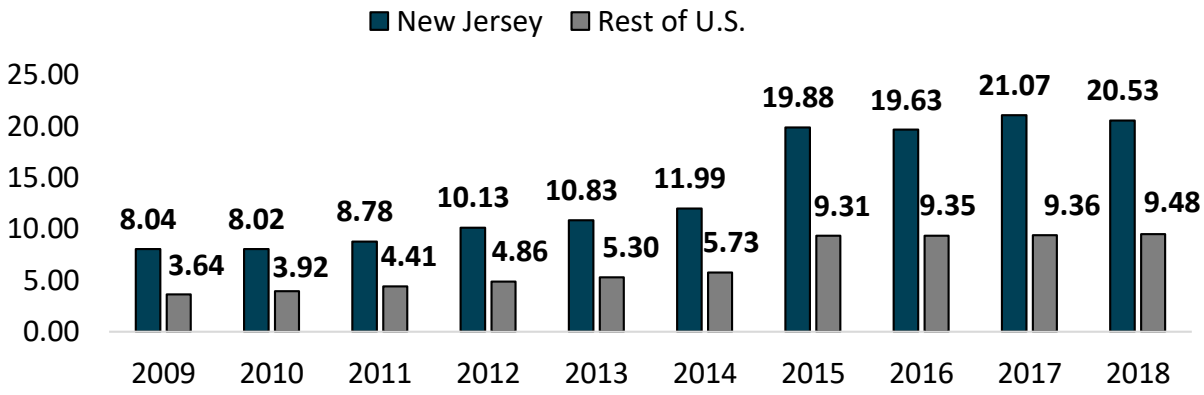
Mean Score in New Jersey and the Rest of the United States, 2009-2018



Mean scores for the rest of the country are imputed from national and New Jersey averages.

Similarly, participation scores rose in the state and across the country over the time period, especially with the reorganization of tests from 2014 to 2015. New Jersey's participation score was approximately twice the national average across the period.

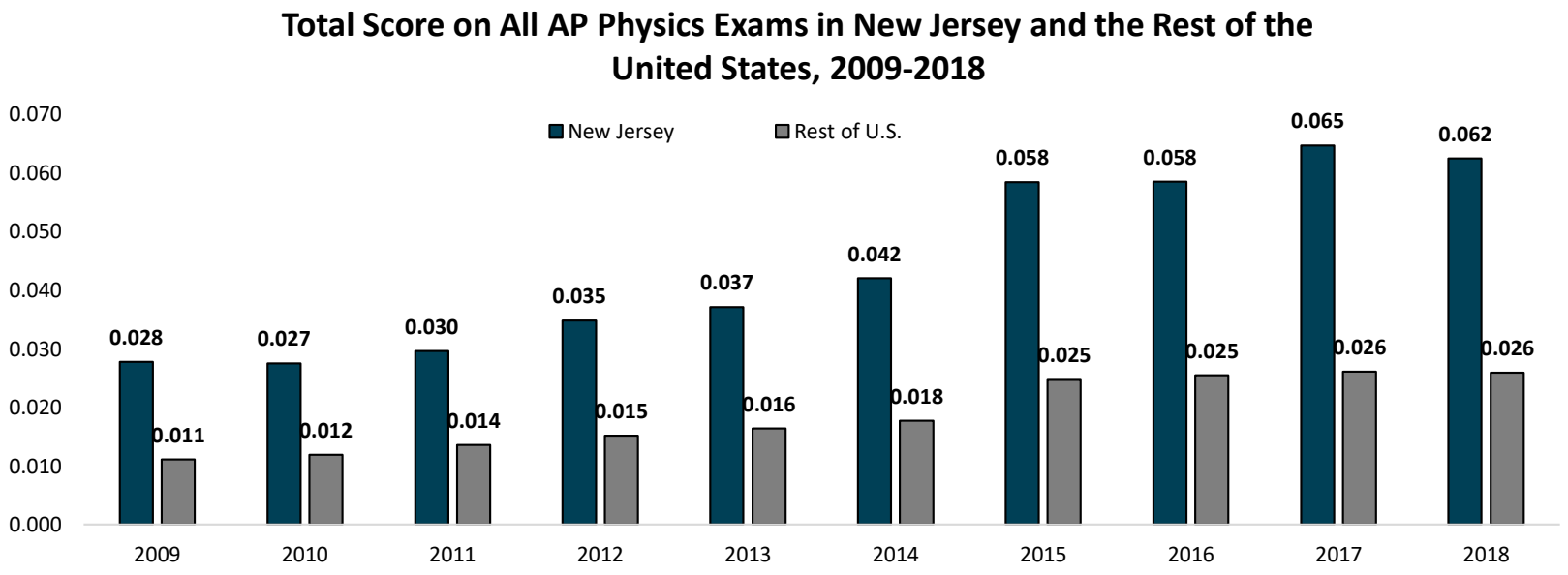
Participation Score in New Jersey and the Rest of the United States, 2009-2018



Participation score is equal to the number of test-takers divided by the number of 15-19 year-olds in the state, times one thousand.

Total Score

Since 2009, New Jersey's total score across all AP physics exams exceeded the national average, increasing from 0.028 in 2009 to 0.062 in 2018.



Total score is equal to the number of test-takers times the mean score for the state, divided by the number of 15-19 year-olds in the state.

Ranking Among U.S. States

- New Jersey consistently ranks among the top six states in terms of participating in taking AP Physics exams, as measured by the percentage of individuals aged 15 to 19 statewide taking the exams. It has had the second-highest participation score every year since 2015.
- New Jersey also consistently ranks among the top four states in terms of total score performance. Total score is defined as the mean score times the number of test-takers, divided by the number of individuals aged 15 to 19 in the state. It has had the highest total score every year since 2015.
- New Jersey also had the second-highest growth score from 2009 to 2018, trailing only Illinois. Growth score is the change in total score over the period.

National Ranking of New Jersey's AP Physics Performance, 2009-2018

New Jersey's National Rank	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Mean Score	8	7	11	15	8	5	11	9	6	6
Participation Score	1	6	5	3	3	3	2	2	2	2
Total Score	1	2	4	2	3	2	1	1	1	1

Comparison to Top-Performing States (2018)

Mean Score

Rank	State	Score
1	Montana	2.78
2	Hawaii	2.77
3	Missouri	2.73
4	Washington	2.70
5	Connecticut	2.67
6	**New Jersey**	2.61

Participation Score

Rank	State	Score
1	Texas	21.57
2	**New Jersey**	**20.53**
3	Massachusetts	19.44
4	Illinois	18.97
5	Connecticut	17.67

Participation score is equal to the number of test-takers divided by the number of 15-19 year-olds in the state, times one thousand.

Total Score

Rank	State	Score
1	**New Jersey**	**0.062**
2	Massachusetts	0.058
3	Illinois	0.055
4	Connecticut	0.054
5	Maryland	0.050

Total score is equal to the number of test-takers times the mean score for the state, divided by the number of 15-19 year-olds in the state.

Growth Score (2009-2018)

Rank	State	Score
1	Illinois	0.037
2	New Jersey	0.035
3	Texas	0.033
4	Massachusetts	0.031
5	Connecticut	0.030

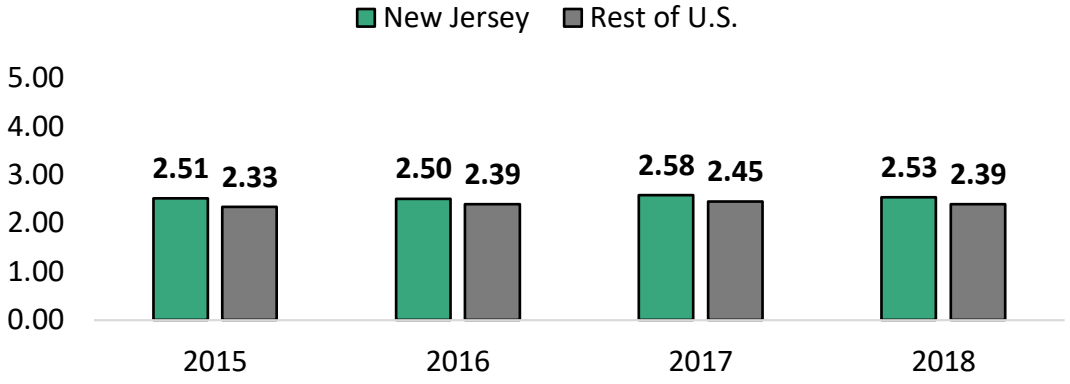
Growth score is the difference between the 2015 and 2018 total scores by state.

PHYSICS 1

Mean Score and Participation

Both nationally and in New Jersey, the mean score on the AP Physics 1 exam remained relatively stable from 2015 to 2018. New Jersey had a slightly higher mean score than the rest of the country across all examined years.

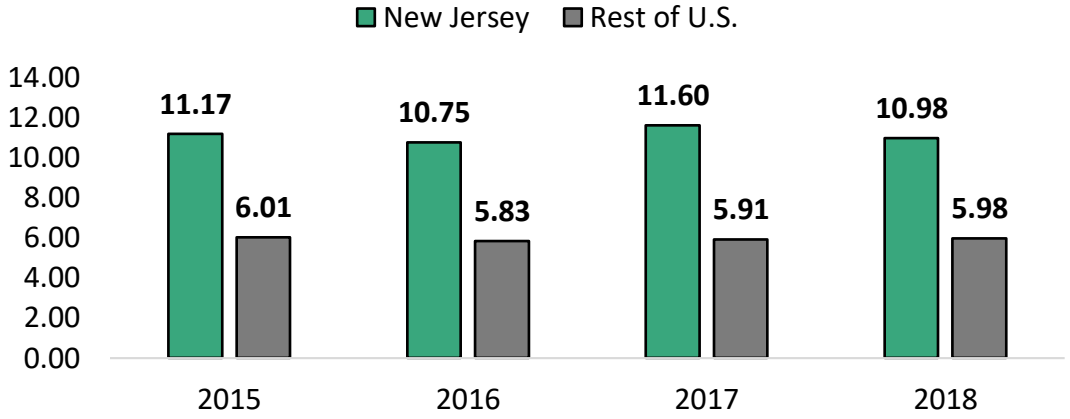
Mean Score in New Jersey and the Rest of the United States, 2015-2018



Mean scores for the rest of the country are imputed from national and New Jersey averages.

From 2015 to 2018, the participation score of the AP Physics 1 exam remained stable both nationally and in New Jersey. Notably, New Jersey had higher participation rates than the rest of the country across all examined years.

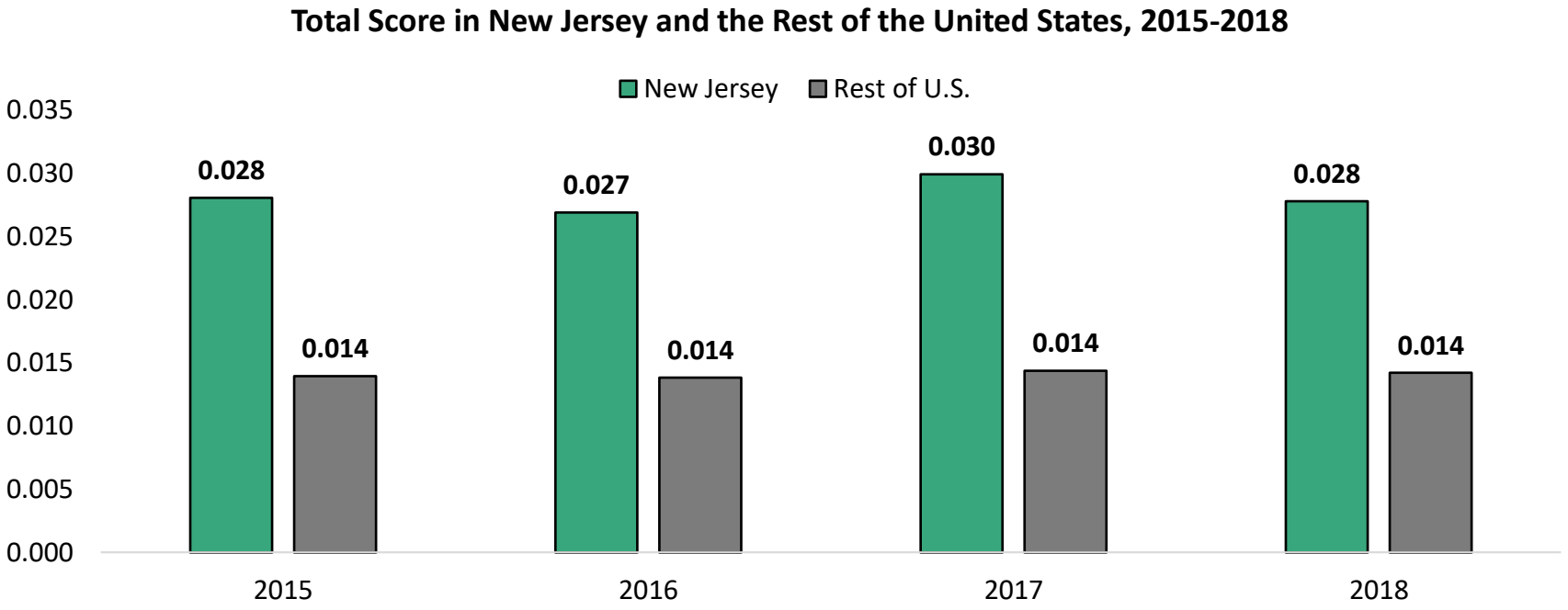
Participation Score in New Jersey and the Rest of the United States, 2015-2018



Participation score is equal to the number of test-takers divided by the number of 15-19 year-olds in the state, times one thousand.

Total Score

Since 2015, New Jersey outperformed the rest of the country in terms of total score on the AP Physics 1 exam. Both nationally and in New Jersey, the total score remained stable between 2015 and 2018.



Total score is equal to the number of test-takers times the mean score for the state, divided by the number of 15-19 year-olds in the state.

Ranking Among U.S. States

- New Jersey generally ranks in the middle among U.S. states in terms of mean score performance on the AP Physics 1 exam.
- Additionally, New Jersey consistently ranks among the top 4 states in terms of the percentage of students taking the exam, as measured by the percentage of individuals aged 15 to 19 statewide taking the AP Physics 1 exam.
- New Jersey also consistently ranks among the top 4 states in terms of total score performance. Total score is defined as the mean score times the number of test-takers, divided by the number of individuals aged 15 to 19 in the state.
- New Jersey is ranked 29th in terms of growth scores, with total scores remaining stable from 2015 to 2018.

National Ranking of New Jersey's AP Physics 1 Performance, 2015-2018

New Jersey's National Rank	2015	2016	2017	2018
Mean Score	13th	17th	15th	15th
Participation Score	2nd	4th	4th	3rd
Total Score	3rd	4th	4th	4th

Comparison to Top-Performing States (2018)

Mean Score

Rank	State	Score
1	Vermont	2.81
2	Idaho	2.80
3	South Dakota	2.78
4	Iowa	2.76
5	New Hampshire	2.76
...		
15	**New Jersey**	**2.53**

Participation Score

Rank	State	Score
1	Texas	15.61
2	Illinois	11.08
3	**New Jersey**	**10.98**
4	Hawaii	10.97
5	Connecticut	10.73

Participation score is equal to the number of test-takers divided by the number of 15-19 year-olds in the state, times one thousand.

Total Score

Rank	State	Score
1	Connecticut	0.0293
2	Texas	0.0287
3	Hawaii	0.0285
4	**New Jersey**	**0.0278**
5	Illinois	0.0270

Total score is equal to the number of test-takers times the mean score for the state, divided by the number of 15-19 year-olds in the state.

Growth Score (2015-2018)

Rank	State	Score
1	North Dakota	0.00947
2	Hawaii	0.00563
3	Illinois	0.00497
4	South Dakota	0.00423
5	District of Columbia	0.00404
...		
29	**New Jersey**	**-0.00026**

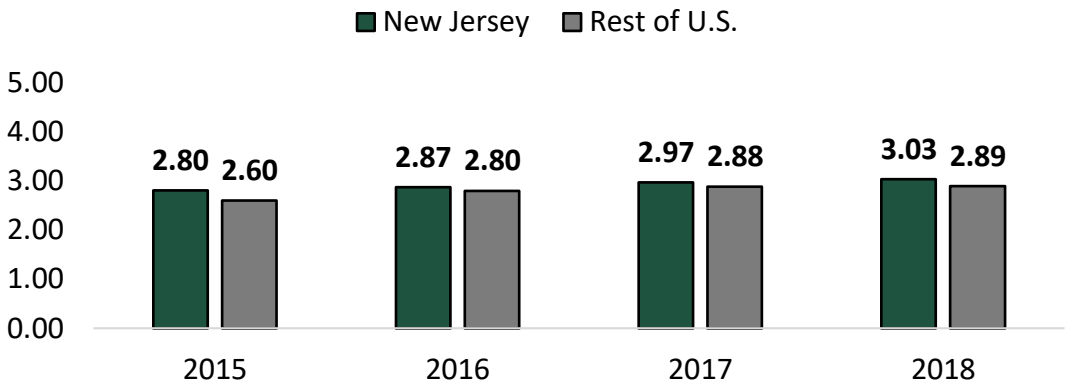
Growth score is the difference between the 2015 and 2018 total scores by state.

PHYSICS 2

Mean Score and Participation

Both nationally and in New Jersey, the mean score on the AP Physics 2 exam remained relatively stable from 2015 to 2018. New Jersey had a slightly higher mean score than the rest of the country across all examined years.

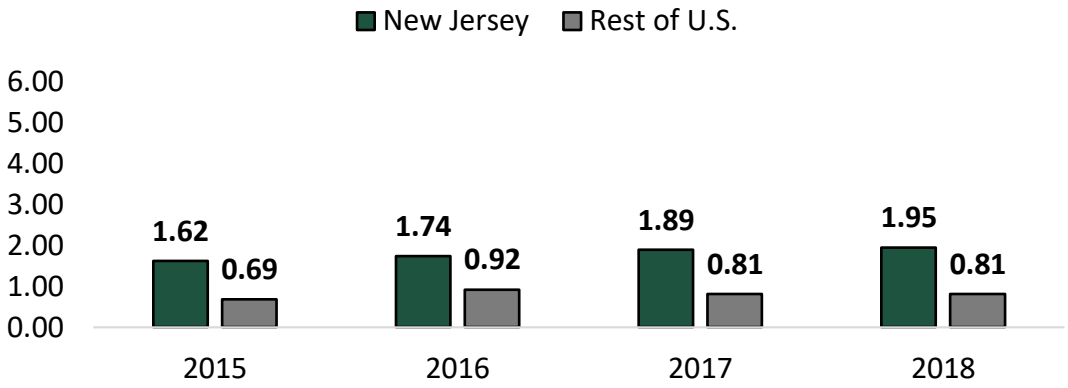
Mean Score in New Jersey and the Rest of the United States, 2015-2018



Mean scores for the rest of the country are imputed from national and New Jersey averages.

New Jersey's participation score on the AP Physics 2 exam increased from 1.62 in 2015 to 1.95 in 2018. Nationally, participation scores have ranged from 0.69 to 0.92 from 2015 to 2018. Notably, New Jersey had higher participation rates than the rest of the country across all examined years.

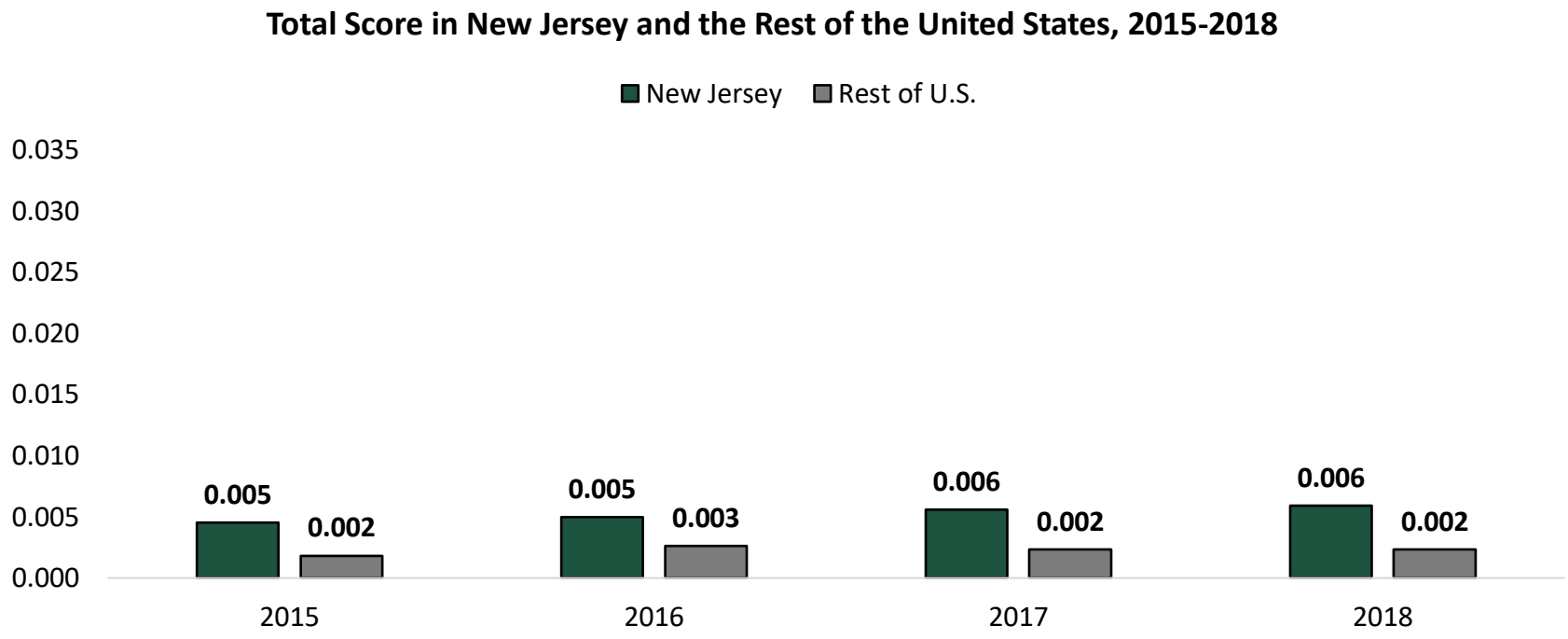
Participation Score in New Jersey and the Rest of the United States, 2015-2018



Participation score is equal to the number of test-takers divided by the number of 15-19 year-olds in the state, times one thousand.

Total Score

Since 2015, New Jersey outperformed the rest of the country in terms of total score on the AP Physics 2 exam. Both nationally and in New Jersey, the total score remained stable between 2015 and 2018.



Total score is equal to the number of test-takers times the mean score for the state, divided by the number of 15-19 year-olds in the state.

Ranking Among U.S. States

- New Jersey generally ranks in the middle among U.S. states in terms of mean score performance on the AP Physics 2 exam.
- Additionally, New Jersey consistently ranks among the top 8 states in terms of the percentage of students taking the exam, as measured by the percentage of individuals aged 15 to 19 statewide taking the AP Physics 2 exam. Notably, New Jersey increased its ranking from eighth to second between 2016 and 2017. New Jersey also held is second place ranking in 2018.
- New Jersey also consistently ranks among the top 5 states in terms of total score performance. Total score is defined as the mean score times the number of test-takers, divided by the number of individuals aged 15 to 19 in the state.
- New Jersey is ranked ninth in terms of growth scores, with total scores remaining stable from 2015 to 2018.

National Ranking of New Jersey's AP Physics 2 Performance, 2015-2018

New Jersey's National Rank	2015	2016	2017	2018
Mean Score	14th	21st	20th	18th
Participation Score	3rd	8th	2nd	2nd
Total Score	3rd	5th	2nd	3rd

Comparison to Top-Performing States (2018)

Mean Score

Rank	State	Score
1	Wyoming	3.60
2	Hawaii	3.49
3	Louisiana	3.48
4	Missouri	3.32
5	Iowa	3.31
...		
18	**New Jersey**	**3.03**

Participation Score

Rank	State	Score
1	Massachusetts	2.00
2	**New Jersey**	**1.95**
3	Texas	1.93
4	Connecticut	1.91
5	Hawaii	1.81

Participation score is equal to the number of test-takers divided by the number of 15-19 year-olds in the state, times one thousand.

Total Score

Rank	State	Score
1	Hawaii	0.0063
2	Connecticut	0.0059
3	**New Jersey**	**0.0059**
4	Massachusetts	0.0055
5	Texas	0.0051

Total score is equal to the number of test-takers times the mean score for the state, divided by the number of 15-19 year-olds in the state.

Growth Score (2015-2018)

Rank	State	Score
1	Massachusetts	0.00198
2	Nebraska	0.00188
3	South Dakota	0.00179
4	Connecticut	0.00168
5	Arkansas	0.00168
...		
9	**New Jersey**	**0.00137**

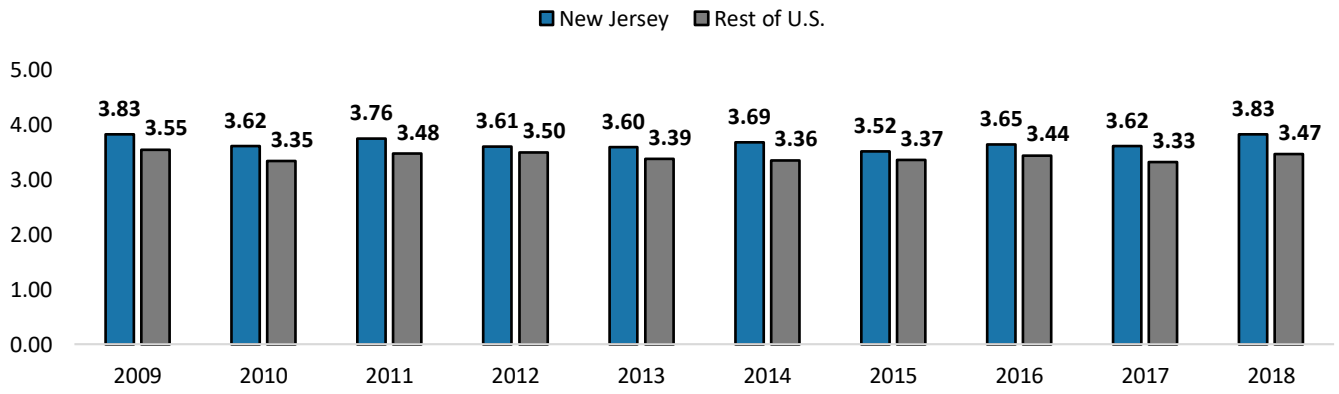
Growth score is the difference between the 2015 and 2018 total scores by state.

PHYSICS C: ELECTRICITY AND MAGNETISM

Mean Score and Participation

In New Jersey, the mean score on the AP Physics C: Electricity and Magnetism exam remained relatively stable from 2009 to 2018. Similarly, at the national level, the mean exam score remained stable. New Jersey had a slightly higher mean score than the rest of the country across all examined years.

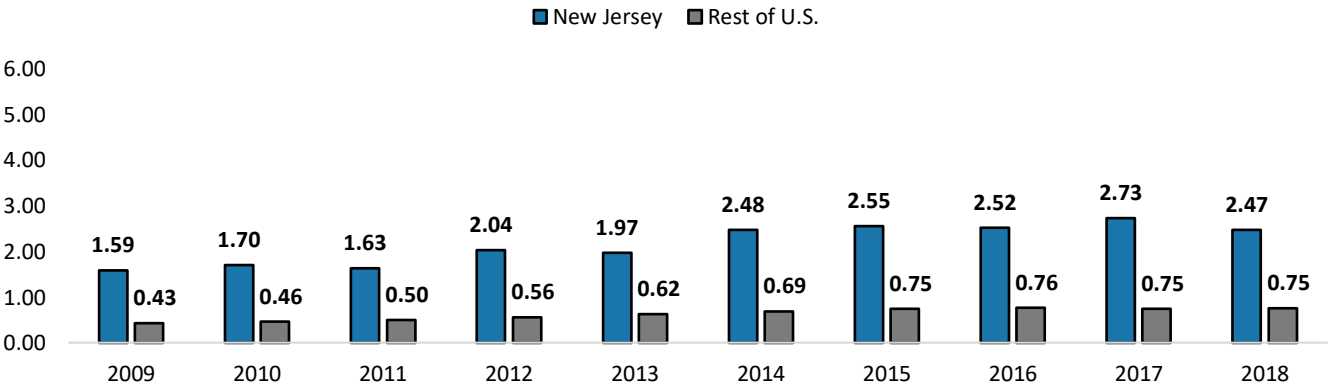
Mean Score in New Jersey and the Rest of the United States, 2009-2018



Mean scores for the rest of the country are imputed from national and New Jersey averages.

From 2009 to 2018, the participation score for students in New Jersey taking the exam increased from 1.59 to 2.47, and in the rest of the country from 0.43 to 0.75. Notably, New Jersey had higher participation rates than the rest of the country across all examined years.

Participation Score in New Jersey and the Rest of the United States, 2009-2018

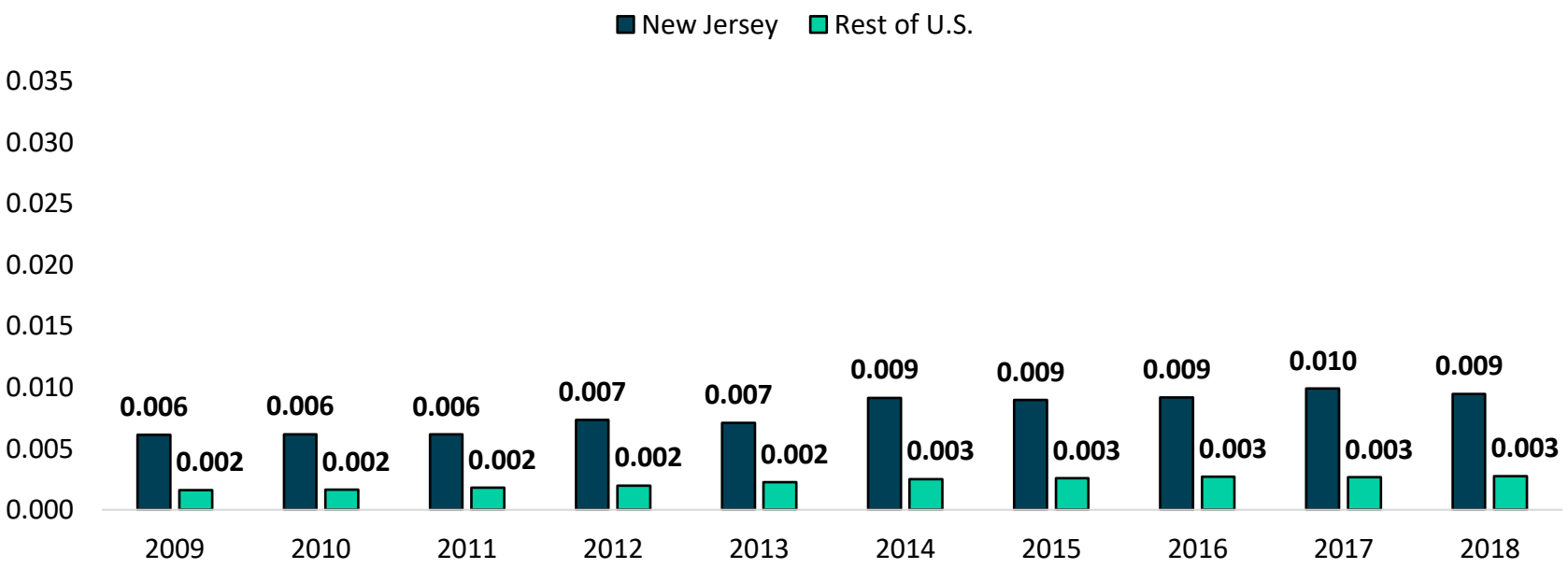


Participation score is equal to the number of test-takers divided by the number of 15-19 year-olds in the state, times one thousand.

Total Score

New Jersey has outperformed the rest of the country in terms of total score on the AP Physics C: Electricity and Magnetism exam since 2009. New Jersey's total score for the exam increased at a higher rate than the rest of the country, increasing from 0.006 to 0.009 between 2009 and 2018 compared to the rest of the country's increase of 0.002 to 0.003.

Total Score in New Jersey and the Rest of the United States, 2009-2018



Total score is equal to the number of test-takers times the mean score for the state, divided by the number of 15-19 year-olds in the state.

Ranking Among U.S. States

- Between 2009 and 2015, New Jersey generally ranked among the middle among U.S. states in terms of mean score performance on the AP Physics C: Electricity and Magnetism exam. Notably, it has ranked in the top 11 since 2016 and increased its rank from 16th in 2015 to 11th in 2016.

- Additionally, New Jersey consistently ranks among the top 3 states in terms of the percentage of students taking the exam, as measured by the percentage of individuals aged 15 to 19 statewide taking the AP Physics C: Electricity and Magnetism exam. New Jersey held second place nationally for participation between 2011 and 2017.

- New Jersey also consistently ranks among the top 2 states in terms of total score performance. Notably, New Jersey moved to first place in total score performance in 2018, moving up from holding second place since 2013. Total score is defined as the mean score times the number of test-takers, divided by the number of individuals aged 15 to 19 in the state.

- New Jersey is ranked fourth in terms of growth scores, with total scores increasingly slightly from 2009 to 2018.

National Ranking of New Jersey's AP Physics C: Electricity and Magnetism Performance, 2009-2018

New Jersey's National Rank	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Mean Score	13th	14th	11th	20th	13th	9th	16th	11th	10th	9th
Participation Score	2nd	1st	2nd	2nd	2nd	2nd	2nd	2nd	2nd	3rd
Total Score	1st	1st	2nd	1st	2nd	2nd	2nd	2nd	2nd	1st

Comparison to Top-Performing States (2018)

Mean Score

Rank	State	Score
1	West Virginia	4.25
2	Missouri	4.13
3	Delaware	4.11
4	Mississippi	4.11
5	Montana	4.11
…		
9	**New Jersey**	**3.83**

Participation Score

Rank	State	Score
1	Illinois	2.48
2	District of Columbia	2.48
3	**New Jersey**	**2.47**
4	Maryland	2.25
5	Massachusetts	2.16

Participation score is equal to the number of test-takers divided by the number of 15-19 year-olds in the state, times one thousand.

Total Score

Rank	State	Score
1	**New Jersey**	**0.0095**
2	Illinois	0.0091
3	Maryland	0.0086
4	District of Columbia	0.0083
5	Massachusetts	0.0079

Total score is equal to the number of test-takers times the mean score for the state, divided by the number of 15-19 year-olds in the state.

Growth Score (2009-2018)

Rank	State	Score
1	Illinois	0.00480
2	Maryland	0.00364
3	Massachusetts	0.00352
4	**New Jersey**	**0.00337**
5	Connecticut	0.00294

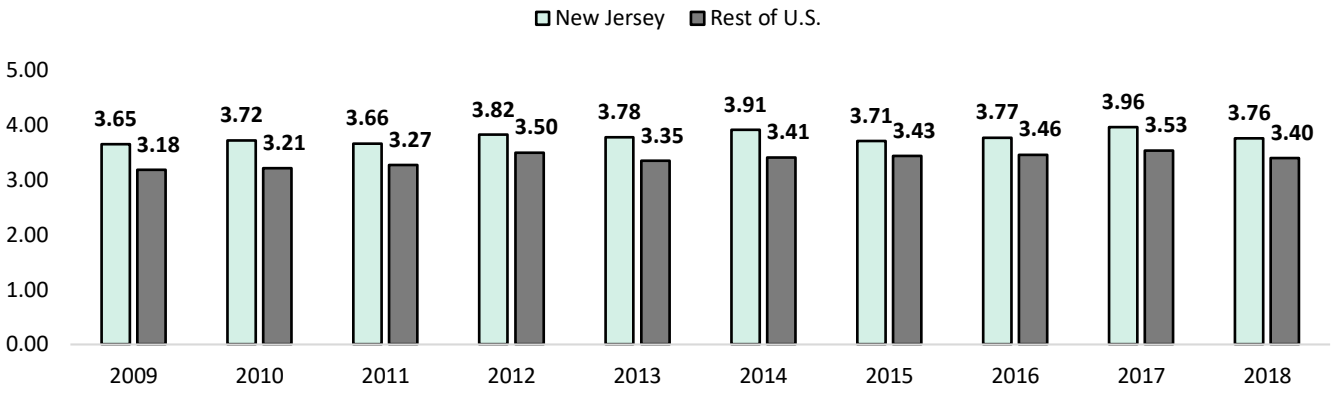
Growth score is the difference between the 2009 and 2018 total scores by state.

PHYSICS C: MECHANICS

Mean Score and Participation

In New Jersey, the mean score on the AP Physics C: Mechanics exam remained relatively stable from 2009 to 2018, increasing slightly from 3.65 in 2009 to 3.76 in 2018. Nationally, the mean exam score increased slightly from 3.18 in 2009 to 3.40 in 2018. New Jersey had a slightly higher mean score than the rest of the country across all examined years.

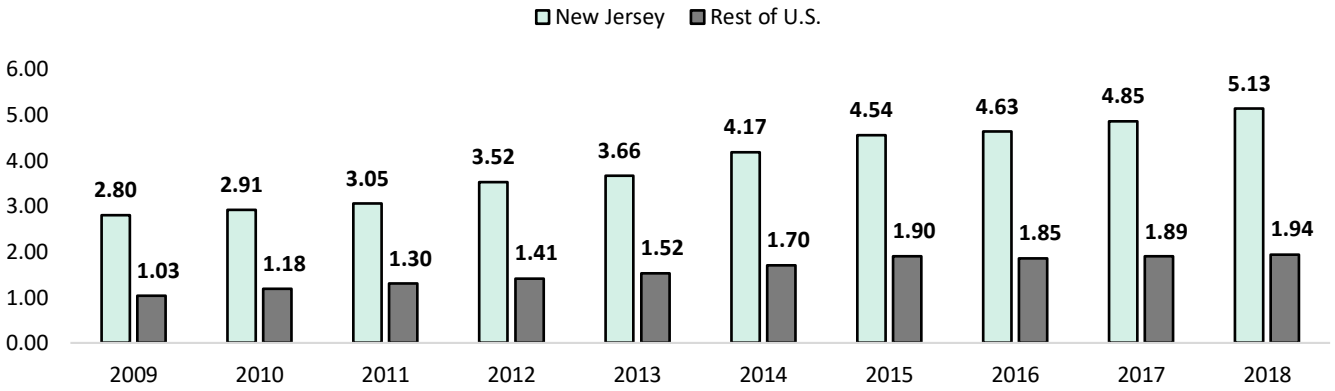
Mean Score in New Jersey and the Rest of the United States, 2009-2018



Mean scores for the rest of the country are imputed from national and New Jersey averages.

From 2009 to 2018, the participation score for students in New Jersey taking the exam increased from 2.80 to 5.13, and in the rest of the country from 1.03 to 1.94. Notably, New Jersey had higher participation rates than the rest of the country across all examined years.

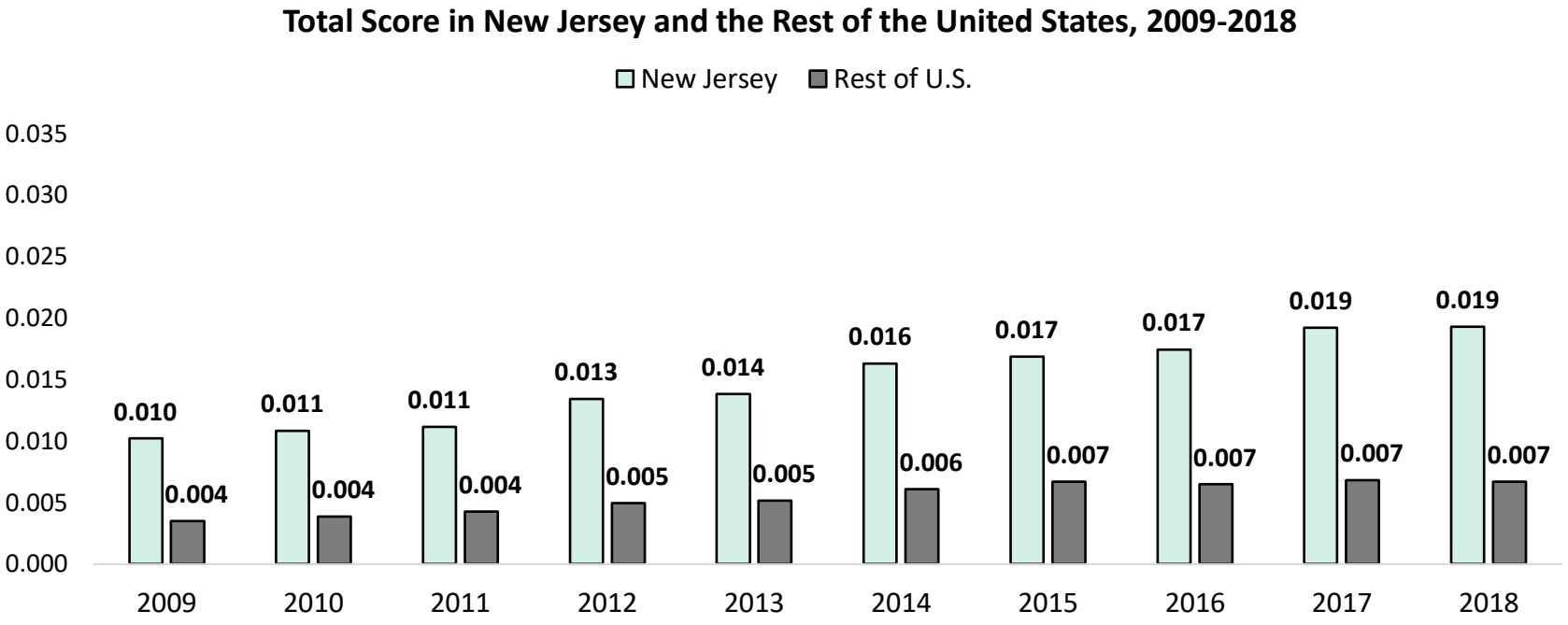
Participation Score in New Jersey and the Rest of the United States, 2009-2018



Participation score is equal to the number of test-takers divided by the number of 15-19 year-olds in the state, times one thousand.

Total Score

New Jersey has outperformed the rest of the country in terms of total score on the AP Physics C: Mechanics exam since 2009. New Jersey's total score for the exam increased at a higher rate than the rest of the country, increasing from 0.010 to 0.019 between 2009 and 2018 compared to the rest of the country's increase of 0.004 to 0.007.



Total score is equal to the number of test-takers times the mean score for the state, divided by the number of 15-19 year-olds in the state.

Ranking Among U.S. States

- New Jersey has consistently ranked in the top 9 states in terms of mean score performance on the AP Physics C: Mechanics exam since 2009, and has ranked in the top 5 since 2017.
- Additionally, New Jersey consistently ranks among the top 4 states in terms of percentage of students taking the exam, as measured by the percentage of individuals aged 15 to 19 statewide taking the AP Physics C: Mechanics exam.
- New Jersey also consistently ranks among the top 4 states in terms of total score performance. Total score is defined as the mean score times the number of test-takers, divided by the number of individuals aged 15 to 19 in the state.
- New Jersey is ranked second in terms of growth scores from 2009 to 2018, followed by D.C., Maryland, and Illinois.

National Ranking of New Jersey's AP Physics C: Mechanics Performance, 2009-2018

New Jersey's National Rank	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Mean Score	7th	5th	9th	8th	5th	2nd	8th	6th	3rd	5th
Participation Score	3rd	4th	4th	3rd	4th	3rd	4th	4th	3rd	4th
Total Score	2nd	4th	4th	3rd	3rd	2nd	3rd	3rd	2nd	3rd

Comparison to Top-Performing States (2018)

Mean Score

Rank	State	Score
1	South Dakota	4.14
2	Montana	4.10
3	Hawaii	3.96
4	Connecticut	3.81
5	Massachusetts	3.76
5	**New Jersey**	**3.76**

Participation Score

Rank	State	Score
1	District of Columbia	5.52
2	Massachusetts	5.25
3	Maryland	5.21
4	**New Jersey**	**5.13**
5	Virginia	3.77

Participation score is equal to the number of test-takers divided by the number of 15-19 year-olds in the state, times one thousand.

Total Score

Rank	State	Score
1	District of Columbia	0.0205
2	Massachusetts	0.0198
3	**New Jersey**	**0.0193**
4	Maryland	0.0181
5	Illinois	0.0138

Total score is equal to the number of test-takers times the mean score for the state, divided by the number of 15-19 year-olds in the state.

Growth Score (2009-2018)

Rank	State	Score
1	Massachusetts	0.00980
2	**New Jersey**	**0.00907**
3	District of Columbia	0.00862
4	Maryland	0.00804
5	Illinois	0.00786

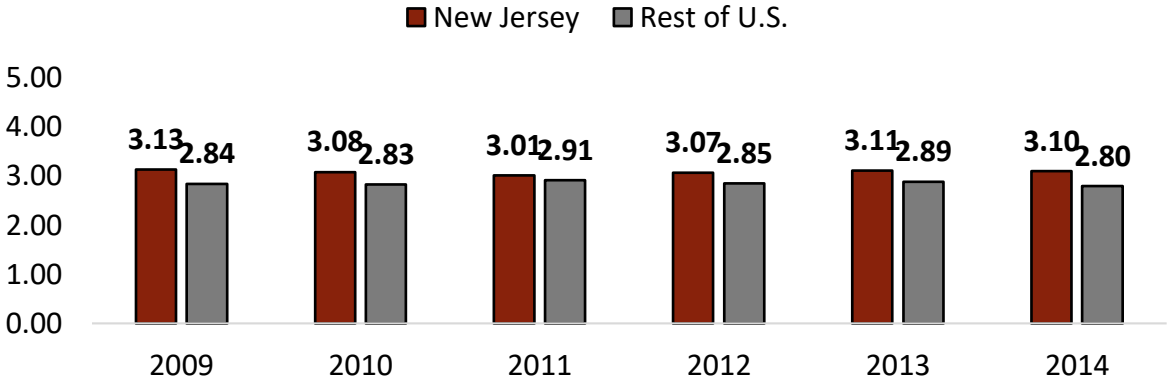
Growth score is the difference between the 2009 and 2018 total scores by state.

PHYSICS B

Mean Score and Participation

In New Jersey, the mean score on the AP Physics B exam remained relatively stable from 2009 to 2014. Nationally, the mean exam score also remained stable. New Jersey had a slightly higher mean score than the rest of the country across all examined years.

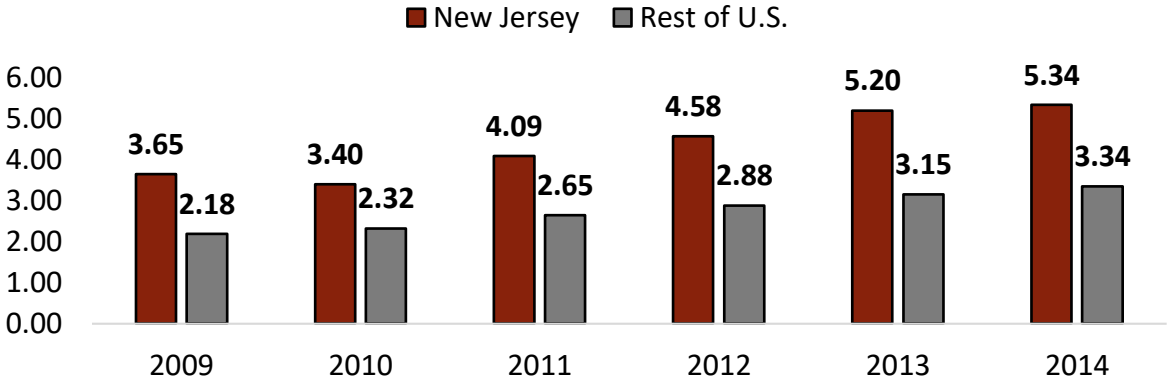
Mean Score in New Jersey and the Rest of the United States, 2009-2014



Mean scores for the rest of the country are imputed from national and New Jersey averages.

From 2009 to 2014, the participation score for students in New Jersey taking the exam increased from 3.65 to 5.34, and in the rest of the country from 2.18 to 3.34. Notably, New Jersey had higher participation rates than the rest of the country across all examined years.

Participation Score in New Jersey and the Rest of the United States, 2009-2014

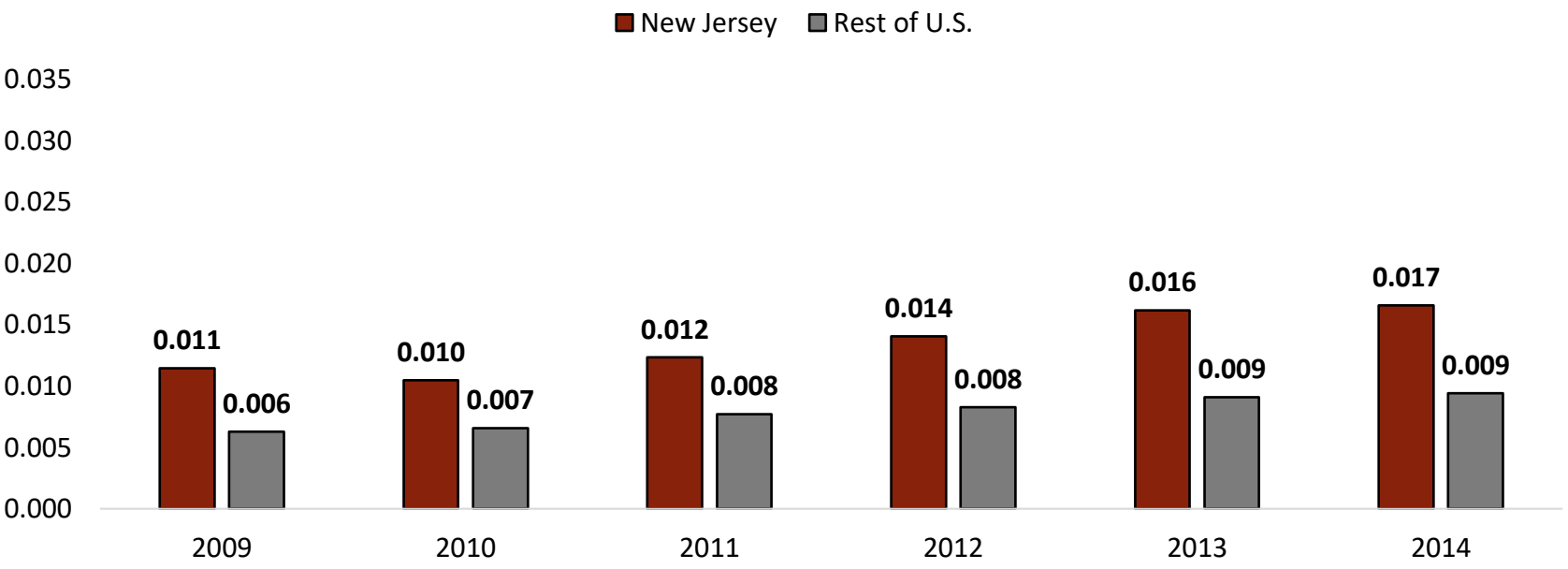


Participation score is equal to the number of test-takers divided by the number of 15-19 year-olds in the state, times one thousand.

Total Score

New Jersey outperformed the rest of the country in terms of total score on the AP Physics B exam from 2009 to 2014. New Jersey's total score for the exam increased at a higher rate than the rest of the country, increasing from 0.011 to 0.017 between 2009 and 2014 compared to the rest of the country's increase of 0.006 to 0.009.

Total Score in New Jersey and the Rest of the United States, 2009-2014



Total score is equal to the number of test-takers times the mean score for the state, divided by the number of 15-19 year-olds in the state.

Ranking Among U.S. States

- New Jersey generally ranked in the middle among U.S. states in terms of mean score performance on the AP Physics B exam. New Jersey's mean score improved overall from 13th to 11th from 2009 to 2014, but it dropped to 21st in 2011.
- Between 2009 and 2014, New Jersey generally ranked among the top 8 states in terms of percentage of students taking the exam, as measured by the percentage of individuals aged 15 to 19 statewide taking the AP Physics B exam.
- New Jersey also consistently ranked among the top 8 states in terms of total score performance between 2009 and 2014. Total score is defined as the mean score times the number of test-takers, divided by the number of individuals aged 15 to 19 in the state.
- New Jersey is ranked 13th in terms of growth scores, with total scores increasing slightly from 2009 to 2014.

National Ranking of New Jersey's AP Physics B Performance, 2009-2014

New Jersey's National Rank	2009	2010	2011	2012	2013	2014
Mean Score	13th	15th	21st	17th	17th	11th
Participation Score	8th	13th	7th	7th	5th	6th
Total Score	6th	8th	8th	6th	6th	6th

Comparison to Top-Performing States (2014)

Mean Score

Rank	State	Score
1	Missouri	3.34
2	Illinois	3.28
3	Kansas	3.26
4	South Dakota	3.24
5	Hawaii	3.21
…		
11	**New Jersey**	**3.10**

Participation Score

Rank	State	Score
1	New York	7.34
2	Hawaii	6.39
3	Massachusetts	6.31
4	Connecticut	6.09
5	California	5.93
6	**New Jersey**	**5.34**

Participation score is equal to the number of test-takers divided by the number of 15-19 year-olds in the state, times one thousand.

Total Score

Rank	State	Score
1	New York	0.0230
2	Hawaii	0.0205
3	Connecticut	0.0192
4	Massachusetts	0.0190
5	California	0.0170
6	**New Jersey**	**0.0165**

Total score is equal to the number of test-takers times the mean score for the state, divided by the number of 15-19 year-olds in the state.

Growth Score (2009-2014)

Rank	State	Score
1	Indiana	0.00831
2	Hawaii	0.00717
3	Colorado	0.00715
4	Massachusetts	0.00699
5	South Dakota	0.00681
…		
13	**New Jersey**	**0.00512**

Growth score is the difference between the 2009 and 2014 total scores by state.

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