# Office of the Superintendent of Schools MONTGOMERY COUNTY PUBLIC SCHOOLS <br> Rockville, Maryland 

December 5, 2002

## MEMORANDUM

To: Members of the Board of Education
From: Jerry D. Weast, Superintendent of Schools
Subject: 2002 Advanced Placement Tests Results

Results from the spring 2002 administration of the Advanced Placement ${ }^{1}$ (AP) tests in the Montgomery County Public Schools (MCPS) show that participation has about doubled in the last five years. This has been accompanied by a slight decline in performance over the five years but that trend started to be reversed. From 1998 to 2002 the number of AP tests taken in MCPS increased 124 percent $(6,124$ to 13,689$)$. The number of students taking these tests increased 92 percent $^{2}(3,525$ to 6,785$)$. The average score on the five-point scale was 3.59 in 1998 and 3.48 in 2002. The 2002 average was .03 of a point higher than in 2001. In 1998, 83 percent of the scores were three or higher. In 2002, 79 percent of the scores were three or higher, a one-point gain from 2001. National trends from 1998 to 2002 were in the same direction but about half as strong. The national increases were 56 percent in AP tests taken and 48 percent in number of students. The national decline in average score was .03 ( 3.02 to 2.99 ). Given the very large increases in participation, the decline in the performance level, while not desirable, is understandable. Generally, when the number of students taking AP tests increases, the average group performance goes down ${ }^{3}$. While that usual trend applies to the MCPS five-year trend, we have started to reverse it in 2002. The 1998 to 2002 MCPS participation and performance trends are shown in Table 1 below. Detailed results from 1998 to 2002 are shown in Table A-1 in the Appendix.

Table 1
MCPS and National Advanced Placement Tests Trends

|  |  |  | MCPS <br> MCPS | National <br> MCPS <br> $\mathbf{2 0 0 2}$ |
| :--- | :---: | :---: | :---: | :---: |
| Change <br> $\mathbf{1 9 9 8 - 2 0 0 2}$ | $\mathbf{1 9 9 8 - 2 0 0 2}$ |  |  |  |
| \# AP Tests Taken | 6,124 | 13,689 | $124 \%$ | $56 \%$ |
| \# Students Taking at Least 1 AP Test | 3,525 | 6,785 | $92 \%$ | $48 \%$ |
| Average Score | 3.59 | 3.48 | -.11 | -.03 |
| \% of Scores 3 or Higher | 83 | 79 | -4 | -1 |

[^0]The increases in participation in MCPS from 1998 were seen across all subject areas tested but were largest in Psychology ( 713 to 1,557), English Language and Composition (768 to 1,582), English Literature and Composition (683 to 1,474 ) and Statistics ( 91 to 514). A new test in 2002, World History, was the fourth most popular in MCPS with 1,360 students taking it.

The highest average scores in MCPS, for tests taken by at least 100 students, were on the Calculus BC (3.81), Computer Science AB (3.76), and Spanish Language (3.71) tests. These tests also had the three highest average scores nationally. The tests on which MCPS students scored the highest relative to the national averages were U.S. History ( 3.64 to 2.81 ), French Language ( 3.43 to 2.74), Chemistry ( 3.46 to 2.79 ), and Micro Economics ( 3.61 to 2.95 ). Detailed results by subject are presented in Table A-2 in the Appendix.

## Racial/Ethnic Groups

The countywide gains in participation also were seen for each racial/ethnic group. The percent gains by group are shown in Table 2 below, with African American and Hispanic students showing the largest proportional gains. The number of African American and Hispanic students taking an AP test has more than doubled from 1998 to 2002. However, when the percent of students enrolled ${ }^{4}$ is considered, the Asian American and White students had larger increases. In 2002, 54 percent of the Asian American students took at least one AP test, an increase of 20 percentage points from 1998, while White students had an increase of 19 percentage points to 47 percent. The participation data for racial/ethnic groups are shown in Table 2 below.

Table 2
MCPS Participation in Advanced Placement Tests by Racial/Ethnic Group 1998 to 2002

| Group | Percent <br> Increase in AP <br> Tests Taken, <br> 1998-2002 | Percent Increase <br> in Students <br> Taking AP Tests, <br> $\mathbf{1 9 9 8 - 2 0 0 2}$ | Percent of <br> Group <br> Taking AP <br> Tests, 1998 | Percent of <br> Group <br> Taking AP <br> Tests, 2002 |
| :--- | :---: | :---: | :---: | :---: |
| African American | 197 | 166 | 7 | 15 |
| Asian American | 126 | 85 | 34 | 54 |
| Hispanic | 160 | 132 | 10 | 18 |
| White | 117 | 87 | 28 | 47 |
| Total | 124 | 92 | 23 | 38 |

[^1]The countywide decline in level of performance from 1998 to 2002 was shown by all racial/ethnic groups. The five-year declines were steepest for African American and Hispanic students. The average scores for these groups went down over .3 of a point. Their declines in the percent of scores three or higher were 15 and 10 percentage points, respectively. The declines in percent of scores three or higher for Asian American and White students were six and two percentage points, respectively. However, all groups except Asian Americans started to reverse this trend in 2002. African Americans had the largest increase in performance from 2001 going from 53 to 57 percent scoring 3 or higher.

MCPS racial/ethnic groups averaged at least .3 of a point higher than their counterparts nationally in 2002. The largest difference in average score, .63 of a point, was for African American students. Nationally, all racial/ethnic groups increased their participation from 1998, but none increased as much as the comparable groups in MCPS. The largest increase nationally in the number of students taking AP tests was 84 percent by Hispanic students. In MCPS, Hispanic student participation increased by 132 percent in that time. The performance data for each group are presented in Table 3 below. More detailed racial/ethnic data are presented in Tables A-3 and A-4 in the Appendix.

Table 3
MCPS and National Performance on Advanced Placement Tests By Racial/Ethnic Group, 1998 and 2002

|  | MCPS |  |  |  | National |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percent 3 or <br> Higher |  |  | Mean Score |  |  | Percent 3 or <br> Higher |  |
| Group | $\mathbf{1 9 9 8}$ | $\mathbf{2 0 0 2}$ | $\mathbf{1 9 9 8}$ | $\mathbf{2 0 0 2}$ | $\mathbf{1 9 9 8}$ | $\mathbf{2 0 0 2}$ | $\mathbf{1 9 9 8}$ | $\mathbf{2 0 0 2}$ |
| African American | 3.13 | 2.77 | 72 | 57 | 2.21 | 2.14 | 35 | 33 |
| Asian American | 3.54 | 3.41 | 82 | 76 | 3.10 | 3.08 | 66 | 65 |
| Hispanic | 3.63 | 3.26 | 81 | 71 | 2.99 | 2.75 | 60 | 53 |
| White | 3.64 | 3.59 | 85 | 83 | 3.06 | 3.07 | 65 | 66 |
| Total | 3.59 | 3.48 | 83 | 79 | 3.02 | 2.99 | 64 | 63 |

## Gender

Both males and females followed the countywide trend in participation and performance from 1998 to 2002. Participation by male students increased 94 percent; for females the increase was 92 percent. Females participated more in 2002 than did males-43 percent of the females enrolled compared to 34 percent of the males. Males had slightly higher performance with an average score of 3.57 and 81 percent of the scores at three or more. Females averaged 3.40 with 77 percent of the scores at three or more.

## Students Receiving Special Services

Students receiving special services participated in the AP tests. Sixty-nine students (1 percent of the students tested) receiving English for Speakers of Other Languages (ESOL) services averaged 3.65 , .17 of a point above the county average on a total of 81 tests. Forty-four ( 54 percent) of these tests were in Spanish (34) or French (10). The other special service groups averaged below the overall county. Students receiving Free and Reduced-price Meals Services (FARMS) averaged 2.85. Two hundred and sixty-four FARMS students ( 3.9 percent of those tested) took 434 tests. Students with Individualized Education Programs (IEPs) averaged 3.37. There were 121 (1.8 percent of those tested) of these students taking 205 tests. The results for these groups are shown in Table 4 below.

Table 4
2002 Performance on Advanced Placement Tests by MCPS Students Receiving Special Services

| Group | \# of Tests <br> Taken | \# of Students <br> Taking at <br> Least 1 Test | Average Score | \% of Scores 3 <br> or Higher |
| :---: | :---: | :---: | :---: | :---: |
| ESOL | 81 | 69 | 3.65 | 79 |
| FARMS | 434 | 264 | 2.85 | 56 |
| Students with IEPs | 205 | 121 | 3.37 | 77 |

## Results by School

The five-year countywide increases in participation were seen in all 21 high schools that were open in 1998. The two schools that opened since then-James Hubert Blake High School and Northwest High School-had large participation increases from 2000. Eleven high schools had the number of students taking AP tests at least double from 1998, as did the two schools that opened in 2000. Four of these schools have seen the number of students taking AP tests at least triple. These are Gaithersburg High School ( 270 percent, 64 to 237), John F. Kennedy High School ( 251 percent, 69 to 242 students), James Hubert Blake High School ( 250 percent, 58 to 203 from 2000), and Damascus High School (206 percent, 81 to 248).

Eleven high schools reversed the usual trend of declining average score with increasing participation. They increased both their average score and participation from 1998. The largest average score gain among these seven was .26 of a point at Bethesda-Chevy Chase High School. Damascus High School had the largest increase in participation for any school with an increase in average score.

Nineteen high schools averaged at least 3 points per test. The schools with the highest averages were Montgomery Blair High School (4.12), Walt Whitman High School (3.91), Winston Churchill High School (3.84), and Poolesville High School (3.80).

School results for 2002 are presented in Table 5 below. School results for the last five years are in Table A-5 in the Appendix. Also in the Appendix is Table A-6 that presents results by subject within school.

Table 5
Advanced Placement Tests Results by School, 2002

| School | $\#$ <br> Tests | $\#$ <br> Students | Mean | Percent <br> 3 or Higher |
| :--- | ---: | :---: | :---: | :---: |
| Bethesda-Chevy Chase | 468 |  |  |  |
| Montgomery Blair | 1,145 | 426 | 3.51 | 82 |
| James Hubert Blake | 373 | 203 | 4.12 | 92 |
| Winston Churchill | 1,057 | 489 | 3.14 | 71 |
| Damascus | 425 | 248 | 3.39 | 88 |
| Albert Einstein | 333 | 164 | 3.02 | 80 |
| Gaithersburg | 435 | 237 | 2.81 | 65 |
| Walter Johnson | 982 | 429 | 3.56 | 58 |
| John F. Kennedy | 434 | 242 | 2.63 | 82 |
| Col. Zadok Magruder | 536 | 283 | 3.52 | 52 |
| Richard Montgomery | 1,128 | 493 | 3.69 | 82 |
| Northwest | 409 | 224 | 2.97 | 84 |
| Paint Branch | 572 | 276 | 3.30 | 65 |
| Poolesville | 249 | 132 | 3.80 | 76 |
| Quince Orchard | 576 | 274 | 3.39 | 90 |
| Rockville | 289 | 152 | 3.03 | 78 |
| Seneca Valley | 248 | 127 | 3.17 | 64 |
| Sherwood | 612 | 308 | 3.36 | 72 |
| Springbrook | 609 | 326 | 3.01 | 76 |
| Watkins Mill | 437 | 250 | 3.45 | 64 |
| Wheaton | 136 | 75 | 2.70 | 79 |
| Walt Whitman | 1,027 | 472 | 3.91 | 55 |
| Thomas S. Wootton | 1,209 | 567 | 3.54 | 92 |
| County |  |  | 82 |  |

JDW:njm
Attachments
Copy to:
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Dr. Boykin
Directors of School Performance
High School Principals
Dr. Stevenson

## Appendix

A-1 Advanced Placement Tests Results for MCPS, Maryland, and National, 1998-2002
A-2 Advanced Placement Tests Results by Subject for MCPS from 1998 to 2002 and National for 2002
A-3 Advanced Placement Tests Results for MCPS Racial/Ethnic Groups, 1998-2002
A-4 National Advanced Placement Tests Results by Race, 1998-2002
A-5 MCPS School Advanced Placement Tests Results, 1998-2002
A-6 Advanced Placement Tests Results by Subject Within School 2002

Table A-1
Advanced Placement Tests Results for
MCPS, Maryland, and National, 1998-2002

| Group | Year | Number of <br> Tests | Number of <br> Students | Mean | Percent <br> 3 or Higher |
| :--- | :---: | :---: | :---: | :---: | :---: |
| MCPS |  |  |  |  |  |
|  | 1998 | 6,088 | 3,503 | 3.59 | 83 |
|  | 1999 | 7,167 | 3,935 | 3.63 | 83 |
|  | 2000 | 8,542 | 4,626 | 3.58 | 83 |
|  | 2001 | 10,689 | 5,591 | 3.45 | 78 |
|  | 2002 | 13,689 | 6,785 | 3.48 | 79 |
|  |  |  |  |  |  |
|  | 1998 | 25,542 | 16,172 | 3.22 | 71 |
|  | 1999 | 28,962 | 17,746 | 3.24 | 71 |
|  | 2000 | 32,606 | 19,680 | 3.22 | 71 |
|  | 2001 | 37,368 | 21,923 | 3.17 | 69 |
|  | 2002 | 45,013 | 24,985 | 3.23 | 71 |
|  | 1998 | 991,952 | 618,257 | 3.02 | 64 |
|  | 1999 | $1,122,414$ | 685,981 | 3.02 | 64 |
|  | 2000 | $1,242,324$ | 747,922 | 3.01 | 64 |
|  | 2001 | $1,380,146$ | 820,880 | 2.95 | 61 |
|  | 2002 | $1,548,999$ | 913,251 | 2.99 | 63 |

Table A-2
Advanced Placement Tests Results by Subject for MCPS From 1998 to 2002 and National for 2002

|  | 1998 |  | 1999 |  | 2000 |  | 2001 |  | 2002 | 2002 |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  | National |  |
| Subject | Mean | No. | Mean | No. | Mean | No. | Mean | No. | Mean | No. | Mean |
| Biology | 3.87 | 321 | 3.81 | 422 | 3.66 | 370 | 3.22 | 629 | 3.55 | 625 | 3.10 |
| Calculus AB | 3.34 | 245 | 3.70 | 261 | 3.55 | 294 | 3.54 | 406 | 3.62 | 474 | 3.10 |
| Calculus BC | 3.68 | 497 | 3.65 | 502 | 3.73 | 585 | 3.90 | 676 | 3.81 | 776 | 3.73 |
| Chemistry | 3.58 | 376 | 3.53 | 334 | 3.69 | 385 | 3.37 | 423 | 3.46 | 518 | 2.79 |
| Computer Science. AB | 4.10 | 99 | 3.73 | 195 | 3.88 | 219 | 3.59 | 263 | 3.76 | 231 | 3.38 |
| Economics - Macro | 3.55 | 80 | 3.89 | 87 | 3.50 | 116 | 3.65 | 109 | 3.59 | 160 | 2.98 |
| Economics - Micro | 3.75 | 77 | 3.70 | 89 | 3.39 | 128 | 3.93 | 110 | 3.61 | 158 | 2.95 |
| English Lang. \& Comp. | 3.52 | 765 | 3.54 | 778 | 360 | 1,019 | 3.41 | 1,283 | 3.41 | 1,581 | 2.91 |
| English Lit. \& Comp. | 3.49 | 682 | 3.50 | 756 | 3.45 | 872 | 3.27 | 1,193 | 3.29 | 1,471 | 3.00 |
| Environmental Science. |  |  | 3.75 | 56 | 3.71 | 118 | 3.06 | 211 | 3.25 | 217 | 2.68 |
| European History | 3.53 | 371 | 3.55 | 406 | 3.45 | 453 | 3.70 | 479 | 3.51 | 419 | 3.03 |
| French Language | 3.52 | 138 | 3.37 | 156 | 3.24 | 225 | 3.34 | 160 | 3.43 | 253 | 2.74 |
| Govt. \& Pol. - Comparative | 3.45 | 110 | 3.47 | 144 | 3.45 | 25 | 3.04 | 305 | 3.43 | 455 | 2.97 |
| Govt. \& Pol. - U. S. | 3.44 | 150 | 3.50 | 188 | 3.31 | 289 | 3.07 | 368 | 3.08 | 538 | 2.71 |
| Physics B | 3.54 | 78 | 3.53 | 96 | 3.32 | 107 | 3.39 | 119 | 3.29 | 110 | 2.74 |
| Physics C - Elect. \& Mag. | 3.44 | 134 | 3.69 | 134 | 3.42 | 107 | 3.71 | 166 | 3.65 | 171 | 3.29 |
| Physics C - Mechanics | 3.70 | 204 | 3.93 | 222 | 3.83 | 192 | 3.84 | 267 | 3.54 | 296 | 3.21 |
| Psychology | 3.70 | 711 | 3.75 | 875 | 3.61 | 1,011 | 3.48 | 1,420 | 3.60 | 1,558 | 3.32 |
| Spanish Language | 3.48 | 283 | 3.39 | 332 | 3.80 | 379 | 3.61 | 411 | 3.71 | 459 | 3.51 |
| Statistics | 3.89 | 91 | 3.87 | 184 | 3.48 | 376 | 3.45 | 525 | 3.33 | 603 | 2.77 |
| U.S. History | 3.56 | 553 | 3.49 | 725 | 3.61 | 761 | 4.48 | 753 | 3.64 | 816 | 2.81 |
| World History |  |  |  |  |  |  |  |  | 3.42 | 1,358 | 2.77 |

Table A-3
Advanced Placement Tests Results
For MCPS Racial/Ethnic Groups, 1998-2002

| Group | Year | Number <br> of Tests | Number of <br> Students | Mean | Percent <br> 3 or Higher |
| :--- | :---: | :---: | :---: | :---: | :---: |
| African American | 1998 | 277 | 188 | 3.13 | 72 |
|  | 1999 | 322 | 197 | 3.16 | 69 |
|  | 2000 | 398 | 272 | 3.05 | 67 |
|  | 2001 | 590 | 375 | 2.72 | 53 |
|  | 2002 | 822 | 501 | 2.77 | 57 |
| Asian American | 1998 | 1,520 | 813 | 3.54 | 82 |
|  | 1999 | 1,806 | 920 | 3.53 | 81 |
|  | 2000 | 2,044 | 999 | 3.52 | 80 |
| Hispanic | 2001 | 2,618 | 1,225 | 3.46 | 78 |
|  | 2002 | 3,435 | 1,504 | 3.41 | 76 |
|  |  |  |  |  |  |
|  | 1998 | 269 | 177 | 3.63 | 81 |
|  | 1999 | 268 | 169 | 3.51 | 84 |
|  | 2000 | 389 | 250 | 3.60 | 81 |
|  | 2001 | 520 | 323 | 3.21 | 68 |
|  | 2002 | 700 | 410 | 3.26 | 71 |
|  |  |  |  |  |  |
|  | 1998 | 4,015 | 2,320 | 3.64 | 85 |
|  | 1999 | 4,723 | 2,622 | 3.70 | 85 |
|  | 2000 | 5,646 | 3,066 | 3.64 | 85 |
|  | 2001 | 6,896 | 3,632 | 3.52 | 81 |
|  | 2002 | 8,713 | 4,348 | 3.59 | 83 |

Table A-4
National Advanced Placement Tests Results by Race, 1998-2002

| Group | Year | Number of <br> Tests | Number of <br> Students | Mean <br> Score | Percent 3 <br> or Higher |
| :--- | :---: | :---: | :---: | :---: | :---: |
| African American | 1998 | 38,859 | 27,054 | 2.21 | 35 |
|  | 1999 | 45,725 | 31,023 | 2.20 | 35 |
|  | 2000 | 53,136 | 36,158 | 2.17 | 34 |
|  | 2001 | 59,898 | 40,078 | 2.11 | 31 |
| Asian American | 2002 | 68,323 | 45,271 | 2.14 | 33 |
|  |  |  |  |  |  |
|  | 1998 | 127,633 | 68,109 | 3.10 | 66 |
| Hispanic | 1999 | 145,654 | 75,875 | 3.07 | 65 |
|  | 2000 | 167,490 | 85,756 | 3.06 | 65 |
|  | 2001 | 184,337 | 92,762 | 3.03 | 63 |
|  | 2002 | 205,974 | 102,653 | 3.08 | 65 |
|  |  |  |  |  |  |
|  | 1998 | 76,960 | 53,627 | 2.99 | 60 |
|  | 1999 | 93,079 | 62,853 | 2.94 | 55 |
|  | 2000 | 112,559 | 74,852 | 2.90 | 56 |
|  | 2001 | 130,959 | 86,018 | 2.80 | 52 |
|  | 2002 | 151,396 | 98,495 | 2.75 | 53 |
|  |  |  |  |  |  |
|  | 1998 | 641,128 | 403,553 | 3.06 | 65 |
|  | 1999 | 721,839 | 445,880 | 3.05 | 65 |
|  | 2000 | 830,102 | 504,600 | 3.06 | 66 |
|  | 2001 | 914,012 | 549,065 | 3.02 | 64 |
|  | 2002 | $1,022,481$ | 607,816 | 3.07 | 66 |

Table A-5
MCPS School Advanced Placement Tests Results, 1998-2002

| School | Year | Number of Tests | Number of Students | Mean | Percent 3 or Higher |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Bethesda-Chevy Chase | 1998 | 248 | 177 | 3.25 | 73 |
|  | 1999 | 190 | 140 | 3.52 | 78 |
|  | 2000 | 246 | 180 | 3.55 | 81 |
|  | 2001 | 379 | 257 | 3.40 | 75 |
|  | 2002 | 468 | 326 | 3.51 | 82 |
| Blake | 1998 |  |  |  |  |
|  | 1999 |  |  |  |  |
|  | 2000 | 74 | 58 | 3.23 | 78 |
|  | 2001 | 296 | 163 | 3.05 | 65 |
|  | 2002 | 373 | 203 | 3.14 | 71 |
| Blair | 1998 | 627 | 313 | 4.06 | 91 |
|  | 1999 | 694 | 327 | 4.23 | 93 |
|  | 2000 | 677 | 332 | 4.14 | 94 |
|  | 2001 | 805 | 383 | 4.21 | 95 |
|  | 2002 | 1,145 | 488 | 4.12 | 92 |
| Churchill | 1998 | 430 | 244 | 3.81 | 89 |
|  | 1999 | 582 | 332 | 3.83 | 89 |
|  | 2000 | 732 | 364 | 3.87 | 90 |
|  | 2001 | 840 | 428 | 3.77 | 88 |
|  | 2002 | 1,057 | 489 | 3.84 | 88 |
| Damascus | 1998 | 112 | 81 | 3.21 | 72 |
|  | 1999 | 197 | 113 | 3.22 | 77 |
|  | 2000 | 180 | 119 | 3.24 | 76 |
|  | 2001 | 282 | 162 | 3.15 | 73 |
|  | 2002 | 425 | 248 | 3.39 | 80 |
| Einstein | 1998 | 137 | 78 |  | 78 |
|  | 1999 | 144 | 92 | 3.37 | 76 |
|  | 2000 | 190 | 131 | 3.42 | 75 |
|  | 2001 | 285 | 169 | 2.83 | 56 |
|  | 2002 | 333 | 164 | 3.02 | 65 |
| Gaithersburg | 1998 | 103 | 64 | 2.97 | 69 |
|  | 1999 | 154 | 88 | 3.03 | 65 |
|  | 2000 | 157 | 100 | 2.95 | 66 |
|  | 2001 | 297 | 163 | 2.84 | 59 |
|  | 2002 | 435 | 237 | 2.81 | 58 |
| Walter Johnson | 1998 | 411 | 242 | 3.59 | 86 |
|  | 1999 | 541 | 269 | 3.58 | 87 |
|  | 2000 | 761 | 344 | 3.57 | 85 |
|  | 2001 | 772 | 340 | 3.50 | 84 |
|  | 2002 | 982 | 429 | 3.56 | 82 |

Table A-5 (Continued)
MCPS School Advanced Placement Tests Results, 1998-2002

| School | Year | Number of Tests | Number of Students | Mean | Percent 3 or Higher |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Kennedy | 1998 | 90 | 69 | 2.94 | 66 |
|  | 1999 | 173 | 97 | 2.73 | 58 |
|  | 2000 | 211 | 123 | 2.81 | 57 |
|  | 2001 | 362 | 204 | 2.37 | 41 |
|  | 2002 | 434 | 242 | 2.63 | 52 |
| Magruder | 1998 | 246 | 136 | 3.31 | 81 |
|  | 1999 | 273 | 161 | 3.34 | 81 |
|  | 2000 | 286 | 167 | 3.49 | 85 |
|  | 2001 | 428 | 230 | 3.49 | 85 |
|  | 2002 | 536 | 283 | 3.52 | 82 |
| Richard Montgomery | 1998 | 838 | 407 | 3.77 | 89 |
|  | 1999 | 888 | 408 | 3.76 | 87 |
|  | 2000 | 933 | 424 | 3.87 | 88 |
|  | 2001 | 978 | 441 | 3.81 | 87 |
|  | 2002 | 1,128 | 493 | 3.69 | 84 |
| Northwest | 1998 |  |  |  |  |
|  | 1999 |  |  |  |  |
|  | 2000 | 151 | 93 | 2.91 | 69 |
|  | 2001 | 239 | 154 | 3.08 | 70 |
|  | 2002 | 409 | 224 | 2.97 | 65 |
| Paint Branch | 1998 | 182 | 121 | 3.50 | 82 |
|  | 1999 | 229 | 149 | 3.50 | 78 |
|  | 2000 | 288 | 170 | 3.29 | 76 |
|  | 2001 | 408 | 225 | 3.33 | 74 |
|  | 2002 | 572 | 276 | 3.30 | 76 |
| Poolesville | 1998 | 107 | 67 |  | 93 |
|  | 1999 | 143 | 79 | 3.57 | 84 |
|  | 2000 | 127 | 74 | 3.60 | 87 |
|  | 2001 | 238 | 113 | 3.51 | 82 |
|  | 2002 | 249 | 132 | 3.80 | 90 |
| Quince Orchard | 1998 | 429 | 241 | 3.52 | 82 |
|  | 1999 | 483 | 246 | 3.60 | 84 |
|  | 2000 | 535 | 271 | 3.40 | 80 |
|  | 2001 | 573 | 284 | 3.26 | 77 |
|  | 2002 | 576 | 274 | 3.39 | 78 |
| Rockville | 1998 | 142 | 74 | 2.99 | 68 |
|  | 1999 | 182 | 107 | 3.10 | 72 |
|  | 2000 | 231 | 135 | 3.18 | 71 |
|  | 2001 | 234 | 141 | 3.18 | 71 |
|  | 2002 | 289 | 152 | 3.03 | 64 |

Table A-5 (Continued)
MCPS School Advanced Placement Tests Results, 1998-2002

| School | Year | Number of Tests | Number of Students | Mean | Percent 3 or Higher |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Seneca Valley | 1998 | 161 | 103 | 3.02 | 63 |
|  | 1999 | 123 | 88 | 3.19 | 72 |
|  | 2000 | 171 | 116 | 3.35 | 77 |
|  | 2001 | 228 | 142 | 3.18 | 73 |
|  | 2002 | 248 | 127 | 3.17 | 72 |
| Sherwood | 1998 | 295 | 184 | 3.40 | 76 |
|  | 1999 | 227 | 172 | 3.58 | 84 |
|  | 2000 | 266 | 164 | 3.85 | 90 |
|  | 2001 | 332 | 188 | 3.47 | 79 |
|  | 2002 | 612 | 308 | 3.36 | 76 |
| Springbrook | 1998 | 320 | 202 | 3.48 | 80 |
|  | 1999 | 368 | 219 | 3.43 | 77 |
|  | 2000 | 496 | 291 | 3.15 | 71 |
|  | 2001 | 541 | 310 | 2.86 | 58 |
|  | 2002 | 609 | 326 | 3.01 | 64 |
| Watkins Mill | 1998 | 180 | 102 | 3.21 | 76 |
|  | 1999 | 138 | 89 | 3.21 | 73 |
|  | 2000 | 260 | 162 | 3.42 | 84 |
|  | 2001 | 356 | 202 | 3.41 | 78 |
|  | 2002 | 437 | 250 | 3.45 | 79 |
| Wheaton | 1998 | 34 | 27 | 3.06 | 74 |
|  | 1999 | 48 | 34 | 3.19 | 69 |
|  | 2000 | 65 | 47 | 2.85 | 66 |
|  | 2001 | 83 | 46 | 2.84 | 67 |
|  | 2002 | 136 | 75 | 2.70 | 55 |
| Whitman | 1998 | 547 | 328 |  | 88 |
|  | 1999 | 706 | 284 | 3.69 | 86 |
|  | 2000 | 802 | 409 | 3.72 | 87 |
|  | 2001 | 926 | 444 | 3.76 | 88 |
|  | 2002 | 1,027 | 472 | 3.91 | 92 |
| Wootton | 1998 | 485 | 265 | 3.76 | 88 |
|  | 1999 | 604 | 322 | 3.80 | 89 |
|  | 2000 | 703 | 352 | 3.62 | 84 |
|  | 2001 | 807 | 402 | 3.58 | 83 |
|  | 2002 | 1,209 | 567 | 3.54 | 82 |
| County | 1998 | 6,124 | 3,525 | 3.59 | 83 |
|  | 1999 | 7,167 | 3,935 | 3.63 | 83 |
|  | 2000 | 8,542 | 4,626 | 3.58 | 83 |
|  | 2001 | 10,689 | 5,591 | 3.45 | 78 |
|  | 2002 | 13,689 | 6,785 | 3.48 | 79 |

Table A-6
Advanced Placement Tests Results by Subject Within School, 2002

| School | Art History |  | Studio Art: Drawing |  | Studio Art: 2-D Design |  | Studio Art: 3-D Design |  | Biology |  | Calculus AB |  | Calculus BC |  | Chemistry |  | Computer Science A |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Beth.-Chevy Chase |  |  | 1 |  | 1 | * |  |  | 16 | 13 | 20 | 18 | 21 | 21 | 12 | 4 | 7 | 5 |
| Blair |  |  | 1 | * | 2 | * |  |  | 44 | 40 |  |  | 108 | 93 | 46 | 43 | 1 |  |
| Blake |  |  |  |  |  |  |  |  | 8 | 4 | 17 | 13 | 17 | 12 |  |  |  |  |
| Churchill | 39 | 23 | 2 | * | * |  |  |  | 37 | 35 | 64 | 61 | 60 | 59 | 27 | 22 | 15 | 14 |
| Damascus |  |  |  |  |  |  |  |  | 27 | 18 | 13 | 12 | 20 | 12 | 49 | 44 | 1 | * |
| Einstein |  |  | 2 | * | 8 | 8 |  |  | 28 | 11 | 8 | 5 | 6 | 5 | 6 | 0 |  |  |
| Gaithersburg |  |  |  |  | 2 | * |  |  | 27 | 17 | 11 | 6 | 20 | 17 | 20 | 10 | 13 | 9 |
| W. Johnson | 7 | 7 | 2 | * |  |  |  |  | 34 | 34 | 3 | * | 88 | 63 | 50 | 43 |  |  |
| Kennedy |  |  |  |  |  |  | 1 | * | 52 | 21 | 22 | 15 | 20 | 13 | 14 | 6 | 11 | 3 |
| Magruder |  |  | 1 | * |  |  |  |  | 23 | 20 | 4 | * | 41 | 38 | 15 | 9 | 1 | * |
| R. Montgomery | 4 | * | 6 | 6 |  |  |  |  | 24 | 21 | 65 | 63 | 56 | 52 | 38 | 33 |  |  |
| Northwest |  |  | 6 | 4 | 5 | 5 |  |  | 16 | 15 | 8 | 5 | 18 | 14 | 27 | 22 | 3 | * |
| Paint Branch |  |  | 3 | * | 7 | 4 |  |  | 34 | 19 | 3 | * | 36 | 34 | 16 | 8 | 5 | 4 |
| Poolesville |  |  | 17 | 16 | 8 | 8 |  |  | 12 | 11 | 12 | 11 | 17 | 16 |  |  |  |  |
| Q. Orchard | 4 | * |  |  | 7 | 5 | 1 | * | 31 | 24 | 2 | * | 40 | 25 | 10 | 9 |  |  |
| Rockville |  |  | 2 | * |  |  |  |  | 21 | 14 | 20 | 17 |  |  | 1 | * |  |  |
| Seneca Valley | 12 | 7 |  |  |  |  |  |  | 9 | 7 | 21 | 21 | 1 | * | 21 | 6 | 1 | * |
| Sherwood |  |  |  |  |  |  |  |  | 12 | 8 | 14 | 10 | 22 | 10 | 27 | 8 | 2 | * |
| Springbrook |  |  |  |  |  |  |  |  | 18 | 16 |  |  | 48 | 33 | 16 | 8 |  |  |
| Watkins Mill |  |  | 7 | 3 |  |  | 1 | * | 34 | 29 | 26 | 19 | 20 | 18 | 22 | 20 |  |  |
| Wheaton |  |  |  |  |  |  |  |  | 23 | 13 | 13 | 11 |  |  | 5 | 5 | 4 | * |
| Whitman | 7 | 7 | 23 | 22 |  |  |  |  | 27 | 26 | 82 | 74 | 38 | 36 | 63 | 61 | 3 | * |
| Wootton |  |  | 2 | * | 1 | * |  |  | 68 | 58 | 46 | 38 | 79 | 73 | 33 | 30 | 3 | * |

[^2]Table A-6 (Continued)
Advanced Placement Tests Results by Subject Within School, 2002

| School | Computer Science AB |  | Econ/ Micro |  | Econ/ Macro |  | Eng. Lang \& Comp |  | $\begin{aligned} & \hline \hline \text { Eng. Lit. \& } \\ & \text { Comp } \end{aligned}$ |  | Environment. Science |  | European History |  | French Language |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \#T | $3+$ | \# ${ }^{\text {T }}$ | $3+$ | \# ${ }^{\text {T }}$ | $3+$ | \# ${ }^{\text {T }}$ | 3+ | \#T | 3+ |  |  | \# ${ }^{\text {T }}$ | 3+ |  |  |
| Beth.-Chevy Chase | 2 | * |  |  |  |  | 103 | 74 | 72 | 58 |  |  | 15 | 13 | 9 | 9 |
| Blair | 81 | 75 | 39 | 31 | 40 | 29 | 113 | 110 | 55 | 55 | 5 | 4 | 19 | 19 | 33 | 31 |
| Blake |  |  |  |  |  |  | 88 | 62 | 75 | 55 |  |  | 22 | 21 | 10 | 8 |
| Churchill | 27 | 24 |  |  |  |  | 44 | 44 | 66 | 65 | 20 | 9 | 43 | 42 | 13 | 12 |
| Damascus | 9 | 3 |  |  |  |  | 49 | 44 | 66 | 56 | 11 | 9 | 20 | 18 |  |  |
| Einstein |  |  |  |  |  |  | 63 | 40 | 47 | 32 | 12 | 4 |  |  | 8 | 8 |
| Gaithersburg |  |  |  |  |  |  | 66 | 36 | 64 | 34 | 14 |  |  |  | 13 | 6 |
| W. Johnson | 13 | 12 |  |  |  |  | 86 | 81 | 62 | 56 | 31 | 17 | 45 | 43 | 21 | 20 |
| Kennedy | 1 | * |  |  |  |  | 79 | 39 | 97 | 33 |  |  |  |  | 3 | * |
| Magruder | 4 | * |  |  |  |  | 53 | 44 | 56 | 48 |  |  | 41 | 40 | 12 | 5 |
| R. Montgomery | 18 | 16 | 75 | 67 | 75 | 59 | 133 | 119 | 81 | 67 |  |  | 62 | 45 | 30 | 28 |
| Northwest | 8 | 3 |  |  |  |  | 58 | 45 | 63 | 39 |  |  | 32 | 22 | 11 | 8 |
| Paint Branch | 6 | 2 |  |  |  |  | 55 | 33 | 41 | 29 |  |  |  |  | 4 | * |
| Poolesville |  |  |  |  |  |  | 37 | 36 | 22 | 22 | 25 | 23 | 1 | * |  |  |
| Q. Orchard | 8 | 7 | 8 | 6 | 7 | 7 | 58 | 40 | 56 | 47 | 5 | 3 | 13 | 11 | 7 | 3 |
| Rockville |  |  |  |  |  |  | 51 | 32 | 75 | 43 |  |  | 14 | 9 | 3 | * |
| Seneca Valley | 5 | 5 |  |  |  |  | 46 | 34 | 33 | 28 |  |  |  |  | 1 | * |
| Sherwood | 5 | 3 |  |  |  |  | 56 | 45 | 73 | 57 | 9 | 8 | 15 | 15 | 2 | * |
| Springbrook | 26 | 23 |  |  |  |  | 59 | 30 | 79 | 51 |  |  | 1 | * | 9 | 7 |
| Watkins Mill |  |  |  |  |  |  | 58 | 41 | 45 | 35 |  |  | 12 | 9 | 3 | * |
| Wheaton |  |  |  |  |  |  | 9 | 5 | 30 | 10 |  |  | 12 | 11 |  |  |
| Whitman | 12 | 9 | 1 | * | 1 | * | 134 | 131 | 111 | 102 | 24 | 22 | 16 | 16 | 26 | 23 |
| Wootton | 6 | 1 | 35 | 24 | 37 | 28 | 83 | 70 | 102 | 93 | 61 | 49 | 36 | 30 | 35 | 28 |


| \#T | - | Number Tested |
| :--- | :--- | :--- |
| $3+$ | - | Number of tests with scores 3 or higher |
| $*$ | - | $3+$ not reported because number tested is less than |

Blank Space - No students took the test

Table A-6 (Continued)
Advanced Placement Tests Results by Subject Within School, 2002

|  | French Literature \#T 3+ |  | German <br> Language <br> \#T 3+ |  |  <br> Pol/U.S. <br> \#T 3+ |  |  <br> Pol/Comp <br> \# ${ }^{\text {P }}$ 3+ |  | Human Geography \# ${ }^{\text {1 }}$ + |  | Latin Vergil |  | Latin Literature |  | Music <br> Theory |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| School |  |  | \#T | 3+ |  |  | \#T | 3+ |  |  | \# | 3+ |
| Beth.-Chevy Chase | 2 | * |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 | * |
| Blair |  |  |  |  | 30 | 30 | 32 | 32 |  |  |  |  | 2 | * | 1 | * |
| Blake |  |  |  |  | 12 | 6 |  |  |  |  |  |  |  |  |  |  |
| Churchill |  |  |  |  | 44 | 36 | 35 | 31 | 35 | 24 |  |  |  |  |  |  |
| Damascus |  |  |  |  | 16 | 13 | 16 | 14 |  |  |  |  |  |  |  |  |
| Einstein |  |  |  |  | 9 | 2 |  |  | 12 | 11 |  |  |  |  | 2 | * |
| Gaithersburg | 1 | * |  |  | 14 | 10 | 12 | 8 |  |  |  |  |  |  |  |  |
| W. Johnson |  |  |  |  | 61 | 47 | 56 | 41 |  |  | 7 | 2 |  |  |  |  |
| Kennedy |  |  |  |  | 24 | 13 | 22 | 22 |  |  |  |  |  |  |  |  |
| Magruder |  |  |  |  | 8 | 5 | 9 | 8 |  |  |  |  |  |  |  |  |
| R. Montgomery | 4 | * |  |  | 18 | 12 | 16 | 15 |  |  |  |  |  |  |  |  |
| Northwest |  |  |  |  | 19 | 11 | 18 | 12 |  |  |  |  |  |  |  |  |
| Paint Branch |  |  |  |  | 21 | 14 | 27 | 19 |  |  |  |  |  |  |  |  |
| Poolesville |  |  |  |  | 6 | 5 | 5 | 4 | 1 | * |  |  |  |  |  |  |
| Q. Orchard |  |  | 1 | * | 9 | 8 | 6 | 5 | 8 | 8 |  |  |  |  | 5 | 4 |
| Rockville |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Seneca Valley |  |  |  |  | 5 | 3 |  |  |  |  |  |  |  |  |  |  |
| Sherwood |  |  |  |  | 63 | 43 | 65 | 60 |  |  |  |  |  |  | 6 | 2 |
| Springbrook | 6 | 3 |  |  | 82 | 42 | 82 | 55 |  |  |  |  |  |  |  |  |
| Watkins Mill |  |  |  |  | 9 | 9 | 9 | 8 | 6 | 6 |  |  |  |  |  |  |
| Wheaton |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Whitman | 13 | 9 | 1 | * | 48 |  | 45 | 40 | 4 | * |  |  |  |  |  |  |
| Wootton |  |  |  |  | 40 | 24 |  |  |  |  |  |  | 10 | 2 | 10 | 10 |

\# $\boldsymbol{T} \quad$ Number Tested
$3+\quad-\quad$ Number of tests with scores 3 or higher

*     - $\quad 3+$ not reported because number tested is less than 5

Blank Space - No students took the test

Table A-6 (Continued)
Advanced Placement Tests Results by Subject Within School, 2002

| School | Physics B |  | Physics C <br> Mechanics |  | Physics C Elec. \& Magnet |  | Psychology |  | Spanish Language |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \# ${ }^{\text {T }}$ | $3+$ | \#T | $3+$ | \# ${ }^{\text {T }}$ | $3+$ | \#T | $3+$ | \# ${ }^{\text {T }}$ | $3+$ |
| Beth.-Chevy Chase |  |  | 7 | 5 | 1 | * | 36 | 29 | 27 | 25 |
| Blair | 2 | * | 27 | 25 | 10 | 9 | 168 | 154 | 36 | 27 |
| Blake |  |  | 4 | * |  |  | 40 | 20 | 2 | * |
| Churchill |  |  | 28 | 27 | 28 | 25 | 151 | 138 | 65 | 47 |
| Damascus | 12 | 10 | 3 | * |  |  | 54 | 44 | 8 | 6 |
| Einstein |  |  | 5 | 2 |  |  | 13 | 9 | 11 | 9 |
| Gaithersburg | 20 | 10 | 1 | * | 1 | * | , | * | 21 | 18 |
| W. Johnson |  |  | 24 | 21 | 25 | 22 | 104 | 82 | 60 | 56 |
| Kennedy |  |  |  |  |  |  | 57 | 34 | 10 | 9 |
| Magruder |  |  | 8 | 4 |  |  | 99 | 98 | 22 | 11 |
| R. Montgomery | 7 | 5 | 29 | 18 | 23 | 6 | 83 | 55 | 49 | 48 |
| Northwest |  |  |  |  |  |  | 90 | 43 | 10 | 8 |
| Paint Branch |  |  | 27 | 26 | 19 | 14 | 73 | 59 | 7 | 6 |
| Poolesville | 12 | 9 |  |  |  |  | 31 | 30 |  |  |
| Q. Orchard | 2 | * | 3 | * |  |  | 104 | 94 | 5 | 3 |
| Rockville | 15 | 15 | 1 | * | 1 | * |  |  | 9 | 8 |
| Seneca Valley | 2 | * |  |  |  |  | 18 | 13 | 6 | 6 |
| Sherwood |  |  | 9 | 4 |  |  | 79 | 67 | 17 | 9 |
| Springbrook | 3 | * | 17 | 13 |  |  | 42 | 23 | 17 | 16 |
| Watkins Mill |  |  | 13 | 11 |  |  | 102 | 76 | 11 | 7 |
| Wheaton |  |  | 16 | 4 |  |  |  |  |  |  |
| Whitman | 28 | 25 | 10 | 9 |  |  | 85 | 74 | 49 | 49 |
| Wootton | 7 | 7 | 64 | 61 | 63 | 51 | 128 | 102 | 17 | 16 |

\# $\boldsymbol{T}$ - Number Tested
3+ - Number of tests with scores 3 or higher

*     - 3+ not reported because number tested is less than 5

Blank Space - No students took the test

Table A-6 (Continued)
Advanced Placement Tests Results by Subject Within School, 2002

| School | Spanish Literature |  | Statistics |  | US History |  | World History |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \# ${ }^{\text {T }}$ | 3+ | \#T | 3+ | \#T | 3+ | \#T | $3+$ |
| Beth.-Chevy Chase | 4 | * | 8 | 7 | 103 | 90 |  |  |
| Blair |  |  | 28 | 28 | 48 | 46 | 171 | 160 |
| Blake |  |  | 11 | 7 | 21 | 17 | 49 | 40 |
| Churchill | 9 | 8 | 81 | 74 | 28 | 27 | 97 | 86 |
| Damascus |  |  | 6 | 3 | 47 | 35 |  |  |
| Einstein |  |  | 8 | 5 |  |  | 67 | 46 |
| Gaithersburg | 12 | 6 | 46 | 23 | 19 | 7 | 37 | 28 |
| W. Johnson | 1 | * | 34 | 32 | 70 | 50 | 102 | 75 |
| Kennedy | 3 | * |  |  | 16 | 11 |  |  |
| Magruder |  |  | 27 | 20 | 20 | 13 | 96 | 72 |
| R. Montgomery | 2 | * | 36 | 35 | 115 | 108 | 80 | 60 |
| Northwest |  |  | 18 | 8 |  |  |  |  |
| Paint Branch |  |  | 78 | 67 | 11 | 7 | 104 | 86 |
| Poolesville |  |  | 12 | 11 | 31 | 20 |  |  |
| Q. Orchard |  |  | 38 | 26 | 29 | 24 | 109 | 78 |
| Rockville |  |  | 48 | 17 | 30 | 25 | 1 | * |
| Seneca Valley |  |  |  |  | 15 | 9 | 52 | 34 |
| Sherwood |  |  | 14 | 9 | 41 | 41 | 82 | 65 |
| Springbrook | 1 | * | 42 | 24 | 18 | 12 | 43 | 31 |
| Watkins Mill |  |  |  |  | 26 | 22 | 32 | 30 |
| Wheaton |  |  |  |  | 24 | 13 |  |  |
| Whitman | 16 | 16 | 18 | 15 | 40 | 37 | 106 | 100 |
| Wootton |  |  | 49 | 39 | 64 | 47 | 130 | 100 |

[^3]
[^0]:    ${ }^{1}$ Advanced Placement tests are a College Board program available to high school students. Scores on these tests can be used by students to earn credit or advanced standing in college. Usually a minimum score of three is needed to achieve this goal.
    ${ }^{2}$ Students can take more than one test in a year.
    ${ }^{3}$ This decrease occurs because the AP tests are aimed at the top high school students. As the group becomes larger, it will tend to include a wider range of academic talent.

[^1]:    ${ }^{4}$ The percent of a group participating is based on the enrollment in Grades 11 and 12 since close to 90 percent of the MCPS students taking AP tests are in those grades.

[^2]:    \#T - Number Tested
    3+ - Number of tests with scores 3 or higher

    *     - 3+ not reported because number tested is less than 5

    Blank Space - No students took the test

[^3]:    \#T - Number Tested
    3+ - Number of tests with scores 3 or higher

    * $\quad$ - $\quad 3+$ not reported because number tested is less than 5

    Blank Space - No students took the test

