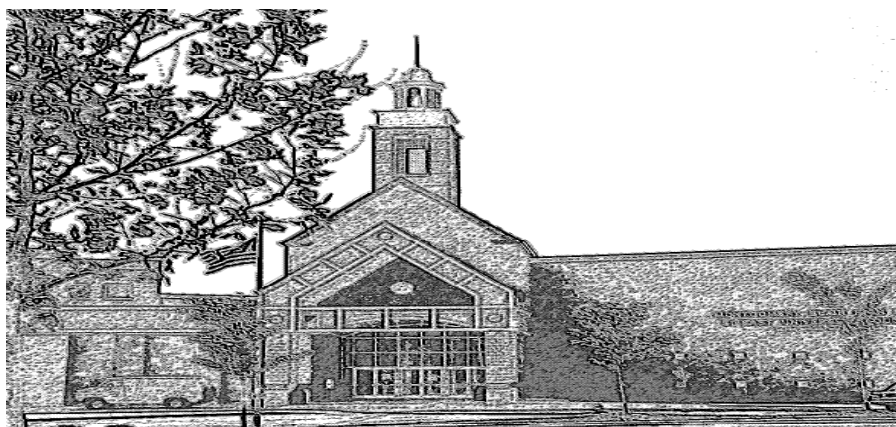


# A Profile of the Class of 2011



College Board Code: 210965

## The School and Community

Since Montgomery Blair High School opened in 1935, it has served the Silver Spring and Takoma Park areas of Montgomery County, Maryland. As a comprehensive high school, Blair has a long history of academic and innovative programs that meet the needs of its highly diverse community. Montgomery Blair is accredited by the Middle States Association of Colleges and Secondary Schools and by the Maryland State Department of Education.

### Administrators

Principal ..... Mr. Darryl Williams  
Magnet Coordinator ..... Mr. Peter Ostrander

### Counselors

Grades 9 - 12, A - K ..... Ms. Tia Ross  
Grades 9 - 12, L - Z ..... Ms. Jennifer Taylor

### The Students

Class	Montgomery Blair High School	Magnet Program
Seniors	640	99
Juniors	665	95
Sophomores	799	100
Freshmen	756	105
Total number of students:	2860	399

### Magnet Program

The Science, Mathematics, Computer Science Magnet Program, designed to offer accelerated, interdisciplinary courses for highly able students, opened in September, 1985. Located in Montgomery Blair High School to help promote quality integrated education, the Magnet provides enhanced learning opportunities for talented students from Montgomery County. Students have access to state-of-the-art computer and laboratory equipment to pursue independent research. Supporting students in their research efforts is a network which includes faculty advisors, local scientists and research laboratories as well as more distant facilities to which Blair is electronically linked. Students in the program are provided the opportunity to complete and present an independent research project during their senior year.

Students in the Blair Magnet Class of 2011 are conducting research at 21 different sites: American Red Cross, American University, ARL, Carnegie Institute of Washington, Catholic University of America, USDA, FDA, George Washington University, Georgetown University, Johns Hopkins University, National Synchrotron Radiation Research, Naval Medical Research Center, NIH, NIST, NOAA, Patuxent Wildlife Research Center, RSI/Harvard, SEAP, Seoul National University, Stony Brook University and University of Maryland. Research topic areas range from computer engineering, neuropsychology, biophysics to nanotechnology, kinesiology and genetics.

The Magnet is a founding member of the National Consortium for Specialized Secondary Schools of Mathematics, Science and Technology (NCSSSMST). NCSSSMST is dedicated to providing innovative and rigorous college level curricula for highly achieving students. More information regarding NCSSSMST can be found at <[www.ncsssmst.org](http://www.ncsssmst.org)>.

### Grade Point Average

The Board of Education of Montgomery County Public Schools eliminated the practice of providing class rank for students beginning with the class of 1994. Class rank is not listed on transcripts; however, students' weighted and unweighted grade point averages are provided. Grade point averages are calculated at the end of the summer session following the sixth semester. Credit/No Credit grades are excluded. GPA's are recalculated at the end of semester seven. Weighted GPA's are calculated by adding one quality point to an A, B or C advanced placement or advanced level courses and an A or B in honors courses.

### Distribution of Cumulative GPA's, Weighted and Unweighted

Range	99 Students Number GPA	Number Weighted GPA
4.51 and above	0	63
4.01 - 4.50	0	29
3.51 - 4.00	79	7
3.01 - 3.50	20	0
2.51 - 3.00	0	0
2.01 - 2.50	0	0
1.51 - 2.00	0	0
1.01 - 1.50	0	0
1.00 and below	0	0

### Magnet Program Courses

All Magnet courses are considered to be advanced level courses and are designated with an "H" for Honors.

#### Required Magnet Courses

##### Science

- Advanced Science 1 - Physics
- Advanced Science 2 - Chemistry
- Advanced Science 3 - Earth/Space Sciences
- Advanced Science 4 - Biology (double period)

##### Research

- Research and Experimentation for Problem Solving 1, A & B
- Research and Experimentation for Problem Solving 2
- Research Design

##### Computer Science

- Fundamentals of Computer Science A & B
- Algorithms and Data Structures A & B (Object Oriented Programming)



Montgomery Blair High School  
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 51 University Boulevard East  
 Silver Spring, Maryland 20901  
 (301) 649-8240  
 Fax (301) 649-2845  
 www.mbhhs.edu



# SCIENCE, MATHEMATICS, COMPUTER SCIENCE MAGNET

## Montgomery County Public Schools

### Mathematics

All students who enter the Magnet must have completed Algebra I in Grade 8 or earlier. Most students have completed Geometry and others Precalculus. All must complete Magnet Analysis 1, A & B (most closely equivalent to AP Calculus BC) before they graduate from the program.

- Magnet Geometry A & B
- Magnet Precalculus A, B, & C
- Magnet Functions A & B (Magnet Precalculus in two semesters instead of three. Intended for highly able, diligent mathematics students)
- Magnet Analysis 1, A & B (most closely equivalent to AP Calculus BC)

### Magnet Elective Courses

Magnet electives are one semester single period courses unless otherwise noted. A course designated w/an asterisk (\*) is taken after successful completion of an AP level course.

### Science

- Advanced Topics in Earth Science
- Analytical Chemistry
- Astronomy
- Biological Chemistry
- Cell Physiology
- Introductory Genetic Analysis (double period)
- Introductory Physical Chemistry
- Marine Biology
- Materials Science
- Mathematical Physics (AP Physics A & B. Only for students who are currently enrolled in or who have taken Magnet Analysis 2, Multivariable Calculus and Differential Equations. One year course.)
- Optics
- Origins of Science
- Quantum Physics
- Thermodynamics

### Computer Science

- Advanced Application Software
- \*Analysis of Algorithms
- \*Computational Methods
- \*Computer Graphics (Java)
- \*Computer Modeling and Simulation
- \*Guided Research (3-D Computer Graphics)
- \*Introduction to Artificial Intelligence with LISP
- \*Software Design

### Mathematics

- Applied Statistics
- Advanced Geometry
- \*Complex Analysis
- Discrete Mathematics
- \*Linear Algebra
- \*Magnet Analysis 2, A & B (Multivariable Calculus and Differential Equations)

### Research

Most Magnet students complete an individual or team project which begins in the second semester of their junior year and continues through the senior year. Research Project courses enable them to complete that research in one or two periods per day. Guided Research courses can be used for individualized or group study of a topic with a teacher or mentor or to study a current topic of interest.

- Research Project A
- Research Project B
- Guided Research A & B
- Research & Experimentation: Engineering Problem Solving in Robotics

### Magnet Class of 2011

#### STANDARDIZED TEST DATA

(All scores reflect tests taken prior to September, 2009)

Merit Scholarship Semifinalists .....	32
Letter of Commendation Winners .....	49
National Achievement Semifinalists .....	5

#### Scholastic Aptitude Test (SAT) I Scores

<u>Students Tested</u>	<u>Critical Reading Avg.</u>	<u>Math Avg.</u>	<u>Writing Avg.</u>
95	716	771	715

#### SAT II Scores

<u>Students Tested</u>	<u>Test</u>	<u>Average</u>
22	Biology M	738
1	Biology E	800
6	Chemistry	763
10	Chinese with Listening	791
2	Latin	735
1	Literature	650
81	Mathematics Level 2	782
10	Physics	755
2	Spanish	705
1	U. S. History	790
10	World History	702

#### PSAT Scores

<u>Students Tested</u>	<u>Critical Reading Avg.</u>	<u>Math Avg.</u>	<u>Writing Avg.</u>
101	70	76	69

#### Advanced Placement Test Data

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>Total</u>
Biology	0	2	6	15	33	56
Calculus BC	0	0	4	6	65	75
Chemistry	0	1	1	1	6	9
Chinese	0	0	0	0	2	2
Computer Sci. A/AB	0	0	1	22	62	85
Economics Micro	0	0	3	6	6	15
Economics Macro	0	1	2	9	3	15
English Language	0	0	9	49	37	95
Environmental Science	0	0	0	2	3	5
European History	0	0	1	1	0	2
French Language	0	0	0	0	1	1
Govt. & Pol Comp	0	0	0	2	0	2
Govt. & Pol US	0	2	7	25	54	88
Human Geography	0	0	3	0	0	3
Japanese	0	0	0	0	1	1
Latin Vergil	0	1	0	0	0	1
Music Theory	0	0	0	0	1	1
Physics B	0	0	0	0	2	2
Physics C-E&M	0	0	0	3	4	7
Physics C-Mech	0	2	3	1	5	11
Psychology	0	0	1	4	10	15
Spanish Language	0	1	0	1	0	2
Statistics	0	0	1	7	37	45
US History	0	0	0	0	1	1
World History	0	6	9	30	44	89
<b>Total</b>	<b>0</b>	<b>16</b>	<b>51</b>	<b>184</b>	<b>377</b>	<b>628</b>