



**BOARD OF EDUCATION OF HOWARD COUNTY  
MEETING AGENDA ITEM**

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**TITLE:** Report on Participation and Performance in Advanced Placement (AP) Courses and Exams for 2009      **DATE:** October 22, 2009

**PRESENTER(S):** Jose Stevenson, Director of Student Assessment and Program Evaluation

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**OVERVIEW:** The number of HCPSS students taking AP exams continues to rise, as does the number of students who perform well on them. In 2009, HCPSS students took a record-setting 6,588 AP exams. Eighty-three percent of these exams earned a score of 3 or higher, compared to 59 percent nationally and 63 percent in Maryland. These results capped a five-year trend of higher participation and performance. Between 2005 and 2009, the overall participation of HCPSS students in AP testing has increased 40 percent, while the number of AP exams taken has increased 52 percent. At the same time, overall, HCPSS students earned 2,010 more scores of 3 or higher in 2009 than in 2005. African American students had the largest gains in the percentage of AP exams earning scores of 3 or higher, from 57.8 percent in 2005 to 69.2 percent in 2009, an increase of 11.4 percentage points. The attached report provides a summary of trend participation and performance in AP courses and exams by student groups and school.

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**RECOMMENDATION/FUTURE DIRECTION:**

The 2009 results and trend data show that HCPSS schools are making progress in preparing students for college-level work and that more students are meeting the challenge of higher expectations. School staff will continue efforts to identify students with AP potential and to further increase participation and performance levels in all student groups.

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## 2009 Advanced Placement Exam Results

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### Background

An Advanced Placement (AP) exam is a measure of a student's mastery of college-level studies in specific academic content areas while still in high school. Each AP exam is scored using a five-point scale. According to the College Board, which owns and administers the AP program, an exam score of 3 or higher is a strong predictor of a student's ability to succeed in college and earn a degree.<sup>1</sup> Furthermore, a score of 3 or higher may earn students credit, advanced placement, or both for college.

### Enrollment in AP Courses

AP courses in the Howard County Public School System (HCPSS) program offer students opportunities to participate in rigorous academic experiences. Many students take more than one AP course, and not all AP students take the corresponding exams.

There has been steady growth in participation in AP courses since 2005. In 2009, there were 3,758 students enrolled in AP courses representing 23 percent of the 16,139 students enrolled in Grades 9 to 12 and a gain of 4 percentage points from 2005. Nearly half of the 2009 senior class (46 percent) participated in these challenging courses. Table 1 presents these data.

Table 1: Trend Participation in AP Courses

Gr.	2005			2009		
	End-of-Year Enrollment	Number Enrolled in AP	Percent Enrolled in AP	End-of-Year Enrollment	Number Enrolled in AP	Percent Enrolled in AP
12	3,390	1,424	42%	3,830	1,779	46%
11	3,729	895	24%	3,980	1,253	32%
10	3,871	542	14%	4,133	704	17%
9	4,078	2	0%	4,268	22	0.5%
Total	15,068	2,863	19%	16,139	3,758	23%

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<sup>1</sup> S. Geiser and V. Santelices, "The Role of Advanced Placement and Honors Courses in College Admissions" (2004), Center for Studies in Higher Education, University of California, Berkeley.

## 2009 HCPSS Participation and Five-Year Trend

HCPSS students took a record-setting 6,588 AP exams in 2009. In addition to taking more exams, HCPSS students substantially outperformed exam takers in Maryland and the nation (Table 2). The percentage of AP exams taken by HCPSS students that earned scores of 3 or higher (83 percent) was 20 points greater than the percentage for students in Maryland (63 percent) and 24 points greater than the percentage for students in the nation (59 percent).

Table 2: 2009 AP Exam Participation and Performance

	Number of AP Exams Taken	Number AP Exam Scores 3 or Higher	Percentage AP Exam Scores 3 or Higher
HCPSS	6,588	5,468	83.0
Maryland	97,147	60,814	63.0
Nation	2,929,929	1,725,168	59.0

The steady increase in the number of AP exams taken has been accompanied by an equally steady increase in the participation of students in AP testing for all student groups (Table 3). Between 2005 and 2009, the overall participation of HCPSS students in AP testing has increased from 2,174 to 3,043 (40 percent). At the same time, the number of AP exams taken has increased from 4,348 to 6,588 tests (52 percent).

The greatest gains in participation have occurred among African American and Hispanic students. These student groups also had the highest increases in the number of AP exams taken, which has more than doubled since 2005. The American Indian student group is not included due to numbers fewer than five in 2005 and 2009.

Table 3: Number of AP Test Takers and Percentage of AP Exams Taken, 2005 to 2009

	Number of Test Takers				Number of AP Exams Taken			
	2005	2009	Diff.	Change	2005	2009	Diff.	Change
All Students	2,174	3,043	+869	+40%	4,348	6,588	+2,240	+52%
Male	1,037	1,367	+330	+32%	2,156	3,188	+1,032	+48%
Female	1,137	1,676	+539	+47%	2,192	3,400	+1,208	+55%
Asian	536	742	+206	+38%	1,237	1,933	+696	+56%
African American	105	219	+114	+108%	166	383	+217	+131%
White	1,498	2,009	+511	+34%	2,890	4,124	+1,234	+43%
Hispanic	16	62	+46	+288%	52	123	+71	+137%

Note: The number of test takers by race/ethnicity will not add up to the All Students total because some students do not report race/ethnicity.

## 2009 HCPSS Performance and Five-Year Trend

As participation and number of exams taken has increased over the past five years, the number and percentages of exams that have received scores of 3 or higher has also increased for most student groups (Table 4).

- Overall, HCPSS students earned 2,010 more scores of 3 or higher in 2009 than in 2005 (from 3,459 to 5,469). This represents a gain of 3.4 points (from 79.6 to 83.0) in the percentage of AP exams in which they received a score of 3 or higher.
- African American students earned 169 more exam scores of 3 or higher between 2005 and 2009 (from 96 to 265), while Hispanic students earned 46 more scores of 3 or higher (from 41 to 87) during the same time period.
- African American students had the largest gains in the percentage of AP exams earning scores of 3 or higher, from 57.8 percent in 2005 to 69.2 percent in 2009, an increase of 11.4 percentage points.

Table 4: Number and Percentage of Exam Scores 3 or Higher, 2005 to 2009

	Number of AP Exam Scores 3 or Higher			Percentage of AP Exam Scores 3 or Higher		
	2005	2009	Change	2005	2009	Change
All Students	3,459	5,469	+2,010	79.6	83.0	+3.4
Male	1,733	2,742	+1,009	80.4	86.0	+5.6
Female	1,723	2,727	+1,004	78.7	80.2	+1.5
Asian	982	1,612	+630	79.6	83.4	+3.8
African American	96	265	+169	57.8	69.2	+11.4
White	2,338	3,489	+1,151	80.9	84.6	+3.7
Hispanic	41	87	+46	78.8	70.7	-8.1

The trend in the percentage of exams earning a score of 4 or higher further underscores the steady level of success among most HCPSS student groups (Table 5). Overall, the percentage of exams that earned a score of 4 or higher grew 7.4 percentage points (from 52.8 to 60.2 percent) between 2005 and 2009.

Table 5: Percentage of Exam Scores 4 or Higher, 2005 to 2009

	Percentage of AP Exam Scores 4 or Higher		
	2005	2009	Diff.
All Students	52.8	60.2	+7.4
Male	55.6	66.0	+10.4
Female	50.0	54.8	+4.8
Asian	55.8	64.9	+9.1
African American	31.9	40.5	+8.6
White	52.7	60.2	+7.5
Hispanic	51.9	48.8	-3.1

### Performance by Schools

The participation of HCPSS students in AP exams has increased steadily at most high schools since 2005 (Table 6). Most schools have also seen an increase in the number of AP exams taken. Most schools have been successful in raising or maintaining high achievement on the AP exams with scores at 3 or higher. A similar trend is evident with the percentage of scores at 4 or higher. In 2009, at least five schools achieved gains in both participation (number of test takers and number of exams taken) and performance (percentage of scores 3 or higher and 4 or higher) relative to 2005.

Table 6: Participation and Performance on AP Exams by School, 2005 to 2009

	Number of Test Takers			Number of Exams Taken			Percentage of Scores 3 or Above			Percentage of Scores 4 or Above		
	2005	2009	Diff.	2005	2009	Diff.	2005	2009	Diff.	2005	2009	Diff.
HCPSS	2174	3043	+869	4348	6588	+2240	80	83	+3	53	60	+7
Atholton	157	241	+84	301	508	+207	86	84	-2	56	60	+4
Centennial	429	421	-8	934	1097	+163	85	92	+7	66	73	+7
Glenelg	191	250	+59	369	484	+115	77	78	+1	41	48	+7
Hammond	132	157	+25	239	291	+52	79	70	-9	56	45	-11
Howard	162	248	+86	246	517	+271	59	77	+18	32	49	+17
Long Reach	146	135	-11	257	224	-33	71	73	+2	40	53	+13
Marriotts Ridge	*	287	*	*	561	*	*	85	*	*	62	*
Mt. Hebron	171	286	+115	422	660	+238	91	91	0	71	70	-1
Oakland Mills	88	121	+33	148	240	+92	76	78	+2	53	51	-2
Reservoir	142	231	+89	262	478	+216	65	80	+15	33	54	+21
River Hill	382	449	+67	867	1101	+234	82	85	+3	52	64	+12
Wilde Lake	174	217	+43	303	427	+124	75	82	+7	48	57	+9

\* Marriotts Ridge High School did not have students participating in AP testing until 2007-2008.

Additional school-by-school reports on AP participation and performance can be found on the HCPSS assessment data mart (INROADS).

## **Summary**

The 2009 AP results are the latest example of a five-year trend of increased participation and performance on AP exams for HCPSS students. Particularly encouraging are the gains in participation of African American and Hispanic students. The participation and performance of African American students, defined as scoring a 3 or higher on an AP exam, has been especially noteworthy. The number of African American test takers and the number of exams they have taken have doubled since 2005, while the number of exams in which they earned a score of 3 or higher has nearly tripled.

HCPSS will continue its commitment to offer rigorous and challenging courses and other curricular opportunities for all students in order to support their preparation for academic achievement and success.