REALIZING THE DREAM: Using Data to Increase Achievement

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The Numbers – Nation

• In 2007, nearly 1.5 million students graduated having taken the SAT®

• When students register to take the SAT, they are asked to fill out a 42-item questionnaire

• About 75% of students who took AP also filled out the SAT questionnaire
The Population & The Instrument

• The SAT is primarily taken by juniors and seniors in high school

• The SAT is a test that measures critical reading, math, and writing

• The SAT questionnaire includes questions about:
  • demographic information
  • high school coursework and activities, and
  • college preferences and aspirations
Overview of Students in the 2007 SAT® Cohort

- Description of First Generation Students
  - Size and Growth
  - Gender
  - Ethnicity
  - Income

- Academic Preparation, College Plans and Aspirations
  - SAT Mean Scores
  - Degree Level Goals
  - Core Curriculum
  - Rigorous Math and Science Courses
  - College Location Choice
  - Housing Plans
  - Plans to Work Part Time
Limitations of our research include:

• Students who are not offered AP at their schools
• Students who do not take the SAT
• Research limited to three AP Exams
Students in the 2007 SAT® Cohort by Ethnicity

- White: 55%
- African American/Black: 11%
- Hispanic: 11%
- Asian: 9%
- Other: 4%
- No Response: 9%
- American Indian or Alaskan Native: 1%

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Students in the SAT® Cohort by Ethnicity 2003-2007

In Thousands

- American Indian or Alaska Native
- Asian
- African American/Black
- Hispanic
- White
- Other
Students in the SAT® Cohort by Ethnicity
2003-2007

- American Indian or Alaska Native
- Asian
- African American/Black
- Hispanic
- Other

In Thousands

2003 2004 2005 2006 2007

American Indian or Alaska Native: 101, 107.5, 112.5, 122.3, 125.7
Asian: 7.5, 8.2, 8.9, 9.3, 9.9
African American/Black: 39.1, 46.6, 58.2, 54.5, 53.9
Hispanic: 135, 138.3, 153.1, 151.7, 159.8
Other: 138, 150.6, 160.5
Students in the 2007 SAT® Cohort by Gender

- Female: 54%
- Male: 46%
Students in the 2007 SAT® Cohort by Ethnicity and Gender

- American Indian or Alaska Native: 53% Female, 47% Male
- Asian: 51% Female, 49% Male
- African American/Black: 58% Female, 42% Male
- Hispanic: 57% Female, 43% Male
- White: 53% Female, 47% Male
- Other: 56% Female, 44% Male
First Generation and Non-First Generation Students in the SAT® Cohort 2002-2007 by Ethnicity

Percent of First Generation
- White: 49%
- Hispanic: 20%
- African American/Black: 17%
- Asian: 9%
- Other: 4%
- AI/AN: 1%

Percent of Non-First Generation Students
- White: 68%
- Hispanic: 8%
- African American/Black: 9%
- Asian: 10%
- Other: 4%
- AI/AN: 1%
Household Income by Ethnicity for Students in the 2007 SAT® Cohort

<table>
<thead>
<tr>
<th>Income Range</th>
<th>African American/Black</th>
<th>Hispanic</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td>$30K or Less</td>
<td>36%</td>
<td>36%</td>
<td>8%</td>
</tr>
<tr>
<td>$30K-$50K</td>
<td>28%</td>
<td>27%</td>
<td>22%</td>
</tr>
<tr>
<td>$50K-$70K</td>
<td>14%</td>
<td>13%</td>
<td>16%</td>
</tr>
<tr>
<td>$70K-$100K</td>
<td>13%</td>
<td>13%</td>
<td>24%</td>
</tr>
<tr>
<td>$100K</td>
<td>9%</td>
<td>11%</td>
<td>30%</td>
</tr>
</tbody>
</table>

- $30K or Less
- $30K-$50K
- $50K-$70K
- $70K-$100K
- $100K
SAT Performance of Students in the 2007 SAT® Cohort

- SAT Performance
- Academic Preparation
- College Aspirations
- AP Course Taking Patterns to Increase Achievement
# 2007 SAT® Mean Scores by Ethnicity

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Critical Reading</th>
<th>Mathematics</th>
<th>Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian or Alaska Native</td>
<td>487</td>
<td>494</td>
<td>473</td>
</tr>
<tr>
<td>Asian</td>
<td>514</td>
<td>578</td>
<td>513</td>
</tr>
<tr>
<td>African American/Black</td>
<td>433</td>
<td>429</td>
<td>425</td>
</tr>
<tr>
<td>Hispanic</td>
<td>458</td>
<td>461</td>
<td>449</td>
</tr>
<tr>
<td>White</td>
<td>527</td>
<td>534</td>
<td>518</td>
</tr>
</tbody>
</table>
### 2007 SAT® Mean Scores by Gender-Ethnicity

#### National: 2007 SAT Mean Scores by Gender and Ethnicity

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Critical Reading</th>
<th>Mathematics</th>
<th>Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>American Indian or Alaskan Native</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>485</td>
<td>478</td>
<td>478</td>
</tr>
<tr>
<td>Male</td>
<td>490</td>
<td>513</td>
<td>468</td>
</tr>
<tr>
<td><strong>Asian</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>515</td>
<td>565</td>
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</tr>
<tr>
<td>Male</td>
<td>513</td>
<td>592</td>
<td>506</td>
</tr>
<tr>
<td><strong>African American/Black</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>436</td>
<td>423</td>
<td>433</td>
</tr>
<tr>
<td>Male</td>
<td>429</td>
<td>437</td>
<td>414</td>
</tr>
<tr>
<td><strong>Hispanic</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>455</td>
<td>447</td>
<td>452</td>
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<tr>
<td>Male</td>
<td>461</td>
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<tr>
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<tr>
<td>Female</td>
<td>526</td>
<td>519</td>
<td>524</td>
</tr>
<tr>
<td>Male</td>
<td>529</td>
<td>553</td>
<td>511</td>
</tr>
</tbody>
</table>
College Aspirations of Students in the 2007 SAT® Cohort

SAT Performance

Academic Preparation

College Aspirations

AP Course Taking Patterns to Increase Achievement
Degree Level Goals by Ethnicity of Students in the 2007 SAT® Cohort

- **Black or African American**
  - Doctoral: 26%
  - Masters: 24%
  - Bachelors: 26%
  - Cert. or Assc.: 3%
  - Undecided: 17%

- **Hispanic**
  - Doctoral: 16%
  - Masters: 33%
  - Bachelors: 22%
  - Cert. or Assc.: 3%
  - Undecided: 2%

- **White**
  - Doctoral: 0%
  - Masters: 34%
  - Bachelors: 29%
  - Cert. or Assc.: 3%
  - Undecided: 24%
College Location Preference by Ethnicity in the 2007 SAT® Cohort

- **Undecided**
  - African American/Black: 15%
  - Hispanic: 17%
  - White: 25%

- **Outside US**
  - African American/Black: 3%
  - Hispanic: 4%
  - White: 3%

- **Beyond States Bordering Mine**
  - African American/Black: 28%
  - Hispanic: 19%
  - White: 21%

- **In States Bordering Mine**
  - African American/Black: 27%
  - Hispanic: 16%
  - White: 23%

- **In My Home State**
  - African American/Black: 49%
  - Hispanic: 51%
  - White: 46%

- **Close to Home**
  - African American/Black: 24%
  - Hispanic: 33%
  - White: 20%
Housing Preference by Ethnicity in the 2007 SAT® Cohort

- **African American/Black**
  - At Home: 8%
  - On-Campus: 21%
  - Off Campus: 36%
  - Do Not Know: 18%

- **Hispanic**
  - At Home: 9%
  - On-Campus: 5%
  - Off Campus: 3%
  - Do Not Know: 26%

- **White**
  - At Home: 9%
  - On-Campus: 55%
  - Off Campus: 26%
  - Do Not Know: 30%
Plans to Seek Part Time Job in College by Ethnicity in the 2007 SAT® Cohort

- American Indian or Alaskan Native: 64%
- Asian: 58%
- African American/Black: 67%
- Hispanic: 70%
- White: 61%
Academic Preparation of Students in the 2007 SAT® Cohort

SAT Performance

College Aspirations

Academic Preparation

AP Course Taking Patterns to Increase Achievement
Academic Preparation by Ethnicity of Students in the 2007 SAT® Cohort

- American Indian or Alaskan Native: 73%
- Asian: 74%
- African American/Black: 68%
- Hispanic: 72%
- White: 82%
- Other: 74%

Bar chart showing Core and Non-Core percentages for each ethnicity.
PSAT Taker by Ethnicity of Students in the 2007 SAT® Cohort

- American Indian or Alaskan Native: 73% PSAT Taker, 27% Non-PSAT Taker
- Asian: 74% PSAT Taker, 26% Non-PSAT Taker
- African American/Black: 77% PSAT Taker, 23% Non-PSAT Taker
- Hispanic: 75% PSAT Taker, 25% Non-PSAT Taker
- White: 82% PSAT Taker, 18% Non-PSAT Taker
- Other: 74% PSAT Taker, 26% Non-PSAT Taker
Level of College Preparation by Ethnicity in the 2007 SAT® Cohort – Calculus Course Taken

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Calculus Taken</th>
<th>No Calculus Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian or Alaskan Native</td>
<td>37%</td>
<td>63%</td>
</tr>
<tr>
<td>Asian</td>
<td>63%</td>
<td>37%</td>
</tr>
<tr>
<td>African American/Black</td>
<td>66%</td>
<td>34%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>75%</td>
<td>25%</td>
</tr>
<tr>
<td>White</td>
<td>65%</td>
<td>35%</td>
</tr>
<tr>
<td>Other</td>
<td>52%</td>
<td>48%</td>
</tr>
<tr>
<td>White</td>
<td>49%</td>
<td>51%</td>
</tr>
<tr>
<td>Other</td>
<td>48%</td>
<td>52%</td>
</tr>
</tbody>
</table>
Level of College Preparation by Ethnicity in the 2007 SAT® Cohort – Calculus Course Taken

Mean SAT Math Scores by Calculus Course Taken

- American Indian or Alaskan Native
- Asian
- African American/Black
- Hispanic
- White
- Other

Calculus Taken: 580, 643, 506, 553, 614, 597
No Calculus Taken: 460, 506, 410, 437, 495, 467
Level of College Preparation by Ethnicity in the 2007 SAT® Cohort – Physics Course Taken

- American Indian or Alaskan Native: 65% taken, 35% not taken
- Asian: 81% taken, 19% not taken
- African American/Black: 59% taken, 41% not taken
- Hispanic: 65% taken, 35% not taken
- White: 72% taken, 28% not taken
- Other: 73% taken, 27% not taken

Physics Taken, No Physics Taken
Level of College Preparation by Ethnicity in the 2007 SAT® Cohort – Physics Course Taken

Mean SAT Math Scores by Physics Course

- American Indian or Alaskan Native: 529 (Physics Taken) vs. 455 (No Physics Taken)
- Asian: 605 (Physics Taken) vs. 459 (No Physics Taken)
- African American/Black: 513 (Physics Taken) vs. 407 (No Physics Taken)
- Hispanic: 569 (Physics Taken) vs. 492 (No Physics Taken)
- White: 463 (Physics Taken) vs. 495 (No Physics Taken)
- Other: 547 (Physics Taken) vs. 433 (No Physics Taken)
AP Course Taking Patterns of Students in the 2007 SAT® Cohort

- SAT Performance
- Academic Preparation
- College Aspirations
- AP Course Taking Patterns to Increase Achievement
Percent Taking AP English Language By Composition Indicator by Ethnicity

- All: 18%
- Asian: 24%
- Black: 12%
- Hispanic: 20%
- White: 18%

NO YES
Percent Taking AP English and Scoring 3+
By Composition Indicator By Ethnicity

<table>
<thead>
<tr>
<th></th>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>5%</td>
<td>11%</td>
</tr>
<tr>
<td>Asian</td>
<td>7%</td>
<td>15%</td>
</tr>
<tr>
<td>Black</td>
<td>1%</td>
<td>4%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>3%</td>
<td>8%</td>
</tr>
<tr>
<td>White</td>
<td>6%</td>
<td>12%</td>
</tr>
</tbody>
</table>

By Ethnicity:
- Asian: 11%
- Black: 4%
- Hispanic: 8%
- White: 12%
Average SAT CR Scores for Students Taking AP English Language By Ethnicity

SAT CR (all SAT) SAT CR (with AP English Language) SAT CR (with AP English Language 3+)

ALL: 593, 591, 648, 657
Asian: 514, 599, 615, 624
Black: 430, 516, 530, 610
Hispanic: 457, 530, 624
White: 529, 610, 650
Average SAT W Scores for Students Taking AP English Language By Ethnicity

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>ALL</th>
<th>Asian</th>
<th>Black</th>
<th>Hispanic</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT W (all SAT)</td>
<td>495</td>
<td>650</td>
<td>423</td>
<td>449</td>
<td>519</td>
</tr>
<tr>
<td>SAT W (with AP English Language)</td>
<td>582</td>
<td>595</td>
<td>509</td>
<td>522</td>
<td>600</td>
</tr>
<tr>
<td>SAT W (with AP English Language 3+)</td>
<td>636</td>
<td>600</td>
<td>609</td>
<td>637</td>
<td>600</td>
</tr>
</tbody>
</table>
Percent Taking AP Calculus AB By Number of Years of Calculus by Ethnicity

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>1 Year</th>
<th>2 Years</th>
<th>3 or More Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL</td>
<td>35%</td>
<td>49%</td>
<td>11%</td>
</tr>
<tr>
<td>Asian</td>
<td>35%</td>
<td>40%</td>
<td>9%</td>
</tr>
<tr>
<td>Black</td>
<td>29%</td>
<td>29%</td>
<td>4%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>39%</td>
<td>56%</td>
<td>15%</td>
</tr>
<tr>
<td>White</td>
<td>35%</td>
<td>52%</td>
<td>16%</td>
</tr>
</tbody>
</table>
Percent Taking AP Calculus AB and Scoring 3+ By Number of Years of Calculus By Ethnicity

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>1 Year</th>
<th>2 Years</th>
<th>3 or More</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>21%</td>
<td>39%</td>
<td>39%</td>
<td>100%</td>
</tr>
<tr>
<td>Asian</td>
<td>8%</td>
<td>25%</td>
<td>39%</td>
<td>100%</td>
</tr>
<tr>
<td>Black</td>
<td>7%</td>
<td>9%</td>
<td>18%</td>
<td>100%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2%</td>
<td>14%</td>
<td>35%</td>
<td>100%</td>
</tr>
<tr>
<td>White</td>
<td>10%</td>
<td>22%</td>
<td>43%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Average SAT Math Scores for Students Taking AP Calculus AB By Ethnicity

SAT M (all SAT) SAT M (with AP Calculus AB) SAT M (with AP Calculus 3+)
Percent Taking AP Physics B By Number of Years of Physics by Ethnicity

- **ALL**:  
  - 1 Year: 4%
  - 2 Years: 23%
  - 3 or More Years: 24%

- **Asian**:  
  - 1 Year: 4%
  - 2 Years: 8%
  - 3 or More Years: 24%

- **Black**:  
  - 1 Year: 2%
  - 2 Years: 14%
  - 3 or More Years: 5%

- **Hispanic**:  
  - 1 Year: 2%
  - 2 Years: 3%
  - 3 or More Years: 24%

- **White**:  
  - 1 Year: 5%
  - 2 Years: 10%
  - 3 or More Years: 25%

Legend:  
- Blue: 1 Year
- Orange: 2 Years
- Yellow: 3 or More Years
Percent Taking AP Physics B and Scoring 3+ By Number of Years of Physics By Ethnicity
Average SAT Math Scores for Students Taking AP Physics B By Ethnicity

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>All SAT</th>
<th>SAT M (with AP Physics B)</th>
<th>SAT M (with AP Physics 3+)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL</td>
<td>515</td>
<td>717</td>
<td>691</td>
</tr>
<tr>
<td>Asian</td>
<td>658</td>
<td>683</td>
<td>664</td>
</tr>
<tr>
<td>Black</td>
<td>695</td>
<td>578</td>
<td>535</td>
</tr>
<tr>
<td>Hispanic</td>
<td>654</td>
<td>683</td>
<td>668</td>
</tr>
<tr>
<td>White</td>
<td>426</td>
<td>570</td>
<td>596</td>
</tr>
</tbody>
</table>

SAT M (all SAT) | SAT M (with AP Physics B) | SAT M (with AP Physics 3+)
Questions, Comments, Suggestions

• Researchers are encouraged to freely express their professional judgment. Therefore, points of view or opinions stated in College Board presentations do not necessarily represent official College Board position or policy.

• Please forward any questions, comments, and suggestions to:
  - jlee@collegeboard.org and/or
  - esawtell@collegeboard.org